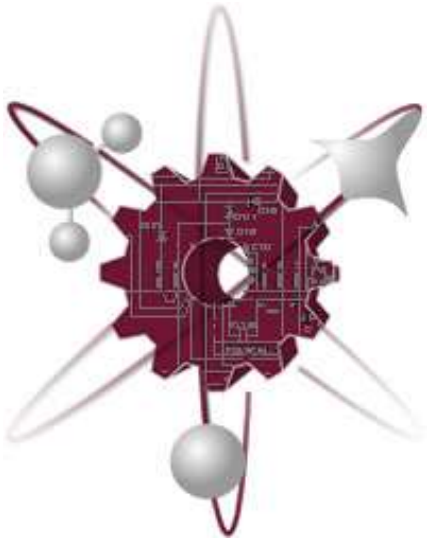
Appendix B: Faculty Vitae

Engineering Physics

Bachelor of Science in Engineering Physics



Self-Study Report

New Mexico State University

Engineering Physics Program

(Bachelor of Science in Engineering Physics)

at

New Mexico State University

Tenured & Tenure-Track Faculty, Regularized College Faculty and Instructional Staff – Department of Physics

Matthias Burkardt

Education – degree, discipline, institution, year

- Habilitation Physics, 1995. *Universität Erlangen-Nurnberg, Germany*
- Ph.D. Physics, 1989. *Universität Erlangen-Nurnberg, Germany*
- Diploma Physics, 1987. *Universität Erlangen-Nurnberg, Germany*

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- *New Mexico State University*, Department of Physics, Las Cruces, NM: Distinguished Achievement Professor, May 2012 – present, full time
- Full Professor, August 2004 – May 2012, full time
- Associate Professor, August 1999 – August 2004, full time
- Assistant Professor, August 1995 - August 1999; full-time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- *Thomas Jefferson National Accelerator Facility,* Newport News, VA: Visiting Scientist, August 2008 – May 2009, full-time
- *University of Maryland,* College Park, MD: Visiting Scientist, April 2002 – May 2002, full-time
- *Center for the Subatomic Structure of Matter,* Adelaide, Australia: Visiting Scientist, March 2002, full-time
- *University of Melbourne,* Australia: Visiting Scientist, January 2002 – February 2002, full-time
- *Technische Universitat München,* Munich, Germany: Visiting Scientist, August 2001 – December 2001, full-time
- Stanford Linear Accelerator Center, Stanford, CA: Postdoctoral Research Associate, January 1990 – August 1991, full-time
- *Massachusetts Institute of Technology,* Cambridge, MA: Postdoctoral Research Associate, August 1991 – August 1993, full-time
- *National Institute for Nuclear Theory and University of Washington,* Seattle, WA: Junior Fellow and Research Assistant Professor, August 1993 – August 1995, full-time

Certifications or professional registrations

- none

Current membership in professional organizations

- American Physical Society

Honors and awards

- NMSU College of Arts & Sciences Faculty Outstanding Achievement Award in Teaching, 2014
- *Outstanding Achievement Professor, NMSU* May 2012
- *College of Arts & Sciences Faculty Outstanding Achievement Award in Scholarship,* NMSU, October 2007
- *New Mexico State University Westhafer Award, NMSU* May 2006

- *Fellow of the American Physical Society (APS)*, November 2004
- *Gardiner Professorship*, New Mexico State University (NMSU), Department of Physics, 2001-2003
- *Invitation Fellowship*, Japanese Society for the promotion of Sciences (JSPS), 1999 and 2001
- *Von Lynen Fellowship*, Alexander von Humboldt Foundation, 1990-1992

Service activities (within and outside of the institution)

- Chair of the NMSU-Physics Tenure & Promotion Committee, since 2018

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Burkardt, M. R., Alhalholy, T. (2017). Quark-Photon-Quark Correlation and Transverse Target Single Spin Asymmetry in Inclusive DIS. Physical Review, D96, 016025-016028
- Burkardt, M. R. (2017). GPDs and Orbital Angular Momentum. Few Body Sys., 58
- Burkardt, M. R., Adhikari, L. (2016). Angular Momentum Distribution in the Transverse Plane. Physical Review, D94, 114021
- Abdallah, M., Burkardt, M. (2016). Transverse Force on Transversely Polarized Quarks in Longitudinally Polarized Nucleons. Phys. Rev., D94, 094040
- Burkardt, M. R. (2016). Inclusive Single-Spin Asymmetries, Quark-Photon, and Quark-Quark Correlations. Physical Review, D96, 094016-094-020
- Burkardt, M. R., Chabysheva, S., Hiller, J. (2016). Two-dimensional light-front $\phi 4$ theory in a symmetric polynomial basis. Phys. Rev., D94, 065006
- Burkardt, M. R. Inclusive Single-Spin Asymmetries, Quark-Photon, and Quark-Quark Correlations. Phys. Rev., D94, 094016
- Bignell, R., Leinweber, D., Kamleeh, W., Burkardt, M. R. (2017). Nucleon Magnetic Properties from Lattice QCD with the Background Field Method. PoS, INPC2016, 8
- Burkardt, M. R. (2017). GPDs and Orbital Angular Momentum. PoS, QCDEV2016, 10

Briefly list the most recent professional development activities

- n.a.

Michaela Burkardt

Education – degree, discipline, institution, year

- Ph. D., Physics, Universität Erlangen-Nürnberg, Germany, 1992
- Diploma Physics, Universität Erlangen-Nürnberg, Germany, 1987
- Graduate Certificate of Online Teaching and Learning, New Mexico State University, NM, 2008

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Full College Professor, 2014 – present, part time
- NMSU, Department of Physics, College Associate Professor, 2007 – 2014, part time
- NMSU, Department of Physics, College Assistant Professor, 2002 – 2007, part time
- Northeastern University, Department of Physics, Clinical Lecturer, 1992-1993, part time
- NMSU, College of Arts and Sciences, Program Director, Peer Learning Assistants Program, 2016 (Apr-Dec), part-time
- NMSU, College of Arts and Sciences, Program Coordinator, Peer Learning Assistants Program, 2014-2016, part-time
- NMSU, Teaching Academy, Faculty Developer/Project Coordinator II, PRIMOS Grant, 2009-2010, full time (Nov 2008-Dec 2008, part time)

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society (4-Corners Section, Topical Group on Physics Education Research, Forum on Education)
- American Association of Physics Teachers

Honors and awards

- NMSU College of Arts & Sciences Faculty Outstanding Achievement Award in Teaching, 2014
- NMSU College of Arts & Sciences Outstanding College Faculty Award, 2012
- NMSU College of Arts & Sciences Faculty Outstanding Achievement Award, 2007

Service activities (within and outside of the institution)

- NMSU Faculty Senator, College-Track, since 2017
- Teaching Academy Fellow, NMSU, since 2016 (Offered a short course "Teaching and Learning STEM" Jan-Mar, 2017)
- Consultant for the "Class Visitation" Program of the Teaching Academy, NMSU, since 2011
- Promotion & Tenure Committee of NMSU's Biology Department for College Track Faculty, 2015-2016, since 2017

- Promotion & Tenure Committee of NMSU's English Department for College Track Faculty, 2014
- Member of the Osteopathic Medicine Pathway Program Admissions Committee, since 2016
- Member of the Scholarship Committee, Department of Physics, NMSU, since 2011
- Chair of Tutoring Services, Department of Physics, NMSU, since 2010
- Director/Coordinator Supplemental Instruction, Department of Physics, NMSU, since 2012
- Faculty Mentor, "Preparing Future Faculty", since 2017
- Member of the Recruiting/Retention Committee, Department of Physics, NMSU, 2010-2016
- Faculty Co-Advisor of Society of Physics Students (SPS), Department of Physics, NMSU, 2011-2016

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- *Poster:* Burkardt, M., Adding UG Peer Learning Assistants to your Course Team, 2016 Summit for Transforming STEM Teaching in Higher Education, Boise State University, Boise, Idaho, April 14-15, 2016

Briefly list the most recent professional development activities

- "2016 Summit for Transforming STEM Teaching in Higher Education", Boise State University, Boise, Idaho, April 14-15, 2016
- Teaching Academy, NMSU, Member 2016/2017 (>10 hours), Sustaining Member 2016, (>38 hours), Member 2015, Member 2013/2014, Distinguished Member (>40 hours) 2012/2013, 2011/2012
  Exemplary activities:
  - "Want Your Students to Learn More? Designing Your Courses for More Significant Learning", by Dee Fink, Jan 2016, (7.5 hours)
  - "Teaching in NMSU's First TEAL Classroom", by Michele Shuster, Oct 2015 (5 hours)
  - "What the Best College Teachers Do", Workshop by Ken Bain, followed with Book Club, Feb –Mar 2013
- Attendee and session chair at the annual 4-Corners Section meeting of the American Physical Society (2016)
- "Strategic Programs for Innovations in Undergraduate Physics" (Spin-UP), Austin, TX, May 2012

Robert Cooper

Education – degree, discipline, institution, year

- Ph.D., Physics, University of Michigan, Ann Arbor, MI, 2008
- M.S., Physics, University of Michigan, Ann Arbor, MI, 2005
- B.S., Physics, University of Toledo, Toledo, OH, 2002
- B.S., Mathematics, University of Toledo, Toledo, OH, 2002

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Assistant Professor, 2015 – present, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Sandia National Laboratories, Senior Member of the Technical Staff, 2009-2011, full time
- Indiana University, Department of Physics, Center for Exploration of Energy and Matter, Postdoctoral Scholar, 2011-2015, full time
- Stanford University, Department of Physics, Postdoctoral Scholar, 2008-2009, full time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society (APS) in Division of Particles and Fields (DPF), Division of Nuclear Physics (DNP), 4-Corners Section (4-C)

Honors and awards

- Faculty Travel Grant for travel to NUFACT in Uppsala, Sweden, New Mexico State University (NMSU), 2017
- MiniGrant for development of low-cost FPGA electronics, NMSU, 2015
- U.S. Patent 8,338,975. *Method for Improving the Angular Resolution of a Neutron Scatter Camera*, Sandia National Laboratories, 2012

Service activities (within and outside of the institution)

- Recruitment Committee, met with students at APS DNP and APS 4-C section meetings as well as meet with prospective students, 2015-present
- Grand Awards Judge in Physics, Intel International Science and Engineering Fair (ISEF), 2016-present
- Advisory Board and Judge, Northwest Ohio Science and Engineering Fair (NWOSEF), 1999-present
- Reviewer, Department of Energy (DOE) Office of Science Graduate Student Research (SCGSR), 2016
- Question Writer, Oak Ridge Associated Universities (ORAU) National Science Bowl (NSB), 2017

- Abstract Reviewer, American Physical Society (APS) Division of Nuclear Physics (DNP) Conference Experiences for Undergraduates (CEU), 2017

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- D. Akimov, et al. [COHERENT collaboration], "Observation of Coherent Elastic Neutrino-Nucleus Scattering." *Science* **357**, 1123 (2017).
- A.A. Aguilar-Arevalo, et al. [MiniBooNE-DM collaboration], "Dark Matter Search in Proton Beam Dump with MiniBooNE." *Physical Review Letters* **118**, 221803 (2017).
- M.J. Bales, R. Alarcon, C.D. Bass, E.J. Beise, H. Breuer, J. Byrne, T.E. Chupp, K.J. Coakley, R.L. Cooper, M.S. Dewey, S. Gardner, T.R. Gentile, D. He, H.P. Mumm, J.S. Nico, B. O'Neill, A.K. Thompson, F.E. Wietfeldt, "Precision Measurement of the Radiative β Decay Mode of the Free Neutron." *Physical Review Letters* **116**, 242501 (2016).
- S.J. Brice, R.L. Cooper, F. DeJongh, A. Empl, L.M. Garrison, A. Hime, E. Hungerford, T. Kobilarcik, B. Loer, C. Mariani, M. Mocko, G. Muhrer, R. Pattie, Z. Pavlovic, E. Ramberg, K. Scholberg, R. Tayloe, R.T. Thornton, J. Yoo, A. Young. "A New Method for Measuring Coherent Elastic Neutrino-Nucleus Scattering at an Off-Axis High-Energy Neutrino Beam Target." *Physical Review* **D 89**, 072004 (2014).
- T.E. Chupp, R.L. Cooper, K.P. Coulter, S.J. Freedman, B.K. Fujikawa, A. Garcia, G.L. Jones, H.P. Mumm, J.S. Nico, A.K. Thompson, C.A. Trull, F.E. Wietfeldt, and J.F. Wilkerson. "Search for a T-Odd, P-Even Triple Correlation in Neutron Decay." *Physical Review* **C 86**, 035505 (2012).
- Invited Talk, "Dark Matter Search in the MiniBooNE Proton Beam Dump Experiment" at *19th International Workshop on Neutrinos from Accelerators (NUFACT)*, Uppsala University, Uppsala, Sweden, September 26, 2017.
- Invited Talk, "Dark Photon/Dark Matter Measurements with CEvNS Detectors" at *New Extensions of Coherent scattering and other Lepton Interactions for new Physics SEarches (vECLIPSE),* University of Tennessee, Knoxville, TN, August 22, 2017.
- Invited Talk, "Current and Future Results from MiniBooNE-DM" at *U.S. Cosmic Visions: New Ideas in Dark Matter*, University of Maryland, College Park, MD, March 23, 2017
- Invited Talk, "The CAPTAIN Low-Energy Physics Program" at *11th International Workshop on Neutrino-Nucleus Scattering in the Few-GeV Region (NuInt17)*, University of Toronto, Toronto, Ontario, June 30, 2017.
- Invited Talk "SBN Future" at *Dark Sectors Workshop*, SLAC National Accelerator Laboratory, Stanford, CA, April 28, 2016.

Briefly list the most recent professional development activities

- Attendee and participant at the annual 4-Corners Section meetings of the American Physical Society, 2016-present
- Attendee and participant at the annual APS Division of Nuclear Physics meeting, 2011-present
- Participant at Brookhaven National Laboratory Cold Electronics Mini-Summer School, Brookhaven, NY, July 18-21, 2016

Francisco J. Carreto-Parra

Education – degree, discipline, institution, year

- M.S., Physics, University of Texas at El Paso, USA, 2007
- B.S. E., Physics Engineering, Universidad Autónoma Metropolitana, Mexico, 2003

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- El Paso Community College (EPCC), Department of Physics, Instructor, 2008- present, part time
- Doña Ana Community College (DACC), Department of Science, Instructor, 2015-2017, part time
- EPCC, HIS STEM Architecture grant, Coordinator of Tutors and Physics Tutor, 2013-2014, Full time.
- University of Texas at El Paso (UTEP), Physics Department, Instructor, 2010-2013, part time
- UTEP, Professional & Public Programs, Instructor of Science, 2008-2010, part time
- UTEP, Physics Department, Teaching Assistant, 2005-2007, part time
- Universidad Autónoma Metropolitana, Engineering Department, Teaching Assistant, 1998-2001, part time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Medical Sterilizer's Service, Owner and Technician, 2002 – 2004, part time
- Clínica Universal, Maintenance responsible, 2000-2004, part time

Certifications or professional registrations

- Mexican Cedula as Physics Engineer.

Current membership in professional organizations

- n.a.

Honors and awards

- Twice Nominated, 2016 and 2011, for El Paso Community College Adjunct Faculty Award

Service activities (within and outside of the institution)

- Founder and Coordinator of program "Astronomy Observatory at EPCC" with Service Learning Program of EPCC, 2009-2013, 2016.
- Guest Speaker at Museum of Archaeology, El Paso Tx, 2013-2014
- Guest Speaker at Hueco Tanks State Historic Site, El Paso, Tx, 2009-2016
- Special Guest for Astronomical Outreach. Univision Channel 26-KINT 26 Television, Program "Nuestra Frontera". May 19th 2012.
- Speaker and technician invited, Universidad de Sonora, Mexico, 2003-2006
- Co-Founder of Federación Astronómica Mexicana (FEDAM), Mexico. 2001-2002

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Villicaña-Pedraza, I., Carreto-Parra, F., Carramiñana, A., Saucedo-Morales, J. (2017). Multifrequency Study of the Blazar 3C 454.3

Briefly list the most recent professional development activities

- I am doing corrections, as coauthor, of a couple of peer reviews articles accepted for *The Astrophysical Journal* and *Revista Mexicana de Astronomia y Astrofisica*.

Michael DeAntonio

Education – degree, discipline, institution, year

- Ph. D., Physics, New Mexico State University, Las Cruces, NM 1993
- M.E., Physics, New Mexico State University, Las Cruces, NM 1991
- B.S., Physics, Duquesne University, Pittsburgh PA 1984

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, College Professor, 2017 – present, part time
- NMSU, Department of Physics, College Associate Professor, 2007 – 2017, part time
- NMSU, Department of Physics, College Assistant Professor, 2002 – 2007, part time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- LaSen Inc., Las Cruces, NM: Consulting Engineer, 2005 – 2015, part-time
- Army Research Laboratory, White Sands Missile Range, NM: Scientist/Engineer, 1998-2001, full -time
- Delphi Automotive, El Paso, TX: Applications Engineer, 1996-1998 full -time, full -time
- Texas A&M University, College Station, TX: Visiting Assistant Professor, 1995-1996, full -time
- Army Research Laboratory, White Sands Missile Range, NM: Post-Doctorate Researcher,1993-1995, full -time
- GTE Communication Systems, Albuquerque, NM: Member of Technical Staff, 1985-1988, full -time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Society for Engineering Education (ASEE)
- American Association of Physics Teachers (AAPT)

Honors and awards

- NA

Service activities (within and outside of the institution)

- Physics Assessment Coordinator, 2017-present
- Natural Science Interstate Passport Team , 2016-2017
- Society of Engineering Physicists (SEPh), 2011-present
- Engineering Physics Committee, 2010-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- D. Short and M. DeAntonio, "Narrow line width tunable DIAL LIDAR detector," in Renewable Energy and the Environment, OSA Technical Digest (online) (Optical Society of America, November 2013), paper EM2A.5.
- M. DeAntonio and M. Nairat, "Feasibility Study for the Remote Detection of Atmospheric Xenon Using a DIAL LIDAR System," in Imaging and Applied Optics Technical Papers, OSA Technical Digest (online) (Optical Society of America, June 2012), paper RTu1E.5.

Briefly list the most recent professional development activities

- Attendee ABET Symposium (2018)
- Regular attendee and participant at the ASEE annual meetings (2005-2016)
- General Chair for 2015 and regular attendee and participant at the Frontiers in Education Conference (2006-2015)

Michael Engelhardt

Education – degree, discipline, institution, year

- Habilitation, Theoretical Physics, Universität Tübingen, Germany, 2001
- Ph.D., Physics, Universität Erlangen, Germany, 1994
- Diplom, Physics, Universität Erlangen, Germany, 1989

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Associate Professor, 2010 – present, full time
- NMSU, Department of Physics, Assistant Professor, 2004 – 2010, full time
- Universität Tübingen, Germany, Privatdozent (Lecturer), 2002 – 2004, part time
- Universität Tübingen, Germany, Research Associate and Privatdozent (Lecturer), 2001 – 2002, full time
- Universität Tübingen, Germany, DFG Habilitation Fellow, 1999 – 2001, full time
- Universität Tübingen, Germany, Postdoctoral Research Associate, 1996 – 1999, full time
- Universität Erlangen, Germany, Postdoctoral Research Associate, 1996, full time
- Weizmann Institute, Israel, MINERVA Postdoctoral Fellow, 1994 – 1996, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- science+computing ag, Tübingen, Germany, IT Consultant, 2002 – 2004, full time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society (4-Corners Section, Division of Nuclear Physics)

Honors and awards

- Gardiner Professorship, New Mexico State University (NMSU), Department of Physics, 2017 – 2019
- American Physical Society (APS) Outstanding Referee, 2012

Service activities (within and outside of the institution)

- Interim Graduate Program Head, Department of Physics, NMSU, 2016 – 2017
- Coordinator, Lattice QCD Program, DOE Topical Collaboration on TMDs
- Coordinator and Principal Spokesperson, Lattice TMD Collaboration
- Manuscript Reviews for Physical Review, Journal of High Energy Physics, European Physical Journal, Few Body Systems
- Grant and Fellowship Proposal Reviews for Department of Energy (DOE)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- J. Green, N. Hasan, S. Meinel, M. Engelhardt, S. Krieg, J. Laeuchli, J. Negele, K. Orginos, A. Pochinsky and S. Syritsyn; Up, down, and strange nucleon axial form factors from lattice QCD, Phys. Rev. D 95 (2017) 114502.
- M. Engelhardt; Quark orbital dynamics in the proton from Lattice QCD – from Ji to Jaffe-Manohar orbital angular momentum, Phys. Rev. D 95 (2017) 094505.
- D. Altarawneh, M. Engelhardt and R. Höllwieser; Model of random center vortex lines in continuous 2+1-dimensional spacetime, Phys. Rev. D 94 (2016) 114506.
- A. Rajan, A. Courtoy, M. Engelhardt and S. Liuti; Parton transverse momentum and orbital angular momentum distributions, Phys. Rev. D 94 (2016) 034041.
- B. Yoon, R. Gupta, T. Bhattacharya, M. Engelhardt, J. Green, B. Joó, H.-W. Lin, J. Negele, K. Orginos, A. Pochinsky, D. Richards, S. Syritsyn and F. Winter; Controlling excited-state contamination in nucleon matrix elements, Phys. Rev. D 93 (2016) 114506.
- M. Engelhardt, P. Hägler, B. Musch, J. Negele and A. Schäfer; Lattice QCD study of the Boer-Mulders effect in a pion, Phys. Rev. D 93 (2016) 054501.
- D. Altarawneh, R. Höllwieser and M. Engelhardt; Confining bond rearrangement in the random center vortex model, Phys. Rev. D 93 (2016) 054007.
- J. Green, S. Meinel, M. Engelhardt, S. Krieg, J. Laeuchli, J. Negele, K. Orginos, A. Pochinsky and S. Syritsyn; High-precision calculation of the strange nucleon electromagnetic form factors, Phys. Rev. D 92 (2015) 031501.
- R. Höllwieser and M. Engelhardt; Approaching SU(2) gauge dynamics with smeared Z(2) vortices, Phys. Rev. D 92 (2015) 034502.
- S. Cisneros, G. Goedecke, C. Beetle and M. Engelhardt; On the Doppler effect for light from orbiting sources in Kerr-type metrics, Mon. Not. Roy. Astr. Soc. 448 (2015) 2733.
- J. Green, J. Negele, A. Pochinsky, S. Syritsyn, M. Engelhardt and S. Krieg; Nucleon electromagnetic form factors from lattice QCD using a nearly physical pion mass, Phys. Rev. D 90 (2014) 074507.
- J. Green, M. Engelhardt, S. Krieg, J. Negele, A. Pochinsky and S. Syritsyn; Nucleon structure from lattice QCD using a nearly physical pion mass, Phys. Lett. B734 (2014) 290.
- M. Engelhardt; Strange quark contributions to nucleon mass and spin from lattice QCD, Phys. Rev. D 86 (2012) 114510.
- J. Green, J. Negele, A. Pochinsky, S. Syritsyn, M. Engelhardt and S. Krieg; Nucleon scalar and tensor charges from lattice QCD with light Wilson quarks, Phys. Rev. D 86 (2012) 114509.
- B. Musch, P. Hägler, M. Engelhardt, J. Negele and A. Schäfer; Sivers and Boer-Mulders observables from lattice QCD, Phys. Rev. D 85 (2012) 094510.

Briefly list the most recent professional development activities

- n.a.

Edwin Fohtung

Education – degree, discipline, institution, year

- Ph.D. Materials Sciences/Physics, 2010. *Universität Freiburg,* Germany
- M.S. Applied Physics, 2007. *Peter the Great St. Petersburg Polytechnic University, Russia*
- B.S. Applied Physics, 2005. *Peter the Great St. Petersburg Polytechnic University, Russia*

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- *New Mexico State University*, Department of Physics, Las Cruces, NM: Assistant Professor, August 2013 – present; full-time
- *Los Alamos National Laboratory*, Experimental Physical Sciences (ADEPS), Los Alamos, NM: LANSCE Assistant Professor/ Visiting Scientist, August 2013 – present; part-time
- *University of California*, San Diego Department of Physics: Postdoctoral Fellow/Associate, November 2010 – August 2013; full-time.
- *Universität Freiburg*: Graduate Research Assistant, 2008 – 2010;

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- *Angstromquelle Karlsruhe (ANKA)- Synchrotron Light Source, Germany*: Wissenschaftler mitarbeiter, 2007 – 2010, full-time

Certifications or professional registrations

- None

Current membership in professional organizations

- Member of the American Physical Society (APS)
- Member of the Materials Research Society (MRS)
- Member of the international society for optics and photonics (SPIE)

Honors and awards

- *Rosen Scholar, Los Alamos National Laboratory, 2014-2017*
- *Bourse d'étude du gouvernement Russe, 2000-2007*
- *Bourses du gouvernement Camerounais, 2001-2007*

Service activities (within and outside of the institution)

- *Grant Reviewer DOD,* Airforce Office of Scientific Research, since 2016.
- *Matter-Radiation Interactions in Extremes (MaRIE)*, Los Alamos National Laboratory Science Review Consulting member, since 2015.
- *Chair*, Oak Ridge National Laboratory, TN Low-Q Science Review Committee, since 2015.
- *Member*, Oak Ridge National Laboratory, TN Low-Q Science Review Committee, 2013-2015.
- *Guest Editor*, Special Issue of Journal of Optics "Coherent Diffractive Imaging", since 2014.
- *Co-chair*, 11th LANSCE School on Mesoscale science, Los Alamos National Laboratory, 2015
- *Chair*, Exchange Bias Session, 58th Annual Conference on Magnetism and Magnetic Material in Denver, November 2015

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- D. Karpov, Z. Liu, T. dos Santos Rolo, R. Harder, P. V. Balachandran, D. Xue, T. Lookman, E. Fohtung, "*Three-dimensional imaging of vortex structure in a ferroelectric nanoparticle driven by an electric field*". Nature Communications 8, Article number: 280 (2017) doi:10 1038/s41467-017-00318-9.
- Zhen Liu, Bin Yang, Wenwu Cao, Edwin Fohtung, and Lookman Turab *"Enhanced energy storage with polar vortices in ferroelectric nanocomposites* ". Phys. Rev. Applied **8**, 034014 (2017).
- Harry M Quiney, Garth Williams, and Edwin Fohtung. "*Editorial: Coherent diffractive imaging". Journal of Optics* (2017);
- S. Adak, M. Hartl, L. Daemen, E. Fohtung, and H. Nakotte. "*Study of oxidation states of the transition metals in a series of Prussian blue analogs using x-ray absorption near edge structure (XANES) spectroscopy*". Journal of Electron Spectroscopy and Related Phenomena;(2016).
- J.W. Kim, A. Ulvestad, S. Manna, R. Harder, E. Fohtung, A. Singer, L. Boucheron, E. E. Fullerton, and O. G. Shpyrko. "*Observation of x-ray radiation pressure effects on nanocrystals*". J. Appl. Phys. 120, 163102 (2016).
- Mahmoud Hammouri, Edwin Fohtung, Igor Vasiliev. "*Ab initio study of magnetoelectric coupling in La0.66Sr0.33MnO3/PbZr0.2Ti0.8O3 multiferroic heterostructures*"; J. Phys. Condensed. Matter 28 396004 (2016).
- J. W. Kim, S. Manna, S. H. Dietze, A. Ulvestard, R. Harder, E. Fohtung, E. Eric Fullerton, and O. G. Shpyrko. "*Curvature-induced and thermal strain in polyhedral gold nanocrystals"*. Appl. Phys. Letts. 105, 173108 (2014).
- Andrew Ulvestard, H. Man Cho, R. Harder, J. W. Kim, E. Fohtung, Y. S. Meng. and O. G. Shpyrko. "*Nanoscale Strain Mapping in Battery Nanostructures*". Applied Phys. Letts. 104 073108 (2014).
- Dmitry Karpov, Tomy dos Santos Rolo, Hannah Rich, Yuriy Kryuchkov, Boris Kiefer and E. Fohtung, "*Birefringent Coherent Diffraction Imaging*". Proc. SPIE 9931, Spintronics IX, 99312F (September 26, 2016); doi:10.1117/12.2235865.

Briefly list the most recent professional development activities

- Annual American Association of Physics Teachers (AAPT) Summer Meeting, College Park, MD, July 25-29, 2015.

Thomas Hearn

Education – degree, discipline, institution, year

- Ph. D., Geophysics, California Institute of Technology, 1985.
- M.S. Geophysics California Institute of Technology, 1981.
- B.S., Physics, University of California, Riverside, 1978.

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Department of Physics, Las Cruces, NM – Associate Professor, September 2008 – present.
- New Mexico State University, Department Head for Physics, August, 2006 to August, 2008.
- New Mexico State University, Department of Physics, Las Cruces, NM - Associate Professor, August, 1996 - present; Assistant Professor, July, 1990 - September, 1996.
- Cornell University, Institute for the Study of the Continents, Ithaca, NY. - Research Associate, Jan, 1989 - June, 1990; Postdoctoral Research Associate, Jan, 1985 - Dec, 1988.

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Rockwell Science Center, Thousand Oaks, CA, Consultant, May 1983 - Jan. 1984
- University of California, Riverside, Institute of Geophysics and Planetary Physics, Riverside, CA. Lab Helper, 1976-1977.
- Bendix United Geophysical, Richfield, Utah, Field crew worker, Summer 1976.

Certifications or professional registrations

- n/a

Current membership in professional organizations

- American Geophysical Union
- Seismological Society of America
- Society of Exploration Geophysicists

Honors and awards

Service activities (within and outside of the institution)

- Engineering Physics Advisor
- Engineering Physics Program Committee member
- Computing Committee member

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Ranasinghe, N. R., Gallegos, A., Hearn, T. M., Ni, J. F., Sandvol, E. Freqency dependent Lg attenuation in northeast China and its implications. Geophysical Journal International., Date Submitted: May 26, 2017.

- Ranasinghe, N. R. et al. (2015), Lg attenuation in northeast China using NECESSArray data, Geophys. J. Int., 200, 67–76, doi:10.1093/gji/ggu375.
- Bao, X., E. Sandvol, Y. J. Chen, J. Ni, T. Hearn, and Y. Shen (2012), Azimuthal anisotropy of Lg attenuation in eastern Tibetan Plateau, J. Geophys. Res., 117(B10), 1–14, doi:10.1029/2012JB009255.
- Wang Hai-Yang, Thomas Hearn, Chen Yong-Shun, PEI Shun-Ping, Feng Yong-Ge, Yue Han, Jin Ge, Zhou Shi-Yong, Wang Yan-Bin, Ge Zeng-Xi, Ning Jie-Yuan, Eric Sandvol, James Ni, Pn wave tomography of eastern Tibetan plateau, submitted to Chinese Journal of Geophysics.
- Liang, X., E. Sandvol, Y.J. Chen, T. Hearn, J. Ni , S. Klemperer, Y. Shen and F. Tilmann, (2012) The destruction of the underthrusted Indian plate, Earth Planet. Sci. Lett., Vol 333-334, 101-111, http://dx.doi.org/10.1016/j.epsl.2012.03.036.
- León Soto, G., E. Sandvol, J. F. Ni, L. Flesch, T. M. Hearn, F. Tilmann, J. Chen, and L. D. Brown (2012), Significant and vertically coherent seismic anisotropy beneath eastern Tibet, J. Geophys. Res., 117, B5, doi:10.1029/2011JB008919.
- Yue, H., et al. (2012), Lithospheric and upper mantle structure of the northeastern Tibetan Plateau, J. Geophys. Res., 117, B5, doi:10.1029/2011JB008545.

Briefly list the most recent professional development activities

- Submitted National Science Foundation proposal on the seismology of Burma.
- Attenuation of seismic waves beneath China.
- Pn propagation and the tectonics of the Tibetan Plateau.
- The seismic period measurement.

Heinrich (Heinz) Nakotte

Education – degree, discipline, institution, year

- Ph. D., Physics, Universiteit van Amsterdam, The Netherlands, 1994
- M.E., Education, Universität zu Köln, Germany, 1988
- B.S., Physics, Universität zu Köln, Germany, 1986

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Full Professor, 2009 – present, full time
- NMSU, Department of Physics, Associate Professor, 2003 – 2009, full time
- NMSU, Department of Physics, Assistant Professor, 1997 – 2003, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Guest Lecturer, South China University of Technology (Guangzhou, China), summer 2017, part time
- Los Alamos National Laboratory - Los Alamos Neutron Science Center (LANSCE), Instrument Scientist - Single Crystal Diffractometer, 2008 – 2016, part time
- Chalk River Laboratory (Chalk River, Canada), Affiliated Staff, 1994 – 2000, part time
- Los Alamos National Laboratory, Postdoctoral Associate, 1994-1997, full time
- Electrotechnical Laboratory (Tsukuba, Japan), STA Fellow (Humboldt Foundation), 1996, part time
- Bosch GmbH - Hydraulic Pump Section (Köln, Germany), Staff Member, 1989, part time
- Leybold Heraeus GmbH - Ultra High Vacuum Group (Köln, Germany), Laboratory Assistant, 1987, part time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society (4-Corners & Texas Sections, Division of Materials Physics)
- Neutron Scattering Society of America

Honors and awards

- Gardiner Professorship, New Mexico State University (NMSU), Department of Physics, 2009 – 2011
- Best Advising Award for Faculty, NMSU, 2010
- NMSU College of Arts & Sciences Faculty Outstanding Achievement Award in Scholarship, 2009
- NMSU Award for Exceptional Achievements in Creative Scholarly Activity, 2003
- Early CAREER Award, National Science Foundation, 2000

Service activities (within and outside of the institution)

- Chair of the Engineering Physics (EP) Program Committee, since 2009

- Chair of the Local Organizing Committee of the 2016 Joint Four-Corners/Texas Sections meeting of the American Physical Society, 2016
- Promotion & Tenure Committee of NMSU's Criminal Justice Department, since 2016
- NMSU Faculty Senator, since 2015
- Chair of the Time-of-Flight Subcommittee of Science Review Committee at Oak Ridge National Laboratory, since 2013
- Member of South Dakota State University's Physics Program Review Panel, 2013
- Editorial Board Member, International Journal of Engineering Science, since 2008

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Nakotte, H., Silkwood, C., Page, K., Wang, H.-W., Olds, D., Kiefer, B., Manna, S., Karpov, D., Fohtung, E. B., Fullerton, E. E. (2017) Pair Distribution Function Analysis applied to Decahedral Gold Nanoparticles. *Physica Scripta, 92*, 114002
- Adak, S., Hartl, M., Daemen, L., Fohtung, E. B., Nakotte, H. (2017). Study of oxidation states of the transition metals in a series of Prussian blue analogs using x-ray absorption near edge structure (XANES) spectroscopy. *Journal of Electron Spectroscopy and Related Phenomena, Elsevier, 214*, 8-19
- Jain, P., Stroppa, A., Nabok, D., Marino, A., Rubano, A., Paparo, D., Matsubara, M., Nakotte, H., Fiebig, M., Picozzi, S., Choi, E. S., Cheetham, A. K., Draxl, C., Dalal, N., Zapf, V. (2016). Switchable electric polarization and ferroelectric domains in a metal-organic-framework. *Nature Partner Journals - Quantum Materials, 1*, 16012
- Nakotte, H., Shrestha, M., Adak, S., Boergert, M., Zapf, V. S., Harrison, N., King, G., Daemen, L. L. (2016). Magnetic Properties of some Transition-Metal Prussian Blue Analogs with Composition $M_3[M'(C,N)_6]_2.xH_2O$. *Journal of Sciences - Advanced Materials and Devices, Elsevier, 1*, 113-120
- Losko, A. S., Vogel, S. C., Reiche, M., Nakotte, H. (2014). A Six-Axes Robotic Sample Changer for High-Throughput Neutron Powder Diffraction and Texture Measurements. *Journal of Applied Crystallography, 47*, 2109-2112
- Zepeda-Alacorn, E., Nakotte, H., Vogel, S., Page, K., Wang, H.-W., King, G., Gualtieri, A., Wenk, H.R. (2014). Magnetic and Nuclear Structure of Goethite alpha-FeOOH: A Neutron Diffraction Study. *Journal of Applied Crystallography, 47*, 1983-1991
- Alsmadi, A., Bsoul, I., Mahmood, S. H., Alnawashi, G., Prokes, K., Siemensmayer, K., Klemke, B., Nakotte, H. (2013). Magnetic study of M-type doped barium hexaferrite nanocrystalline particles. *Journal of Applied Physics, 114*, 243910
- Maskova, S., Havela, L., Danis, S., Llober, A., Nakotte, H., Kothapalli, K., Cerny, A., Kolomiets, A. (2013). Impact of hydrogen absorption on crystal structure and magnetic properties of geometrically frustrated Nd2Ni2In. *Journal of Alloys and Compounds - Elsevier, 566*, 22-30

- Invited Talk at *Frontiers of Theoretical and Applied Physics (FTAPS-2017)*, University of Sharjah (United Arabic Emirates), February 23, 2017
- Invited Talk at APS 4-Corners meeting, Fort Collins, October 20, 2017

Briefly list the most recent professional development activities

- Regular attendee and participant at the annual 4-Corners Section meetings of the American Physical Society (2013-2017)

Vassili Papavassiliou

Education – degree, discipline, institution, year

- Ph. D., Physics, Yale University, USA, 1988
- M.Sc., M.Phil, Yale University, USA 1985
- B.S., Physics, Aristotelion University, Thessaloniki, Greece, 1982

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Department of Physics, Associate Professor, 2001 – present, full time
- NMSU, Department of Physics, Assistant Professor, 1995 – 2001, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- URA Visiting Scholar, Fermi National Accelerator Lab, 2016 – 2017, part time
- Visiting Scientist, Fermi National Accelerator Lab, 2009 – 2010, part time
- Senior Research Associate, Illinois Institute of Technology, 1994 – 1995, full time
- Postdoctoral Appointee, Argonne National Lab, 1991 – 1994, full time
- Research Associate, Yale University, 1988 – 1991, full time
- Research Assistant, Yale University, 1984 – 1988, part time
- Teaching Assistant, Yale University, 1982 – 1983, part time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- n.a.

Honors and awards

- n.a.

Service activities (within and outside of the institution)

- Physics Graduate Program Director, since 2010

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- MicroBooNE Collaboration, R. Acciarri et al. (2017). Michel Electron Reconstruction Using Cosmic-Ray Data from the MicroBooNE LArTPC. *JINST 12*, P09014
- PHENIX Collaboration, C. Aidala et al. (2017). Cross section and transverse single-spin asymmetry of muons from open heavy-flavor decays in polarized p+p collisions at $\sqrt{s}$ = 200 GeV. *Phys.Rev. D95*, 112001
- MicroBooNE Collaboration, P. Abratenko et al. (2017). Determination of muon momentum in the MicroBooNE LArTPC using an improved model of multiple Coulomb scattering. *JINST 12*, P10010.
- PHENIX Collaboration, A. Adare et al. (2017). Angular decay coefficients of J/ψ mesons at forward rapidity from p+p collisions at $\sqrt{s}$ = 510 GeV. *Phys.Rev. D95*, 092003

- MicroBooNE Collaboration, R. Acciarri et al. (2017). Design and Construction of the MicroBooNE Detector. *JINST 12*, P02017
- MicroBooNE Collaboration, R. Acciari et al. (2017). Convolutional Neural Networks Applied to Neutrino Events in a Liquid Argon Time Projection Chamber. *JINST 12*, P03011
- PHENIX Collaboration, A. Adare et al. (2016). Measurements of double-helicity asymmetries in inclusive J/ψ production in longitudinally polarized $p+p$ collisions at $\sqrt{s}$ = 510 GeV. *Phys.Rev. D94*, 112008
- PHENIX Collaboration, A. Adare et al. (2016). Centrality-dependent modification of jet-production rates in deuteron-gold collisions at $\sqrt{s_{NN}}$ = 200 GeV. *Phys. Rev. Lett. 116*, 122301
- PHENIX Collaboration, A. Adare et al. (2016). Measurement of parity-violating spin asymmetries in $W^{\pm}$ production at midrapidity in longitudinally polarized $p+p$ collisions. *Phys. Rev. D93*, 051103
- PHENIX Collaboration, A. Adare et al. (2015). Charged-pion cross sections and double-helicity asymmetries in polarized $p+p$ collisions at $\sqrt{s}$ = 200 GeV. *Phys. Rev. D91*, 032001
- PHENIX Collaboration, A. Adare et al. (2015). Cross section for *bb* production via dielectrons in d + Au collisions at $\sqrt{s_{NN}}$ = 200 GeV. *Phys. Rev. C91*, 014907
- PHENIX Collaboration, A. Adare et al. (2015). Measurement of long-range angular correlation and quadrupole anisotropy of pions and (anti)protons in central d + Au collisions at $\sqrt{s_{NN}}$ = 200 GeV. *Phys. Rev. Lett. 114*, 192301
- PHENIX Collaboration, A. Adare et al. (2014). Azimuthal-angle dependence of charged-pion-interferometry measurements with respect to second- and third-order event planes in Au + Au collisions at $\sqrt{s_{NN}}$ = 200 GeV. *Phys. Rev. Lett. 112*, 222301
- PHENIX Collaboration, A. Adare et al. (2014). Measurement of transverse-single-spin asymmetries for midrapidity and forward-rapidity production of hadrons in polarized $p+p$ collisions at $\sqrt{s}$ = 200 GeV and 62.4 GeV. *Phys. Rev. D90*, 012006
- PHENIX Collaboration, C. Aidala et al. (2014). The PHENIX Forward Silicon Vertex Detector. *Nucl. Instrum. Meth. A755*, 44
- PHENIX Collaboration, A. Adare et al. (2013). Nuclear Modification of ψ′, χ_c, and J/ψ Production in d + Au Collisions at $\sqrt{s_{NN}}$ = 200 GeV. *Phys. Rev. Lett. 111*, 202301
- PHENIX Collaboration, A. Adare et al. (2013). Medium modification of jet fragmentation in Au + Au collisions at $\sqrt{s_{NN}}$ = 200 GeV. measured in direct photon-hadron correlations. *Phys. Rev. Lett. 111*, 032301

Briefly list the most recent professional development activities

- Attended 2017 Meeting of the American Physical Society Division of Particles and Fields, Batavia, IL
- Attended PhyStat-ν Fermilab 2016 Workshop on Statistical Issues in Experimental Neutrino Physics, Batavia, IL

Stephen Pate

Education – degree, discipline, institution, year

- Ph.D., Physics, University of Pennsylvania, 1987
- B.S., Physics, North Carolina State University, 1981

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Full Professor, 2006 – present, full time
- NMSU, Department of Physics, Associate Professor, 2001 – 2006, full time
- NMSU, Department of Physics, Assistant Professor, 1995 – 2001, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Post-doctoral researcher, University of Pennsylvania, 1987-1988, full time
- Post-doctoral researcher, Indiana University, 1988-1991, full time
- Post-doctoral researcher, Massachusetts Institute of Technology, 1992-1993, full time
- Research Scientist, Massachusetts Institute of Technology, 1993-1995, full time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society, life member
- American Association of Physics Teachers, life member

Honors and awards

- Gardiner Professorship, New Mexico State University (NMSU), Department of Physics, 2005 – 2007
- NMSU College of Arts & Sciences Faculty Outstanding Achievement Award in Scholarship, 2013
- NMSU Research Achievement Award, 2013
- NMSU Research Achievement Award, 2015

Service activities (within and outside of the institution)

- Member of the Engineering Physics (EP) Program Committee, 2004-present
- Member of the Local Organizing Committee of the 2016 Joint Four-Corners/Texas Sections meeting of the American Physical Society, 2016
- Chair of Physics Department Promotion & Tenure Committee, 2011-present
- Chair of Physics Department Instructional Laboratory Committee, 2015-present
- Academic Advisor to Physics Students, 1999-present
- NMSU Faculty Senator, 2003-2006
- Reviewer for manuscripts submitted to Physical Review Letters, Physical Review C, and The American Journal of Physics
- Reviewer of funding proposals submitted to the NSF and the DOE

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- C. Aidala et al. [PHENIX Collaboration], "Cross section and transverse single-spin asymmetry of muons from open heavy-flavor decays in polarized p+p collisions at $\sqrt{s}$ = 200 GeV," Phys. Rev. D 95, no. 11, 112001 (2017)
- C. Aidala et al. [PHENIX Collaboration], "Measurements of $B \rightarrow J/\psi$ at forward rapidity in p+p collisions at $\sqrt{s}$ =510 GeV," Phys. Rev. D 95, no. 9, 092002 (2017)
- R. Acciarri et al. [MicroBooNE Collaboration], "Design and Construction of the MicroBooNE Detector," JINST 12, no. 02, P02017 (2017)
- R. Acciarri et al. [MicroBooNE Collaboration], "Convolutional Neural Networks Applied to Neutrino Events in a Liquid Argon Time Projection Chamber," JINST 12, no. 03, P03011 (2017)
- A. Adare et al. [PHENIX Collaboration], "Measurements of double-helicity asymmetries in inclusive J/ψ production in longitudinally polarized p+p collisions at $\sqrt{s}$ =510 GeV," Phys. Rev. D 94, no. 11, 112008 (2016)
- Stephen Pate [for the MicroBooNE Collaboration], "Progress on Neutrino-Proton Neutral-Current Scattering in MicroBooNE," International Nuclear Physics Conference, 11 September 2016, Adelaide, Australia; PoS INPC 2016, 260 (2017)
- C. Aidala, L. Anaya, E. Anderssen, A. Bambaugh, A. Barron, J.G. Boissevain, J. Bok, S. Boose et al., "The PHENIX Forward Silicon Vertex Detector," Nucl. Instrum. Meth. A 755 (2014) 44
- S. Pate and D. Trujillo, "Strangeness Vector and Axial-Vector Form Factors of the Nucleon," EPJ Web Conf. 66, 06018 (2014)
- D. Androic et al. [G0 Collaboration], "Measurement of the parity-violating asymmetry in inclusive electroproduction of π^- near the Δ^0 resonance," Phys. Rev. Lett. 108 (2012) 122002

Briefly list the most recent professional development activities

- Joint Four-Corners/Texas Sections meeting of the American Physical Society, October 2016, Las Cruces NM
- International Nuclear Physics Conference, September 2016, Adelaide, Australia
- Four Corners Section meeting of the American Physical Society, Oct. 2015, Tempe AZ
- Fall Meeting of the APS Division of Nuclear Physics, October 2015, Santa Fe NM

Jacob Urquidi

Education – degree, discipline, institution, year

- Ph.D. in Physical Chemistry, Texas Tech University, Lubbock, Texas. Dissertation: Theoretical Studies on Liquid Water (2001)
- M.S. in Physical Chemistry, Texas Tech University, Lubbock, Texas. Thesis: The Structure of Liquid Water Explained by a Two-State Model (2000)
- B.S. in Chemistry with a minor in Physics and Biology, University of Texas at El Paso, El Paso, Texas (1994)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Department of Physics, Associate Professor of Physics, 2009 – present, full time
- New Mexico State University, Department of Physics, New Mexico State LANSCE Professor of Physics (Tenure Track Assistant Professor, New Mexico State University, Las Cruces, NM and Los Alamos Neutron Scattering Center (LANSCE), Lujan Center, Los Alamos, New Mexico, 2003 – 2009, Full time
- Postdoctoral Research Scientist on disordered materials at the Intense Pulsed Neutron Source (IPNS), Argonne National Laboratory, Argonne, IL. Post-Doc Advisor: Chris Benmore, 2001 – 2003, Full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- N.A.

Certifications or professional registrations

- N.A.

Current membership in professional organizations

- American Physical Society
- American Chemical Society
- National Society of Hispanic Physicists

Honors and awards

- N.A.

Service activities (within and outside of the institution)

- President Elect, National Society of Hispanic Physicists; 2018 – 2024
- ORNL Neutron Sciences Review Committee, member; 2017-2018
- NSF Materials Division, Grant Proposal Review; 2016-2017
- Health and Safety Officer; 2016 - present
- Departmental Space Committee, member; 2012 - present
- Departmental Lab Committee, member; 2009 – present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- McPhearson, G. Amburgey, J., Urquidi, J. Castillo, M., Wavelength dependence of the environmental light-cued daily ejection of bacterial symbionts in Euprymna scolopes; Submitted to Journal of Biorhythms (2018)
- Urquidi, J., Future challenges, working together, and high-hanging fruit" or "The things not said in science.", Keynote presentation, New Mexico AMP Undergraduate Research Conference, Las Cruces, NM (2017)
- Urquidi, Jacob, Brar, Ramaninder K., Rodriguez, Stacy, and Hansen, Immo, The development of new radiation protocols for insect sterilization using long wavelength x-rays; AIP Conference Proceedings, 1671, 020010 (2015)
- Rodriguez, S.D., Brar, R.K., Drake, L.L., Drumm, H.E., Price, D.P., Hammond, J.L., Urquidi, J., and Hansen, I.A., *The effect of radio-protective agents ethanol, thrmethylglycine, and beer on survival of X-ray sterilized male Aedes aegypti*; Parasite Vectors 6:211 (2013

Briefly list the most recent professional development activities

- N.A.

Igor Vasiliev

Education – degree, discipline, institution, year

- Ph.D., Materials Science, University of Minnesota, Minneapolis, Minnesota, 2000
- M.S., Chemical Physics, Moscow Institute of Physics and Technology, Moscow, Russia, 1993
- B.S., Chemical Physics, Moscow Institute of Physics and Technology, Moscow, Russia, 1991

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Department of Physics, Full Professor, 2014 – present, full time
- New Mexico State University, Department of Physics, Associate Professor, 2008 – 2014, full time
- New Mexico State University, Department of Physics, Assistant Professor, 2002 – 2008, full time
- University of Illinois at Urbana-Champaign, Department of Physics, Postdoctoral Research Associate, 2000 – 2002, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Sandia National Laboratories, Visiting Scientist, 2016, part time
- Institute of Chemical Physics, Chernogolovka, Russia, Staff Member, 1993 – 1994, full time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society
- Materials Research Society

Honors and awards

- J. Tinsley Oden Fellowship, University of Texas at Austin, 2008 – 2009

Service activities (within and outside of the institution)

- Engineering Physics Program Committee, member since 2010
- Physics Department Curriculum Committee, chair since 2009
- NMSU Faculty Senate, member 2012 – 2015
- NMSU Scholastic Affairs Committee, member 2012 – 2013
- NMSU Faculty Affairs Committee, member 2013 – 2015
- College of Arts & Sciences Faculty Affairs Committee, member since 2017
- Physics Department Computer Committee, chair 2002 – 2012, member since 2014
- Physics Department Graduate Admission Committee, member since 2008
- Physics Department Tenure & Promotion Committee, member since 2008, chair 2015 – 2016

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- M. Hammouri and I. Vasiliev, Ab Initio Study of the Electronic and Transport Properties of Waved Graphene Nanoribbons, *Physica E 89*, 170−176 (2017).
- M. Hammouri, E. Fohtung, and I. Vasiliev, Ab Initio Study of Magnetoelectric Coupling in $La_{0.67}Sr_{0.33}$ $MnO_3/PbZr_{0.2}Ti_{0.8}O_3$ Multiferroic Heterostructures *J. Phys.: Condens. Matter 28*, 396004 (2016).
- M. Hammouri, S. K. Jha, and I. Vasiliev, First-Principles Study of Graphene and Carbon Nanotubes Functionalized with Benzyne, *J. Phys. Chem. C 119*, 18719−18728 (2015).
- L. V. Frolova, I. V. Magedov, A. Harper, S. K. Jha, M. Ovezmyradov, G. Chandler, J. Garcia, D. Bethke, E. A. Shaner, I. Vasiliev, and N. G. Kalugin, Tetracyanoethylene Oxide-Functionalized Graphene and Graphite Characterized by Raman and Auger Spectroscopy, *Carbon 81*, 216−222 (2015).
- S. Alnemrat, Y. H. Park, and I. Vasiliev, Ab Initio Study of ZnSe and CdTe Semiconductor Quantum Dots, *Physica E 57*, 96−102 (2014).
- L. S. Abdallah, T. M. Tawalbeh, I. V. Vasiliev, S. Zollner, C. Lavoie, A. Ozcan, and M. Raymond, Optical Conductivity of $Ni_{1-x}Pt_x$ Alloys ($0 < x < 0.25$) from 0.76 to 6.6 eV, *AIP Advances 4*, 017102 (2014).
- S. Alnemrat, J. P. Hooper, I. Vasiliev, and B. Kiefer, The Role of Equilibrium Volume and Magnetism on the Stability of Iron Phases at High Pressures, *J. Phys.: Condens. Matter 26*, 046001 (2014).

- Invited Talk at APS Joint Four Corners and Texas Sections Meeting, Las Cruces, New Mexico, October 21, 2016
- Invited Talk at CECAM Workshop on DFT and TDDFT in the Real-Space Formalism within the PARSEC Code: Perspectives and Future Development, Tel Aviv, Israel, December 15, 2015.
- Invited Talk at Workshop on Nanomaterials: Computation, Theory, and Experiment, Telluride, Colorado, June 30, 2015.

Briefly list the most recent professional development activities

- Attendance of DOE/OE Energy Storage Peer Review, Washington D.C., September 25 – 28, 2016
- Attendance of New Mexico Regional Energy Storage and Grid International Workshop, Albuquerque, New Mexico, August

Lauren Waszek

Education – degree, discipline, institution, year

- Ph.D., Earth Sciences, University of Cambridge, 2012
- M.Sci., Experimental and Theoretical Physics, University of Cambridge, 2008
- B.A., Experimental and Theoretical Physics, University of Cambridge, 2008

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Australian National University, Discovery Early Careers Research Award fellow, 2017 – present, full time
- New Mexico State University, Assistant Professor, 2016 – present, full time
- University of Maryland, Postdoctoral Research Associate, 2015 – 2016, full time
- University of Liverpool, Honorary Research Fellow, 2015, full time
- University of Cambridge, Junior Research Fellow, 2012 – 2015, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- N/A

Certifications or professional registrations

- N/A

Current membership in professional organizations

- American Geophysical Union

Honors and awards

- Australian Research Council Discovery Early Careers Research Award DE170100329
- National Science Foundation Equipment Grant EAR-661985
- Waszek et al., 2011 Nature Geoscience five year anniversary 10 favorite papers

Service activities (within and outside of the institution)

- Graduate Admissions Committee, 2017
- Society of Physics advisor, 2016 – present
- Convener, American Geophysical Union Fall Meeting 2017
- Peer reviewer, National Science Foundation, Geophysics Research Letters, Physics of the Earth and Planetary Interiors, Pure and Applied Geophysics

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Lasbleis, M., Waszek, L., Day, E. GrowYourIC: a step towards a coherent model of seismic structure. Geochem. Geophys. Geosys., in press, 2017.
- Waszek, L., Deuss, A. Anomalously large PKiKP-PcP amplitude ratios on a global scale. J. Geophys. Res., 120, doi:10.1002/2015JB012038, 2015.
- Waszek, L., Thomas, C., Deuss, A. PKP precursors: implications for global scattering. Geophys. Res. Lett., 42:1-10, 2015.

- Blom, N., Deuss, A., Paulssen, H., Waszek, L. Earth's inner core: revealing the structures behind the PKP core phase triplication. Geophys. J. Int., 201(3):1657-1665, 2015.
- Waszek, L., Deuss, A. Observations of exotic inner core waves. Geophys. J. Int., 200(3):1636-1650, 2015.
- Waszek, L., Deuss, A. A low attenuation layer in Earth's uppermost inner core, Geophys. J. Int., 195(3):2005-2015, 2013.

Presentations:

- Multiple approaches for mapping regional structures of Earth's inner core. IAG-IASPEI Joint Scientific Assembly, Japan, invited talk, August 2017
- Linking the seismic structure of Earth's uppermost inner core to features at the inner core boundary. ETH Zürich, invited seminar, August 2016
- Linking the seismic structure of Earth's uppermost inner core to features at the inner core boundary. California Institute of Technology, invited colloquium, April 2016
- Constraining the seismic properties of Earth's inner core. Tokyo Institute of Technology, invited seminar, November 2015
- Linking seismic observations of Earth's inner core boundary to deeper structure. Workshop on The Earth's Mantle and Core: Structure, Composition, Evolution, Japan, invited talk, November 2015
- Seismic observations of Earth's inner core: hemispheres, anisotropy and super-rotation. University of Chicago, invited colloquium, January 2015

Briefly list the most recent professional development activities

- Participant, American Association of Physics Teachers New Faculty Workshop, November 2017
- Invited participant, Workshop on The Earth's Mantle and Core: Structure, Composition, Evolution, Japan, July 2017
- Cooperative Institute for Dynamic Earth Research participant, July 2014

Stefan Zollner

Education – degree, discipline, institution, year

- Ph.D. Physics, 1991. *Universität Stuttgart,* Germany
- M.S. Physics, 1987. *Universität Stuttgart,* Germany
- B.S. Physics, 1984. *Universität Regensburg,* Germany

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- *New Mexico State University*, Department of Physics, Las Cruces, NM: Full Professor and Academic Department Head, July 2010 – present; full-time
- *Iowa State University*, Department of Physics and Astronomy, Ames, IA: Assistant Professor, September 1992 – May 1997; full-time.
- *Arizona State University*, Department of Physics and Astronomy, Tempe, AZ: Adjunct Professor, August 2001 – present.

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- *International Business Machines Corporation*, East Fishkill, NY: Process Integration Engineer, November 2008 – June 2010, full-time
- *Freescale Semiconductor, Inc*, Tempe, AZ, Austin, TX, and East Fishkill, NY: Analytical Engineer, Semiconductor Device Engineer, Process Integration Engineer (various positions), April 2004 – November 2008, full-time.
- *Motorola, Inc., Semiconductor Products Sector*, Mesa, AZ, and Tempe, AZ: Analytical Engineer, Section Manager (various positions), May 1997 – April 2004, full-time.
- *Ames Laboratory*, Ames, IA: Associate Physicist, September 1992 – May 1997, full-time.
- *IBM Research Division*, Yorktown Heights, NY: April 1991 – August 1992, IBM World Trade Postdoctoral Research Associate, full-time.

Certifications or professional registrations

- None

Current membership in professional organizations

- Fellow of the American Physical Society (APS)
- Member of the Four-Corners, New York, and Texas Sections of the APS
- Member of the Division of Condensed Matter Physics of the APS
- Member of the Division of Materials Physics of the APS
- Member of the Forums of Industrial & Applied Physics of the APS
- Fellow of the American Vacuum Society (AVS)
- Senior Member of the IEEE, Electron Devices Society
- Member of the German Physical Society (DPG)
- Member of the American Association of Physics Teachers (AAPT)

Honors and awards

- *German Scholarship Foundation* (Studienstiftung des deutschen Volkes), 1981-1987.
- *Fulbright Exchange Scholarship*, 1984-1985 (Arizona State University, Tempe)

- *IEEE Senior Member.*
- *Fellow of the American Physical Society*
- *Fellow of the American Vacuum Society*

Service activities (within and outside of the institution)

- *Academic Department Head,* Department of Physics, NMSU, since July 2010.
- *Board Member*, New Mexico Consortium, since September 2015.
- *Co-Chair*, Local Organizing Committee, Joint Meeting of the Texas and Four Corners Sections of the American Physical Society (APS), October 21-22, 2016, Las Cruces, NM.
- *Proceedings Editor,* International Conference on Spectroscopic Ellipsometry, Barcelona, Spain, Summer 2019.
- *Executive Committee Member*, New Mexico Chapter of the AVS, since 2011.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

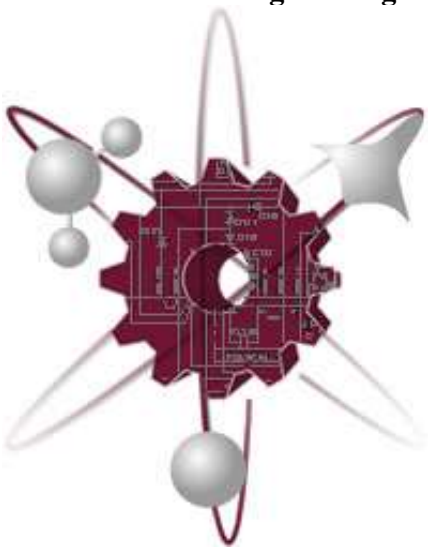
- C. Xu, N.S. Fernando, S. Zollner, J. Kouvetakis, and J. Menendez, *Observation of phase-filling singularities in the optical dielectric function of highly doped n-type Ge*, Phys. Rev. Lett. **118**, 267402 (2017).
- D. Pal, J. Singhal, A. Mathur, A. Singh, S. Dutta, S. Zollner, and S. Chattopadhyay, *Effect of substrates and thickness on optical properties in atomic layer deposition grown ZnO thin films*, Appl. Surf. Sci. **421** B, 341 (2017).
- S. Zollner, T.N. Nunley, D.P. Trujillo, L.G. Pineda, and L.S. Abdallah, *Temperature-dependent dielectric function of nickel*, Appl. Surf. Sci. **421** B, 913 (2017).
- T.N. Nunley, T.I. Willett-Gies, J.A. Cooke, F. Manciu, P. Marsik, C. Bernhard, and S. Zollner, *Optical constants, band gap, and infrared-active phonons of* $(LaAlO_3)_{0.3}(Sr_2AlTaO_6)_{0.35}$ *(LSAT) from spectroscopic ellipsometry*, J. Vac. Sci. Technol. A **34**, 051507 (2016).
- A.B. Posadas, C. Lin, A.A. Demkov, and S. Zollner, Band gap engineering in perovskite oxides: Al-doped $SrTiO_3$, Appl. Phys. Lett. **103**, 142906 (2013).
- S. Zollner, "Spectroscopic Ellipsometry for Inline Process Control in the Semiconductor Industry", in Ellipsometry at the Nanoscale, edited by M. Losurdo and K. Hingerl (Springer, Heidelberg, 2013).
- D.G. Seiler, S. Zollner, A.C. Diebold, and P.M. Amirtharaj, "Optical Properties of Semiconductors", in Handbook of Optics, Vol. IV, edited by M. Bass (Optical Society of America, 3rd edition, New York, 2010).
- Stefan Zollner, Veer Dhandapani, Paul Grudowski, and Greg Spencer, Anneal of epitaxial layer in a semiconductor device, US patent 7,416,605 B2 issued on 26 August 2008

Briefly list the most recent professional development activities

- Annual Physics Department Chairs Conference, American Physical Society, American Center for Physics, College Park, MD, June 5-7, 2015.
- Experienced Faculty Workshop, American Association of Physics Teachers, University of Minnesota, Minneapolis, MN, July 24-26, 2014.

Engineering Physics Program

(Bachelor of Science in Engineering Physics)



at

New Mexico State University

Temporary Instructors – Department of Physics

Farzin Abadizaman

Education – degree, discipline, institution, year

- Ph. D. Candidate, Physics, New Mexico State University, Las Cruces, NM, United States, 2015 September to present.
- M.S., Physics, New Mexico State University, Las Cruces, NM, United States (fall 2017 expected).
- M.S., Physics, Tehran University, Tehran, Iran (Feb 2012).
- B.S., Physics, Shahrood University of Technology, Shahrood, Iran, 2009.

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Teaching assistant, September 2015 to present, part time.
- NMSU, Department of Physics, Research assistant, July 2016- August 2016, July 2017 – August 2017, part time.
- NMSU, Department of Physics, Instructor for Engineering and General Physics Lab - PHYS 215GL, PHYS 211GL, PHYS 213GL Summer -2016 and 2017, Fall 2016.
- Sattari Airforce University, Tehran, Iran, Department of Physics, Teaching Mechanics, Electricity & Magnetism, General Physics, February 2013 – May 2015.

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Vacuum Society (AVS).
- American Physical Society (APS).

Honors and awards

- Outstanding graduate assistant award, April 2017.

Service activities (within and outside of the institution)

- Volunteer judge for the Southwestern New Mexico Regional and Engineering Fair, Las Cruces, NM, Feb 2016.
- President of Physics Graduate Student Organization, New Mexico State University (2016- 2017).

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- F. Abadizaman, P. Paradis, S. Zollner, Temperature Dependent Mueller Matrix Measurements of Magnetized Ni near the Curie Temperature, AVS 64th International Symposium & Exhibition, Tampa, Florida, October 30 – November 3, 2017.
- F. Abadizaman, S. Zollner, Temperature Dependent Mueller Matrix Measurements of Magnetized Ni near the Curie Temperature, AVS New Mexico Symposium, Albuquerque, NM, May 16th, 2017.
- F. Abadizaman, J. Moya, S. Zollner, Experimental errors in Mueller matrix elements of isotropic samples, APS Four Corners Section Meeting, Las Cruces, NM, 21-22 October 2016.

Briefly list the most recent professional development activities

- Regular attendee and participant at the annual AVS International Symposium and Exhibition (2016-2017).

Federico Alvarez

Education – degree, discipline, institution, year

- B.A., Physics, New Mexico State University, 2017
- M.S., Industrial Engineering, 2013
- B.A., Economics, University of Illinois at Chicago, 2011

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- T.A, New Mexico State University (NMSU), Department of Physics, 2017 – present ,full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Centennial High School (Las Cruces, NM), Mathematics Teacher, 2015 –2016, full time
- Cesar Chavez Charter High School (Deming, NM), Mathematics Teacher, 2014 –2015, full time
- Las Montanas High School (Las Cruces, NM), Mathematics Tutor, 2013 – 2014 , full time
- Southwest Cheese (Clovis, NM), Industrial Engineering Intern, 2012, full time

Certifications or professional registrations

- NM Level 1 Teaching License with Math and Science endorsement

Current membership in professional organizations

- n.a

Honors and awards

- n.a

Service activities (within and outside of the institution)

- n.a

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- n.a

Briefly list the most recent professional development activities

- n.a

Fatma Pinar Aslan

Education – degree, discipline, institution, year

- Ph. D., Physics, New Mexico State University, Las Cruces, NM, U.S.A, Expected graduation May 2018
- M.S., Physics Engineering, Istanbul Technical University, Istanbul, Turkey, 2009
- B.S., Physics Engineering, Hacettepe University, Ankara, Turkey, 2005

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Teaching Assistant, 20012 – present, full time
-

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society (Division of Nuclear Physics)

Honors and awards

- American Association of Physics Teachers-Outstanding Physics Teaching Assistant-2014
- NMSU- Preparing Future Faculty Graduate Assistantship Award 2016-2017

Service activities (within and outside of the institution)

- n.a.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- n.a.

Briefly list the most recent professional development activities

- n.a.

Nalin S. Fernando

Education – degree, discipline, institution, year

- Ph. D., Physics, New Mexico State University, 2017
- M.S., Physics, New Mexico State University, 2013
- B.S., Engineering Physics, University of Colombo, Sri Lanka, 2009

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Department of Mathematical Sciences, College Assistant Professor, August 2017- October 2017, part time
- New Mexico State University (NMSU), Department of Physics, Tutor, June 2017 – August 2017, part time
- New Mexico State University (NMSU), Department of Physics, Graduate Assistant, August 2010 – May 2017, part time
- University of Colombo, Sri Lanka, Department of Physics, Teaching Assistant, September 2009 – July 2010

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Intel Corporation, Process Engineer, October 2017- present, full time
- Department of Physics, NMSU, Computer system administrator, December 2014 – May 2015, part time.
- Los Alamos National Lab High Performance Computing Mini-Bootcamp (August-2016), part time.

Certifications or professional registrations

- n.a

Current membership in professional organizations

- American Physical Society (AVS)
- American Vacuum Society (AVS)

Honors and awards

- n.a

Service activities (within and outside of the institution)

- n.a

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- N.S. Fernando, R. Hickey, J. Hart, D. Zhang, R. Hazbun, J. Kolodzey, and S. Zollner, *Strain dependence of the band structure and optical properties of pseudomorphic* $Ge_{1-x-y}Si_xSn_y$ *on Ge* (submitted, 1st review).
- N. S. Fernando, T.N. Nunley, A. Ghosh, C.M. Nelson, J. Cooke, A. A. Medina, C. Xu, J. Menendez, J. Kouvetakis, S. Zollner, *Temperature dependence of the interband critical points of bulk Ge and strained Ge on Si*, Appl. Surf. Sci., **XX**, XXXX (2016). (in press)

- C. Xu, N.S. Fernando, S. Zollner, J. Kouvetakis, and J. Menéndez, *Observation of phase-filling singularities in the optical dielectric function of highly doped n-type Ge*, Phys. Rev. Lett. **118**, 267402 (2017).
- Ryan Hickey, Nalin Fernando, John Hart, Ramsey Hazbun, Stefan Zollner and James Kolodzey, *Properties of pseudomorphic and relaxed Germanium$_{1-x}$Tin$_x$ alloys with Tin Contents up to 18.5 Percent grown by MBE,* J. Vac. Sci. Technol. B **35**, 021205 (2017).
- T.N. Nunley, N.S. Fernando, N. Samarasingha, J.M. Moya, C.M. Nelson, A.A. Medina, S. Zollner, *Optical constants of germanium and thermally grown germanium dioxide from 0.5 to 6.6 eV via a multi-sample ellipsometry investigation,* J. Vac. Sci. Technol. B **34**, 061205 (2016).
  - R. H azbun, J. Hart, R. Hickey, A. Ghosh, N. Fernando, S. Zollner, T. Adam, and J. Kolodzey, *Silicon epitaxy using tetrasilane at low temperatures in ultra high vacuum chemical vapor deposition,* J. Crystal Growth, **444,** (2016).
  - J. Hart, R. Hazbun, D. Eldridge, R. Hickey, N. Fernando, T. Adam, S. Zollner, and J. Kolodzey, *Tetrasilane and Digermane for the ultra-high vacuum chemical vapour deposition of SiGe alloys,* Thin Solid Films **604,** (2016).

Briefly list the most recent professional development activities

- International Conference on Frontiers of Characterization and Metrology for Nanoelectronics (FCMN), Monterey, CA, 21-23 March 2017.
- American Vacuum Society (AVS) 63rd International Symposium, Nashville, TN, 6-11 November 2016.
- IEEE Summer Topicals Conference on Emerging Technology for Integrated Photonics, Newport Beach, CA, 11-13 July 2016.

Galen Helms

Education – degree, discipline, institution, year

- B.S., Engineering Physics, New Mexico State University, Las Cruces, 2015

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Lab Coordinator, 2016 – 2107, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Desert Dough Pizza Inc. DBA Domino's Pizza, Director of Training, Management and new employee training for franchise, 2006-2011, part time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- n.a.

Honors and awards

- Nominated and inducted into ΣΠΣ

Service activities (within and outside of the institution)

- n.a.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- n.a.

Briefly list the most recent professional development activities

- n.a.

Greggory McPherson

Education – degree, discipline, institution, year

- M.S., Physics, New Mexico State University, USA, 2014
- B.S., Physics, New Mexico State University, USA, 2011

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Teaching Assistant, 20012 – present, part time
- NMSU, Department of Physics, Undergraduate Tutor, 2009-2010, part time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Physical Society (4-Corners Section, Division of Materials Physics)
- Biophysical Society

Honors and awards

- Outstanding Teaching Assistant, NMSU Department of Physics, 2017

Service activities (within and outside of the institution)

- Officer in the Physics Graduate Student Organization, NMSU, President (2015), Treasurer (2016-present)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Contributed Poster at APS Texas 4-Corners Joint Meeting, Las Cruces, October 10, 2016
- Urquidi, J., Anovitz, L. M., Amburgey, J. Contributed Talk at APS 4-Corners Section Meeting, Orem Utah, October 17, 2014
- Contributed Talk at Graduate Research and Arts Symposium, New Mexico State University, Las Cruces, April 7, 2013

Briefly list the most recent professional development activities

- Attended faculty workshop hosted by NMSU Teaching Academy: “Getting Our Students to Work in Every Class - From Fast-Paced Formative Feedback Techniques to Facilitating Collaborative Problem Solving in a Flipped Course” by Dr. Edward Prather, January 30, 2017

Nathan Nunley

Education – degree, discipline, institution, year

- Ph.D., Physics, The University of Texas at Austin, In Progress
- M.S., Physics, New Mexico State University, 2016
- B.S., Engineering Physics, New Mexico State University, 2015

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- The University of Texas at Austin, Department of Physics, Graduate Teaching Assistant, Fall 2016-Present, part time
- The University of Texas at Austin, Department of Physics, Graduate Research Assistant, May 2017-August 2017, full time
- NMSU, Department of Physics, Graduate Research Assistant, August 2015-July 2016, full time
- NMSU, Department of Physics, Undergraduate Research Assistant, Spring 2015-Fall 2012, part time
- NMSU, Department of Physics, Supplemental Instruction Teacher, Fall 2015-Spring 2016, part time
- NMSU, Department of Physics, Graduate Teaching Assistant, Fall 2015-Spring 2016, part time
- NMSU, Department of Physics, Peer Learning Assistant, Fall 2014-Spring 2015, part time
- NMSU, Department of Chemistry, Supplemental Instruction Facilitator, Spring 2013-Spring 2014, part time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Air Force Research Laboratory, Kirtland Air Force Base, Phillips Scholar, Summer 2015, full time

Certifications or professional registrations

- N/A

Current membership in professional organizations

- American Physical Society (Texas Section, DMP, DCMP)
- American Association of Physics Teachers
- IEEE

Honors and awards

- Physics Department Top Graduate Teaching Assistant, Spring 2016
- Crimson Scholar Graduate with Honors, Spring 2015
- Physics Department Outstanding Graduating Senior, Spring 2015
- Physics Department Top Undergraduate Teaching Assistant, Spring 2015
- New Mexico Space Grant Consortium Undergraduate Scholarship, 2013-2015

Service activities (within and outside of the institution)

- N/A

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- N.S. Fernando, T.N. Nunley, A. Ghosh, C.M. Nelson, J.A. Cooke, A.A. Medina, S. Zollner, C. Xu, J. Menendez, and J. Kouvetakis, Temperature dependence of the interband critical points of bulk Ge and strained Ge on Si, *Appl. Surf. Sci.* 421 B, 905-912 (2017).
- T.N. Nunley, T.I. Willett-Gies, J.A. Cooke, F.S. Manciu, P. Marsik, C. Bernhard, and S. Zollner, Optical constants, band gap, and infrared-active phonons of $(LaAlO_3)_{0.3}(Sr_2AlTaO_6)_{0.35}$ (LSAT) from spectroscopic ellipsometry, *J. Vac. Sci. Technol. A* 34, 051507 (2016)
- T.N. Nunley, N.S. Fernando, N. Samarasingha, J.M. Moya, C.M. Nelson, A.A. Medina, and S. Zollner, Optical constants of germanium and thermally grown germanium dioxide from 0.5 to 6.6eV via a multisample ellipsometry investigation, *J. Vac. Sci. Technol. B* 34, 061205 (2016).
- S. Zollner, T.N. Nunley, D.P. Trujillo, L. G. Pineda, and L. S. Abdallah, Temperature-dependent dielectric function of nickel, *Appl. Surf. Sci.* 421 B, 913-916 (2017).
- T.N. Nunley, N.S. Fernando, J.M. Moya, C.M. Nelson, A.A. Medina, and S. Zollner, Optical constants of Ge and thermally grown GeO2 from 0.5 to 6.6 eV via multi-sample ellipsometry, *7th International Conference on Spectroscopic Elipsometry*, Berlin, Germany, June 7th, 2016
- O'Hara, T.N. Nunley, A.B. Posadas, S. Zollner, and A.A. Demkov, Electronic and optical properties of NbO_2, *J. Appl. Phys.* 116, 213705 (2014).

Briefly list the most recent professional development activities

- Regular attendee and participant at the annual section and national meetings of the American Physical Society (2014-2017)

Nuwanjula Samarasingha

Education – degree, discipline, institution, year

- Ph. D. Candidate, Physics, New Mexico State University, Las Cruces, NM, United States, 2015 January to present.
- M.S., Physics, New Mexico State University, Las Cruces, NM, United States (fall 2017 expected).
- B.S., Physics, University of Peradeniya, Sri Lanka, 2013.

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University (NMSU), Department of Physics, Teaching assistant, January 2015 to present, part time.
- NMSU, Department of Physics, Research assistant, May 2015- June 2015, January 2017 – July 2017, part time.
- NMSU, Department of Physics, Instructor for Engineering and General Physics Lab - PHYS 216GL, PHYS 212GL, Summer -2016 and 2017.
- University of Peradeniya, Department of Physics, Teaching assistant, February 2013 – November 2014.

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Vacuum Society (AVS).
- American Physical Society (APS).

Honors and awards

- Best student presentation in Ellipsometry focus topic session -AVS 63rd International Symposium and Exhibition, Nashville, TN, 2016.
- Won 3rd place in oral presentation - AVS New Mexico Symposium, Albuquerque, NM, May 16th, 2017.

Service activities (within and outside of the institution)

- Volunteer judge for the Southwestern New Mexico Regional and Engineering Fair, Las Cruces, NM, 04 March 2017.
- Vice President of Physics Graduate Student Organization, New Mexico State University (2016- 2017).

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- T.N. Nunley, N.S. Fernando, N. Samarasingha, J.M. Moya, C.M. Nelson, A.A. Medina, S. Zollner, Optical constants of germanium and thermally grown germanium dioxide

from 0.5 to 6.6 eV via a multi-sample ellipsometry investigation, J. Vac. Sci. Technol. B 34, 061205, 2016. DOI: 10.1116/1.4963075.

- T.N. Nunley, N.S. Fernando, N. Samarasingha, J.M. Moya, C.M. Nelson, A.A. Medina, S. Zollner, Precise optical constants of Ge and GeO_2 from 0.5 to 6.6 eV, IEEE Summer Topicals Conference on Emerging Technology for Integrated Photonics, July 2016, Newport Beach, CA. DOI: 10.1109/PHOSST.2016.7548738.
- Nuwanjula Samarasingha, Zachary Yoder, Stefan Zollner, Dipayan Pal, Aakash Mathur, Ajaib Singh, Rinki Singh, Sudeshna Chattopadhyay, Excitonic effects on the optical properties of thin ZnO films on different substrates, AVS 64th International Symposium & Exhibition, Tampa, Florida, October 30 – November 3, 2017.
- Nuwanjula Samarasingha, Cesar Rodriguez, Jaime Moya, Nalin Fernando, Stefan Zollner, Patrick Ponath, Kristy J. Kormondy, Alex Demkov, Dipayan Pal, Aakash Mathur, Ajaib Singh, Surjendu Dutta, Jaya Singhal, Sudeshna Chattopadhyay, Excitonic effect at interfaces in thin oxide films, AVS New Mexico Symposium, Albuquerque, NM, May 16th, 2017.
- Nuwanjula Samarasingha, Cesar Rodriguez, Jaime Moya, Nalin Fernando, Stefan Zollner, Patrick Ponath, Kristy J. Kormondy, Alex Demkov, Dipayan Pal, Aakash Mathur, Ajaib Singh, Surjendu Dutta, Jaya Singhal, Sudeshna Chattopadhyay, Excitons at interfaces in ellipsometric spectra, AVS 63rd International Symposium & Exhibition, Nashville, TN, 6-11, November 2016.
- Nuwanjula Samarasingha, Cesar Rodriguez, Jaime Moya, Nalin Fernando, Stefan Zollner, Patrick Ponath, Kristy J. Kormondy, Alex Demkov, Dipayan Pal, Aakash Mathur, Ajaib Singh, Surjendu Dutta, Jaya Singhal, Sudeshna Chattopadhyay, Excitons at interfaces in thin oxide films, APS Four Corners Section Meeting, Las Cruces, NM, 21-22 October 2016.
- N. Samarasingha, C. Rodriguez, J. Moya, S. Zollner, N. Fernando, S. Chattopadhyay, P. Ponath, and A.A. Demkov, Structural and optical properties of $SrTiO_3$ thin films on different substrates, Lawrence Symposium on Epitaxy, Scottsdale, AZ, 21-24 February 2016.
- N. Samarasingha, C. Rodriguez, J. Moya, S. Zollner, N. Fernando, S.Chattopadhyay, P. Ponath, and A.A. Demkov, Structural and optical properties of $SrTiO_3$ thin films on semiconductors, The 43rd Conference on the Physics and Chemistry of Surfaces and Interfaces, Palm Springs, CA, 17-21 January 2016.
- N. Samarasingha, J. Moya, S. Zollner, S. Chattopadhyay, P. Ponath, and A. Demkov, Structural properties of $SrTiO_3$ thin films on semiconductors, APS Four Corners Section Meeting, Tempe, AZ, 16 October 2015.

Briefly list the most recent professional development activities

- Regular attendee and participant at the annual AVS International Symposium and Exhibition (2016-2017).

Hasan Cavit Sezer

Education – degree, discipline, institution, year

- Ph. D student, New Mexico State University started in 2014
- M.S in Theoretical Physics, Stockholm University 2011
- B.S., Physics, Isik University, Turkey 2007

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Physics, Teaching Assistant, 2014-2017, part time
- Istanbul Technical University, Department of Physics Engineering, part time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

n.a

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- n.a

Honors and awards

- Honor Student at Işık University 2003-2004,
- Scholarship By ÖSYM (Student Selection and Placement Center)

Service activities (within and outside of the institution)

- Research Assistant at Stockholm University 2010-2011, Quantum Information and Quantum Computation Group, Stockholm, Sweden

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation
Briefly list the most recent professional development activities

- A Representation of Extraspecial 2-Group, Entanglement and Berry Phase of Two Qubits in a Yang-Baxter System, *J. of Quantum Information* **11**, Number 6 (2012) pp 1685-1694
- Quantum Entanglement Properties of Geometrical andTopological Quantum Gates (Advances in Quantum Theory: Proceedings of Int. Conf. on Advances in Quantum Theory. AIP Conference Proceedings, Volume 1327 (2011) pp, 472-476.
- Poster: H. Cavit Sezer, H. Ngoc Duy, Hoshang Heydari, Geometric Phases of different Classes of Four-Qubit States. (Advances in Quantum Theory Conference, Vaxjö University, June 2010)
- Poster: H. CavitSezer, Hoshang Heydari, Quantum Entanglement Properties of Geometrical and Topological Quantum Gates (Quantum Computation and Quantum Information Conference- Wenner Gren Center, Stockholm, October 2010)

Briefly list the most recent professional development activities

- n.a.

Samantha Sword-Fehlberg

Education – degree, discipline, institution, year

- Ph. D., Physics, New Mexico State University (NMSU), In Progress
- B.S., Physics and Astronomy, Northern Arizona University (NAU), 2016

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Department of Physics, Research Assistantship, 2017 – Present, Half time
- NMSU, Department of Physics, Graduate Assistantship, 2016 – 2017, Half time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Center for Computing Excellence: HEP Fellowship Recipient, Fermi National Laboratory, Summer 2017, Full Time
- Air Force Research Laboratory (AFRL) Summer Scholar, Kirtland AFB, Albuquerque, NM, Summer 2016, Full time
- AFRL Summer Scholar, Kirtland AFB, Albuquerque, NM, Summer 2015, Full time
- Boston College Intern, Kirtland AFB, Albuquerque, NM, Winter 2014, Full time
- Boston College Intern, Kirtland AFB, Albuquerque, NM, Summer 2014, Full time

Certifications or professional registrations

- Secret Security Clearance granted by Federal Government
- Class IV Laser Usage through NAU and Federal Government
- Trained in traditional first aid as well as acute response techniques

Current membership in professional organizations

- American Physical Society (APS), 4-Corners Section
- Sigma Pi Sigma Physics Honor Society
- Optical Society of America

Honors and awards

- Received Position of Student at Large Member of Four-Corners Section of the American Physical Society , 2016
- Graduated with NAU Department Honors
- Member of NAU Dean's List for 5 Semesters
- NAU Department Scholarship for Academic Success, 2015-2016
- Recipient of Girl Scout Gold Award (equivalent to Eagle Scout), 2012

Service activities (within and outside of the institution)

- President of the Physics Graduate Student Organization, Fall 2017 – Present
- Student Member at Large of Four-Corners Section of the APS, 2016-Present
- Chair of the Spherical Cow Award Organizing Committee of the 2016 Joint Four-Corners/Texas Sections meeting of the APS, Fall 2016
- Volunteer Camp Counselor, Camp Mary White, 2013-2015

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

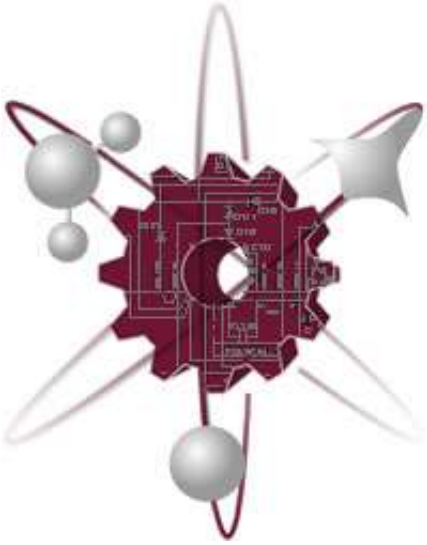
- Multi-Particle Identification Using Convolutional Neural Networks in Microboone, APS Four-Corners Section Meeting, Fort Collins, Colorado, October 21, 2017
- Efficient Coupling of a Super Continuum Laser to a Double Monochromator, Kirtland AFB (Talk, August 2015), NAU (Talk, Sep 2015), APS Four-Corners Section Meeting (Poster, October 2015)
- Spectral Calibration of Hyperspectral Imagers, Kirtland AFB (Talk, August 2014), NAU (Talk, September, 2014)

Briefly list the most recent professional development activities

- Regular attendee and participant at the annual 4-Corners Section meetings of the APS (2015-2017)

Engineering Physics Program

(Bachelor of Science in Engineering Physics)



at

New Mexico State University

Tenured & Tenure-Track Faculty – Department of Mechanical & Aerospace Engineering

Abdessattar Abdelkefi

Education – degree, discipline, institution, year

- Ph.D. in Engineering Mechanics, Virginia Polytechnic Institute and State University, (2012)
- MS in Mechanical Engineering, Tunisia Polytechnic School – Tunisia (2009)
- BS in Mechanics and Structures, Tunisia Polytechnic School – Tunisia (2009)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (08/2014 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University
- Postdoctoral Research Fellow (08/2012– 08/2014), Virginia Polytechnic Institute and State University
- Research/Teaching Assistant (01/2010– 07/2012), Virginia Polytechnic Institute and State University

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- none

Certifications or professional registrations

- none

Current membership in professional organizations

- American Institute of Aeronautics and Astronautics, AIAA
- American Society for Engineering Education, ASEE
- Member, Energy Harvesting Network, EPSRC

Honors and awards

- *Liviu Liberscu Memorial Scholarship* of the Department of Engineering Science and Mechanics at Virginia Tech, rewarded based on the criteria of *"having the potential for scholarly achievement in teaching and research, and a demonstrated dedication to the welfare and well-being of others.",* Spring 2011.
- *Bechtel Graduate Travel Fellowship "available on a yearly basis for ten EM doctoral students of the Department of Engineering Science and Mechanics at Virginia Tech",* Spring 2011.
- *Master degree top student award*, Summer 2009.
- *Best Engineering Internship Award,* Summer 2009.

Service activities (within and outside of the institution)

- Editorial Board: (1) Heliyon, (2) International Journal of Recent advances in Mechanical Engineering (IJMECH).
- Associate Editor: (1) Journal of Applied and Computational Mechanics, (2) Advances in Engineering Science and Technology, (3) Robotics & Automation Engineering Journal.

- Reviewer for two books proposals in Elsevier.
- Member of the Graduate committee of the Mechanical and Aerospace Engineering Department at NMSU.
- Member of the Faculty Advisory Committee on Technology (FACT) at NMSU.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Hassanalian, M., Rice, D., and Abdelkefi, A., 2018, Evolution of space drones for planetary exploration: A review, *Progress in Aerospace Sciences, 97, 61-105.*
- Taylor, G., Ceballes, S., and Abdelkefi, A., 2018, Insights on the point of contact analysis and characterization of constrained pipelines conveying fluid. *Nonlinear Dynamics*, 1-15
- Hassanalian, M., Ben Ayed, S., Ali, M., Houde, P., Hocut, C., and Abdelkefi, A., 2018, Insights on the thermal impacts of wing colorization of migrating birds on their skin friction drag and the choice of their flight route, *Journal of Thermal Biology, 72, 81-93*.
- Larkin, K., Ghommem, M., and Abdelkefi, A., 2018, Significance of size dependent and material structure coupling on the characteristics and performance of nanocrystalline micro/nano gyroscopes, *Physica E Low-dimensional Systems and Nanostructures, 99, 169-181.*
- Salazar, R., Fuentes, V., and Abdelkefi, A., 2018, Classification of biological and bioinspired aquatic systems: a review, *Ocean Engineering, 148, 75-114.*
- Dai, H., Ceballes, S., Abdelkefi, A., Y. Hong, and Wang, L., 2018, Exact modes for post-buckling characteristics of nonlocal nanobeams in a longitudinal magnetic field, *Applied Mathematical Modelling, 55, 758-775.*
- Hassanalian, M., Throneberry, G., Ali, M., Ben Ayed, S., and Abdelkefi, A., 2018, Role of wing color and seasonal changes in ambient temperature and solar irradiation on predicted flight efficiency of the Albatross, *Journal of Thermal Biology, 71, 112-122.*
- Zimmerman, S. and Abdelkefi, A., 2017, Review of marine animals and bioinspired robotic vehicles: classifications and characteristics, *Progress in Aerospace Sciences*, *93, 95-119.*
- Abdelmoula, H., Sharpes, N., Abdelkefi, A., Lee, H. and Priya, S., 2017, Low-frequency Zigzag energy harvesters operating in torsion-dominant mode, *Applied Energy, 204, 413-419.*
- Ali-Akbari, H.R., Ceballes, S., and Abdelkefi, A., 2017, Geometrical influence of a deposited particle on the performance of bridged carbon nanotube-based mass detectors, *Physica E Low-dimensional Systems and Nanostructures, 94, 31-46.*
- Abdelmoula, H., Zimmerman, S., and Abdelkefi, A., 2017, Accurate modeling, comparative analysis, and performance enhancement of broadband piezoelectric energy harvesters with single and dual magnetic forces, *International Journal of Non-Linear Mechanics, 95, 355-363.*

Briefly list the most recent professional development activities

- n.a.

Terry W. Armstrong

Education – degree, discipline, institution, year

- Ph.D. in Aerospace Engineering, New Mexico State University –NM (2015)
- MS in Aeronautical Science, Embry-Riddle University– FL (2000)
- BS in Engineering Science, United States Air Force Academy – CO (1985)
- Formal military courses: Air Command & Staff College (1999), Squadron Officer School (1990), Safety Board President course, Government Flight Representative course, etc

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (01/2016 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Air Operations Manager (11/2013 – 01/2014) Global Military Experts Consulting - Kandahar Afghanistan
- Senior Analyst (11/2008 – 10/2009) Advanced Concepts Enterprises, Inc - Eglin AFB, FL
- Deputy Director/Director (10/2004 – 09/2006) Air Force Operational Test and Evaluation Center, Special Test Directorate - Kirtland AFB, NM
- Chief of Flight Safety (02/2002 – 10/2009) United States Air Forces Europe - Ramstein AB, GE
- Commander (07/1999 – 02/2002) Detachment , 85th Test and Evaluation Squadron - Tyndall AFB, FL
- Government Flight Representative (07/1998 – 07/1999) Defense Contract Management Agency - Kimhae, KR
- F-15 Instructor Pilot/Assistant Operations Officer (08/1995 – 07/1998) 95th Fighter Squadron - Tyndall AFB, FL
- F-15 Pilot/Chief of Training/Chief of Scheduling (06/1991 – 08/1995) 59th Fighter Squadron - Eglin AFB, FL
- T-38 Instructor Pilot (10/1986 – 10/1990) 80th Flying Training Wing - Sheppard AFB, TX

Certifications or professional registrations

- None

Current membership in profession organizations

- Order of Daedalians

Honors and awards

- 2018 NMSU Frank Bromilow Engineering Teaching Excellence
- Air Medal, Aerial Achievement Medal, various service medals, United States Air Force (1985-2006)

- Major Herschel H. Green Trophy, Order of Daedalians, 1997
- "Turkey Shoot" Top Flight, Lead, 95th Fighter Squadron, 1997
- Top Gun 97-1, 95th Fighter Squadron, 1997
- Top Flight 97-1, 95th Fighter Squadron, 1997
- Top Gun Wingman, 59th Fighter Squadron, 1993
- F-15 Outstanding Graduate, 325th Fighter Wing, 1991
- T-38 Instructor of the Quarter, 80th Flying Training Wing, 1989 & 1990
- Top T-38 Aircrew & Top Team Awards, Air Education and Training Command, Torchlight Competition, 1989
- T-38 Well Done Award, 80th Flying Training Wing, 1988
- Service activities (within and outside of the institution) –
- Pearson Publishing professional review of Moving Frames in Dynamics textbook
- Skoltech Russia Center for Design Review Committee
- Bechtel Nevada Test Site Senior Test & Evaluation Independent Review Committee
- Boy Scouts of America Eagle Badge Seminar
- 24 NMSU student letters of recommendation
- NMSU Air Force ROTC Keynote Speaker
- NMSU Air Force ROTC Engineering Lecture

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Correlation of Electrical and Mechanical Properties of Cracked Conductive Materials, 2015 UMI Publishing
- Electrical Impedance Changes Due to Cracks in Planar Conductive Elements (2015), Structural Health Monitoring
- Extension of Elasto-static and Resistive Cross-Property Connections to Impedence (2014), International Journal of Engineering Science
- Evaluation of Strength of Plane Microcracked Structural Elements (2014), International Journal of Fracture

Briefly list the most recent professional development activities

- none

Vimal Chaitanya

Education – degree, discipline, institution, year

- Ph.D. in Materials Science and Engineering, The Johns Hopkins University, 1984
- MS in Bioengineering, Clemson University, 1979
- BE in Mechanical Engineering, The M.S. University of Baroda, India, 1973

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Professor (01/01/2017 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University
- Professor and Vice President for Research - NMSU (07/2006 – 12/31/2016), Department of Mechanical and Aerospace Engineering, New Mexico State University
- Director, Advanced Materials Processing and Analysis Center (08/1998 – 06/2006), University of Central Florida
- Program Director Materials Science and Engineering Graduate Degrees (08/1999 – 06/2006), University of Central Florida
- Professor (08/1998 – 06/2006), University of Central Florida
- Associate Professor (08/1989 – 07/1998), University of Central Florida
- Assistant Professor (08/1984 – 07/1989), University of Central Florida

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Guest Scientist (08/1983 – 07/1984), National Bureau of Standards (Now NIST)
- Assistant Mechanical Engineer (08/1973 – 08/1977), The Gujarat State Fertilizers Corporation Limited, Baroda, India

Certifications or professional registrations

- Professional Engineer (PE), State of Florida, 1988 (currently inactive)

Current membership in profession organizations

- Association of the Public and Land Grant Universities APLU
- National Academy of Inventors NAI
- The Electrochemical Society ECS
- The American Society for Materials ASM

Honors and awards

- Research Achievement Award, University of Central Florida, 2003
- Excellence in Professional Service Award, University of Central Florida, 2002
- Member of President's Millionaire Club (for bringing >$1M in a year), 2001
- Nominated for the UCF Pegasus Professor Award, 2000, 2002
- UCF Leadership Award, 1999

Service activities (within and outside of the institution)

- Editorial Board, Journal of Innovation, National Academy of Inventors, 2010-present

- Executive Committee, Council on Research (COR), Association of the Public and Land Grant Universities (APLU), 2011-2016
- Vice-Chair, Dielectric Science and Technology, The Electrochemical Society, 2016-present
- Vice President, Arrowhead
- Member, New Mexico Council for Research and Development Collaboration, 2012-2106
- Member, Education Committee, The Electrochemical Society, 2010-present
- Member, Awards and Honors Committee, The Electrochemical Society, 2016-present.
- Chair, Summer Fellowship Program Committee, The Electrochemical Society, 2008-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- 1G. Chen, E. Fu, M. Zhou, Y. Xu. L. Fei, S. Deng, V. Chaitanya, Y. Wang and H. Luo. "A Facile Microwave-assisted Route to Co(OH)2 and Co3O4 Nanosheet for Li-ion Battery", J. of Alloys and Compounds, 578 (2013) 349-354
- Butler, B., Chopra, M.B., Kassab, A.J. and Chaitanya, V., Boundary Element Model for Electrochemical Dissolution under Externally Applied Low Level Stress Engineering Analysis with Boundary Elements, 37 (2013) 977-987
- Chaitanya, V., 232nd ECS Fall Meeting, The Electrochemical Society, National Harbor, MD, "Sustainable Autarky of Food-Energy-Water (SAFE-Water)", October 1-5, 2017
- Chaitanya, V. (Panelist and Speaker), Association of Public and Land Grant Universities – Council on Research, "Breaking down silos between research centers and academic units," July 9-11, 2017

Briefly list the most recent professional development activities

- Interim Director of Energy Research Lab, working on enhancing research in areas of Energy-Water nexus, Materials for Energy and Materials Degradation, 2017-present.
- Working with DOE-Los Alamos National Lab to foster a Regional Academic Collaboration (REACT) in STEM disciplines and address the workforce pipeline needs of the Nation while creating collaborative opportunities for Universities with Government Labs, 2017-present.
- Assisted in creating and administering interdisciplinary graduate degree programs (Masters and Ph.D.) in Water Science and Management at NMSU, 2012-2016.
- Created strategic initiative office in 2008, which was later renamed office of research development to align with the professional organization, NORDP.
- Created a user lab facility for NMSU researchers named CURRL (Core University Resource Research Laboratory) with a full time Director
- Participated in formulating and functioning of New Mexico Collaborative Research and Development Council (NMCRDC) working with the legislative staff of the congressional delegation to improve collaboration between universities, government labs and defense institutions within the state of NM.

Ruey-Hung Chen

Education – degree, discipline, institution, year

- Ph.D. in Aerospace Engineering, The University of Michigan – Ann Arbor (1988)
- MS in Aerospace Engineering, The University of Michigan – Ann Arbor (1984)
- BS in Aeronautical Engineering, National Cheng-Kung University – Taiwan (1981)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Robert G. Myers Professor and Department Head (01/2016 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University full-time
- Associate Chair (08/03 – 08/06) and Graduate Coordinator (08/03 – 09/04 and 08/07 – 08/08), Department of Mechanical, Materials and Aerospace Engineering, University of Central Florida, Orlando, Florida
- Professor (08/2004 – 12/2015; on sabbatical leave, 08/2006 – 04/2007)
  Associate Professor (1998 – 2004), Assistant Professor (1993 – 1998)
  Department of Mechanical, Materials and Aerospace Engineering, University of Central Florida, Orlando, Florida

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Program Director (9/12 – 09/15) Combustion and Fire Systems Program
- Program Director (Acting) (08/14 – 08/15) Thermal Transport Processes Program
  National Science Foundation (NSF)
- Faculty Research Participant
  National Energy Technology Laboratory (NETL), Pittsburgh, PA (through Oak Ridge Institute for Science and Education; 11/06 – 07/07, 05/08 – 07/08, 04/09 – 06/11)
- Aerospace Engineer (08/1992 – 12/1992)
  AeroChem Research Laboratories, Princeton, New Jersey

Certifications or professional registrations

- none

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME), the Combustion Institute, ASEE

Honors and awards

- Distinguished Alumnus Award, Institute of Aeronautics and Astronautics, National Cheng-Kung University, Taiwan (to receive on November 12, 2016)
- Excellence in Undergraduate Teaching Award, College of Engineering and Computer Science, University of Central Florida (UCF), 2012
- Best Paper Award, ASCE (American Society of Civil Engineers) Earth and Space 2010 Conference – "Study of Fire Retardant Performance of Composite Coated with Hybrid Carbon Nanofiber Papers"
- UCF Teaching Incentive Award for academic years 1998 – 2003

- (Florida) State University System/UCF/COE Teaching Incentive Award from 1994 – 98
- UCF MMAE Undergraduate Teaching Award (1996, 1998, 1999, 2009, 2012)
- UCF MMAE Graduate Teaching Award (1995, 2010)
- UCF MMAE Advising Award (2005)
- Achievement Award (25 awarded out of approx. 7,000 students), National Cheng-Kung University, Taiwan, 1980

Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation
- Reviewer, Air Force Office of Scientific Research
- Reviewer – International journal of Heat and Mass Transfer, AIAA Journal of Thermophysics and Heat Transfer

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Y. Wei, F.S. Segura, W. Deng, and Ruey-Hung Chen (2018) Ignition of counter-flow diffusion flames: effect of diluents and diffusive-thermal properties, accepted for publication, International Journal of Heat and Mass Transfer, Vol. 123, 988-993.
- Foundations of Gas Dynamics – Cambridge University Press, 418 pp, April 2017 (ISBN 978-1-107-08270-0) (single author)
- R. Holguin, K. Kota, S. Wooten, Ruey-Hung Chen, S. Ross (2017) Enhanced boiling heat transfer on binary surfaces, International Journal of Heat and Mass Transfer, Vol. 114, 1105-1113.
- Y. Wei, W. Deng, and Ruey-Hung Chen (2016) Effects of internal circulation and particle mobility during nanofluid droplet evaporation, International Journal of Heat and Mass Transfer, Vol. 103, 1335-1347.
- Y. Wei, W. Deng, and Ruey-Hung Chen (2016) Effects of insoluble nano-particles on nanofluid droplet evaporation, International Journal of Heat and Mass Transfer, Vol. 97, 725-734.
- M. Robayo, B. Beaman, B Hughes, B. Delose, N. Orlovskaya, and Ruey-Hung Chen (2014) Perovskite catalyst enhanced combustion on porous media, Energy, Vol. 76, 477-486.
- M. Tsoi, J. Zhuge, Ruey-Hung Chen, and J. Gou (2014) Modeling and experimental studies of thermal degradation of glass fiber reinforced polymer composites, Fire and Materials, Vol. 38(2), 247-263.
- K. Mueller, O. Waters, V. Bubnovich, N. Orlovskaya, and Ruey-Hung Chen (2013) Super-adiabatic combustion in Al_2O_3 and SiC coated porous media for thermoelectric power conversion, Energy, Vol. 56, 108-116.
- Tran X. Phuoc and Ruey-Hung Chen (2013) Spontaneous ignition of low-concentration nano-sized Al-water slurry, Applied Energy, Vol. 101, 567-571.

Briefly list the most recent professional development activities

- AIAA Sci Tech Conference, Kisseemmee, FL, January 8-12, 2018
- ASEE Annual Conference, Columbus, OH, June, 2017

- NMSU Teaching Academy – Activities include Department Head Training, On-line Course Quality Matter Workshop

Vincent K. Choo

Education – degree, discipline, institution, year

- Ph.D., Composite Materials, 1982, Liverpool University, U.K.
- B.Sc., ME (Honors), 1977, Nottingham University, U.K.

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Mech Engr, New Mexico State University, Associate Professor, Aug '92 - Present
- Mech Engr, New Mexico State University, Assistant Professor, May '85 - Aug '92
- Mech Engr, Univ of Washington, Seattle, Visiting Assistant Professor, Apr '83-Dec '84
- Imperial College, London, U.K., Postdoctoral Research Assistant, Oct-Dec 1982

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Consulting Experience:
- Turbo-Care, a subdivision of Westinghouse, Houston, USA, 2004
- Abitibi, Arizona, USA, 1999
- Summer Assignment, Boeing, Seattle, USA, 1998
- Crescent Consultants LTD., Nottingham, U.K., 1991
- Sund Defibrator AB, Stockholm, Sweden, 1985
- Boeing Airplane Company, Seattle, Washington, 1984
- 1983 - Flow Industries, Kent, Washington

Certifications or professional registrations

- none

Current membership in professional organizations

- none

Honors and awards

- none

Service activities (within and outside of the institution)

- ME, NMSU, ABET committee member
- ME, NMSU, Faculty Peer Review committee member
- Judging Panel:
- Science Fair, Desert Spring Christian School, January 13, 2017.
- Panel Review of Proposals:
- Proposal review for New Mexico Space Grants Consortium 2011

- NSF Instrumentation and Laboratory Improvement Program, 1993
  - Book Review:
- Analytic Dynamics, MrGraw Hill, 1997

- Basic Mechanical Design, by J.E. Shingley McGraw-Hill, September, 1993

Briefly list the most recent professional development activities

- "On the Topic of Assessment and Evaluation", ASEE Gulf Southwest Annual Conference, Bridging Theory and Practice in Engineering and Technology Education, UTEP, EL PASO, April 2012
- Workshop hosted by the NMSU Teaching Academy:
- 6/30/2011 - Documenting Effective Teaching in a Scholarly Manner. As a participant
- Seminar hosted by the NMSU Teaching Academy
- 10/13/2011 - How Good is Good Enough? Setting Assessment Benchmarks or Standards. As a participant

Edgar G. Conley

Education – degree, discipline, institution, year

- PhD. Engineering Mechanics, Michigan State University (MSU), East Lansing, MI, l986.
- MSME Machine Design, MSU, l979.
- BSME, MSU, l971.

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor, (1993-present) MAE Dept., New Mexico State University
- NASA Administrator's Faculty Fellow, (2008-2009, twelve-month appointment) John C. Stennis Space Center, MS Gulf Coast.
- Summer Faculty Research Fellow, (summer 1999) The Boeing Company, Seattle, WA.
- Summer Faculty Research Fellow (summers 1992 and 1993) supported by Associated Western Universities, Inc., at the DOE/Waste Isolation Pilot Plant, Carlsbad, NM
- Assistant Professor (1988 - 1993) Mechanical Engineering Department, New Mexico State.
- Assistant Professor (1986 - 1988), Mechanical Engineering Department, University of Alaska Fairbanks, Fairbanks, AK.

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Engineering Consultant (self-employed) - manufacturing, products liability/consulting, and criminal investigations

Certifications or professional registrations

- Registered Professional Engineer, Michigan, #6201025252

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME)
- American Society of Engineering Education (ASEE)

Honors and awards

- Donald C. Roush Excellence in Teaching Award, NMSU Engineering College, 2012
- ASME Student Section Advisor for the Year, 2004 for Region XII
- Professor of the Year, Mechanical Engineering Academy, NMSU from 2000 and 2005

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Invited Workshop: "Hybrid Rocket Experiment Station," NASA Human Exploration and Operations Higher Education Project in partnership with the National Space Grant College and Fellowship Program Fourth Annual Space Grant Faculty Senior Design Training, Kennedy Space Center, FL, July 19&20 2012.

Briefly list the most recent professional development activities

- n.a.

Borys Drach

Education – degree, discipline, institution, year

- Ph.D. in Mechanical Engineering, University of New Hampshire – Durham (2013)
- Cognate in College Teaching, University of New Hampshire – Durham (2013)
- B.S. in Mechanical Engineering, National Technical University of Ukraine – Kyiv (2008)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (08/2013 – Present), Department of Mechanical & Aerospace Engineering, New Mexico State University, Las Cruces NM
- Post-Doctoral Associate (05/2013 – 08/2013), Department of Mechanical Engineering, University of New Hampshire, Durham NH
- Research and Teaching Assistant (08/2008 – 05/2013), Department of Mechanical Engineering, University of New Hampshire, Durham NH

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Mechanical Engineering Intern (06/2012 – 08/2012), SynCardia Systems, Tucson AZ

Certifications or professional registrations

- none

Current membership in profession organizations

- United States Association for Computational Mechanics (USACM)
- International Association for Computational Mechanics (IACM)
- American Society of Mechanical Engineers (ASME)

Honors and awards

- J.T. Oden Faculty Fellow (2015), University of Texas at Austin
- Dissertation Year Fellowship Award (2012-2013), University of New Hampshire
- Golden Key International Honors Society Member (UNH Chapter)

Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation
- Reviewer – International Journal of Solids and Structures; Engineering Fracture Mechanics; Journal of Manufacturing Processes; Advanced Engineering Materials; Acta Mechanica; Materials and Design; Mathematical Methods in the Applied Sciences; Composite Structures; Mechanics of Materials; ASME International Mechanical Engineering Congress & Exposition; International Conference on Composite Materials

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Drach, B., Tsukrov, I., Trofimov, A.*, Gross, T., Drach, A., 2018. "Comparison of stress-based failure criteria for prediction of curing induced damage in 3D woven composites". Composites: Part A, 189, 366-377
- Kuksenko, D.*, Drach, B., 2017. "Effective conductivity of materials with continuous curved fibers". International Journal of Engineering Science, 118, 70-81
- Kuksenko, D.*, Drach, B., Tsukrov, I., 2017. "Prediction of Damage Initiation and Simulation of Damage Propagation in 3D Woven Composites During Processing". Proceedings of the 32nd ASC Technical Conference, West Lafayette, IN, USA
- Trofimov, A.*, Drach, B., Sevostianov, I., 2017. "Effective elastic properties of composites with particles of polyhedral shapes". International Journal of Solids and Structures, 120, 157-170
- Trofimov, A.*, Drach, B., Kachanov, M., Sevostianov, I., 2017. "Effect of a partial contact between the crack faces on its contribution to overall material compliance and resistivity". International Journal of Solids and Structures, 108, 289-297
- Drach, B., Kuksenko, D.*, Sevostianov, I., 2016. "Effect of a curved fiber on the overall material stiffness". International Journal of Solids and Structures, 100-101, 211-222
- Drach, B., Tsukrov, I., Trofimov, A.*, 2016. "Comparison of full field and single pore approaches to homogenization of linearly elastic materials with pores of regular and irregular shapes". International Journal of Solids and Structures, 96, 48-63
- Tsukrov, I., Drach, B., Trofimov, A.*, 2015. "Comparison of Full Field and Single Inclusion Approaches to Homogenization of Composites with Non-Ellipsoidal Pores". Key Engineering Materials (Advances in Fracture and Damage mechanics XIII), 627, 309-312
- Sevostianov, I., Kachanov, M., Drach, B., 2014. "On the effect of interactions of inhomogeneities on the overall elastic and conductive properties". International Journal of Solids and Structures 51, 4531-4543
- Knezevic, M., Drach, B., Ardeljan, M., Beyerlein, I.J., 2014. "Three dimensional predictions of grain scale plasticity and grain boundaries using crystal plasticity finite element models". Computer Methods in Applied Mechanics and Engineering, 277, 239-259
- Drach, B., Drach, A., Tsukrov, I., 2014. "Prediction of the effective elastic moduli of materials with irregularly-shaped pores based on the pore projected areas". International Journal of Solids and Structures, 51, 2687-2695
- Drach, A., Drach, B., Tsukrov, I., 2014. "Processing of fiber architecture data for finite element modeling of 3D woven composites". Advances in Engineering Software, 72, 18-27
- Drach, B., Drach, A., Tsukrov, I., 2013. "Characterization and Statistical Modeling of Irregular Porosity in Carbon/Carbon Composites Based on X-Ray Microtomography Data". Journal of Applied Mathematics and Mechanics (ZAMM) 93, 346-366

Briefly list the most recent professional development activities

- NMSU Teaching Academy member (2013, 2014)

- NSF Workshops (Arlington VA, 2014; Lubbock TX, 2015)
- Summer Fellowship, University of Texas at Austin (2015)

Gabe Garcia

Education – degree, discipline, institution, year

- Ph.D. in Civil Engineering, Texas A&M University – (1996)
- MS in Mechanical Engineering, New Mexico State University – (1991)
- BS in Mechanical Engineering, New Mexico State University – (1988)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Interim Department Head (07/2015 – 01/16), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, NM
- Associate Chair (01/14 – 11/17), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, NM
- Associate Professor (2002 – present) and Graduate Coordinator (2003 – 2005) Assistant Professor (1996 – 2002)), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, NM

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Faculty Research Participant
  Space and Naval Warfare Systems Center – Pacific (SPAWAR), San Diego, CA
- (05/11 – 08/11, 05/12 – 08/12, 05/13 – 08/13)

Certifications or professional registrations

- none

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME)

Honors and awards

- NMSU MAES Leadership Award 2016
- NMSU MAES Outstanding Professor Award

Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation, (1999, 2002, 2003, 2004)
- Proposal reviewer/panelist, NASA, (2000, 2001)
- Reviewer – International Journal of Solids and Structures (2003)
- ASCE Journal of Structural Engineering (2004)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Leslie, I. H., Garcia, G., and Murray, L., Improving Student Performance in Programming Courses through Unlimited Access to Computer and Software Resources, ASEE Annual Conference & Exposition, Portland, Oregon, June 2005.
- Riley, L. A., Nassersharif, B., Garcia, G., and Schaub, J., An Automated Testing and Classification System For Identifying Defects in Nuclear Steam Generator Tubes

Using a Learning Vector Quantization Neural Architecture, Proceedings of the 2003 Advanced Simulation Technologies Conference, Society for Computer Simulation International, Orlando, Florida, April 2003.

- Jayawardana, S., Garcia, G.V., Nakotte, N., Clausen, B., Bourke, M., Finite Element Modeling of Anisotropic Properties of Cu-Ag Metal Matrix Composites, IEEE Transactions on Applied Superconductivity, Vol. 10 (1), 2000.
- Matthews, L.K. and Garcia, G.V., Laser and Eye Safety in the Laboratory, IEEE Press, New York, 1995.

Briefly list the most recent professional development activities

- Faculty Research Participant (05/11 – 08/11)
  Space and Naval Warfare Systems Center – Pacific (SPAWAR), San Diego, CA
- Faculty Research Participant (05/12 – 08/12)
  Space and Naval Warfare Systems Center – Pacific (SPAWAR), San Diego, CA
- Faculty Research Participant (05/13 – 08/13)
  Space and Naval Warfare Systems Center – Pacific (SPAWAR), San Diego, CA

Andreas Gross

Education – degree, discipline, institution, year

- Dr. Eng. in Mechanical Engineering, RWTH Aachen University – Germany (2002)
- Diploma in Aerospace Engineering, University of Stuttgart – Germany (1997)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (01/14 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Assistant Research Professor (01/05 – 12/13), Department of Aerospace and Mechanical Engineering, University of Arizona, Tucson, Arizona
- Research Associate (01/01 – 12/04), Department of Aerospace and Mechanical Engineering, University of Arizona, Tucson, Arizona

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Summer Faculty Fellowships
  Air Force Research Laboratory (AFRL), Wright-Patterson Air Force Base, Ohio
- (05/14 – 07/14, 05/15 – 07/15, 05/16 – 07/16, 05/18-07/18)

Certifications or professional registrations

- none

Current membership in profession organizations

- American Institute of Aeronautics and Astronautics (AIAA)

Honors and awards

- Outstanding Research Professor Award, NMSU Mechanical and Aerospace Eng. Academy, 2018
- Patricia Christmore Faculty Teaching Award, NMSU, 2017
- Outstanding Professor Award, NMSU Mechanical and Aerospace Engineering Academy, 2017

Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation
- AIAA Fluid Dynamics Technical Committee, Associate Member (2007-2009), Full member (2017-2020)
- Assistant Organizer of 38th and 39th AIAA Fluid Dynamics Conference and 9th AIAA Flow Control Conference

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Andreas Gross, M. Agate, J. Little, H. Fasel, (2018) Numerical Simulation of Wing Section Undergoing Plunging Motions at High Angles of Attack, AIAA Journal, accepted.

- Andreas Gross, C. Marks, R. Sondergaard, (2018) Local Linear Stability Analysis of Curved Turbulent Endwall Boundary Layer in Low-Pressure Turbine Cascade, AIAA Journal, accepted.
- Andreas Gross, C. Marks, R. Sondergaard, P. Bear, and J. Wolff, (2018) Experimental and Numerical Characterization of Flow through Highly Loaded Low-Pressure Turbine Cascade, Journal of Propulsion and Power, Vol. 34(1), 27-39.
- Andreas Gross, C. Marks, R. Sondergaard, (2017) Numerical Investigation of Low-Pressure Turbine Junction Flow, AIAA Journal, Vol. 55 (10), 3617-3621.
- Andreas Gross, H.F. Fasel (2016) Hybrid Turbulence Model Simulations of Partially Stalled Airfoil Flow, AIAA Journal, Vol. 54(4), 1220-1234.
- Andreas Gross, H.F. Fasel (2015) Hybrid Turbulence Model Simulations of Hemisphere-Cylinder Geometry, International Journal of Heat and Fluid Flow, Vol. 54, 28-38.
- Andreas Gross, H.F. Fasel, M. Gaster (2015) Criterion for Spanwise Spacing of Stall Cells, AIAA Journal, Vol. 53(1), 272-274.
- Andreas Gross, H.F. Fasel (2013) Numerical Investigation of Separation Control for Wing Section, International Journal of Flow Control, Vol. 5(3&4), 121-141.
- H.F. Fasel, F. Meng, E. Shams, Andreas Gross (2013) CFD Analysis for Solar Chimney Power Plants, Solar Energy, Vol. 98(Part A), 12–22.
- C. Brehm, Andreas Gross, H.F. Fasel (2013) Open-Loop Flow-Control Investigation for Airfoils at Low Reynolds Numbers, AIAA Journal, Vol. 51(8), 1843-1860.
- Andreas Gross, C. Jagadeesh, H.F. Fasel (2013) Numerical and Experimental Investigation of Unsteady Three-Dimensional Separation on Axisymmetric Bodies, International Journal of Heat and Fluid Flow, Vol. 44, 53–70.
- Andreas Gross, H.F. Fasel (2013) Numerical Investigation of Passive Separation Control for an Airfoil at Low-Reynolds-Number Conditions, AIAA Journal, Vol. 51(7), 1553-1565.
- Andreas Gross, H.F. Fasel, (2012) Flow Control for NREL S822 Wind Turbine Airfoil, AIAA Journal, Vol. 50(12), 2779-2790.

Briefly list the most recent professional development activities

- Attended summer AIAA Fluid Dynamics/Flow Control conferences in summer and AIAA Scitech conferences in winter for last 20 years.

Krishna Kota

Education/Professional Preparation

- Postdoctoral Research Fellow, Georgia Institute of Technology – Atlanta (2008 – 2010)
- Ph.D. in Mechanical Engineering, University of Central Florida – Orlando (2008)
- M.S. in Mechanical Engineering, University of Central Florida – Orlando (2005)
- B.Tech. in Mechanical Engineering, Jawaharlal Nehru Tech. University – India (2002)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (08/2012 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Postdoctoral Research Fellow (08/2008 – 07/2010), Georgia Institute of Technology, Atlanta, Georgia

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Research Scientist (8/2010 – 08/2012), Bell Labs, Murray Hill, New Jersey

Certifications or professional registrations

- None

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME), American Institute of Aeronautics & Astronautics (AIAA), American Society for Engineering Education (ASEE)

Honors and awards

- NMSU MAE Academy Professor; NMSU Donald Roush Faculty Award; Plenary Speaker at an international electronics cooling workshop, 2017 (invited); Review Editor for the journal 'Frontiers in Mechanical Engineering' (invited); Who's Who in Thermal Fluids; Mini-Symposium Organizer at ThermaComp Conference, 2016 (invited); The National Scholars Honor Society

Service activities (within and outside of the institution)

- Proposal reviewer/panelist for National Science Foundation and Oak Ridge Associated Universities; Reviewer for 16 international journals and 4 annual international conferences in the thermal sciences area; Served on the committees of international conferences in various roles

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Jessica Reyes, Krishna Kota, "Convective Performance of a Dielectric Liquid in a Channel with Conducting-Lubricating Walls for Liquid Cooling of Electronics," International Communications in Heat and Mass Transfer, Vol. 89, No. 12, pp. 147-153, 2017.
- Roberto Venegas, Sarada Kuravi, Krishna Kota, Mary McCay, "Comparative Design

Analysis of Geothermal and Solar Thermal Power Plants: A Case Study," International Journal of Renewable Energy Research, Vol. 7, No. 4, 2017 (in editing).

- Seyedali Seyedkavoosi, Saeed Javan, Krishna Kota, "Exergy-based Optimization of an Organic Rankine Cycle (ORC) for Waste Heat Recovery from an Internal Combustion Engine (ICE)," Applied Thermal Engineering, Vol. 126, No. 11, pp. 447-457, 2017.
- Ryan Holguin, Krishna Kota, Stephen Wootton, Ruey-Hung Chen, Sean Ross, "Enhanced Boiling Heat Transfer on Binary Surfaces," International Journal of Heat and Mass Transfer, Vol. 114, No. 11, pp. 1105-1113, 2017.
- Nicholas Clegg, Krishna Kota, Xin He, Sean Ross, "Achieving Ultra-Omniphilic Wettability on Copper using a Facile, Scalable, Tuned Bulk Micromanufacturing Approach," ASME Journal of Micro- and Nano-Manufacturing, Vol. 5, No. 3, 031003 (1-7), 2017.
- Krishna Kota, Ludovic Burton, Yogendra Joshi, "Thermal Performance of an Air-cooled Heat Sink Channel with Microscale Dimples under Transitional Flow Conditions," ASME Journal of Heat Transfer, Vol. 135, No. 11, 111005 (1-9), 2013.
- Jason Shelby, Krishna Kota, "Design of a High-effective, Compact Wavy Cryogenic Heat Recuperator," Proceedings of 2015 ASME International Mechanical Engineering Congress and Exposition, Houston, TX, November 14-20, 2015.
- Mohamed El-Genk, Arthur Suszko, Krishna Kota, "Nucleate Boiling of PF-5060 on Inclined Dimpled Surfaces," Proceedings of the 1st ASTFE Thermal and Fluid Engineering Summer Conference, New York, NY, August 9-12, 2015.
- Krishna Kota, Mohamed Awad, "Understanding the Impact of Flow Bypass on the Heat Transfer Performance of Air-Cooled Heat Sinks," Proceedings of 2014 ASME International Mechanical Engineering Congress and Exposition, Montreal, Canada, November 14-20, 2014.
- Krishna Kota, Mohamed Awad, "Understanding the Impact of Flow Bypass on the Overall Pressure Drop of Air-Cooled Heat Sinks," Proceedings of 2014 IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems, Orlando, Florida, May 27-30, 2014.

Patents & Patent Applications in the Past Five Years

- An Approach for Altering Wetting Properties of Metallic Surfaces, Inventor: Krishna Kota (submitted, 2017).
- Cryogenic Heat Exchanger, Inventor: Krishna Kota (submitted, 2016).
- A Real-time Feedback Control System for Data Center Cooling, Co-Inventor: Krishna Kota (submitted, 2013).
- Cooling Technique, Co-Inventor: Krishna Kota, US 9,557,118.
- A Mechanically-reattachable Liquid-cooled Cooling Apparatus, Co-Inventor: Krishna Kota, US 8,542,489.

Briefly list the most recent professional development activities

- NMSU Teaching Academy Mentoring Program & Writing Workshops, Lab Safety Training, Radiation Safety Training, PI Training, Technical Conference Session/Topic Chair

Sarada Kuravi

Education – degree, discipline, institution, year & Training

- Postdoctoral Fellow, Clean Energy Research Center, University of South Florida – Tampa (2012)
- Ph.D. in Mechanical Engineering, University of Central Florida - Orlando (2009)
- M.S. in Mechanical Engineering, University of Central Florida - Orlando (2006)
- B.Tech. in Mechanical Engineering, Jawaharlal Nehru Technological University - India (2002)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (08/2014 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Assistant Professor (08/2012 – 05/2014), Department of Mechanical and Aerospace Engineering, Florida Institute of Technology, Melbourne, Florida
- Postdoctoral Research Fellow (09/2009 – 07/2012), Clean Energy Research Center, University of South Florida, Tampa, Florida
- Postdoctoral Research Fellow (08/2009 – 09/2009), Department of Mechanical, Materials and Aerospace Engineering, University of Central Florida, Orlando, Florida

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- CAD Engineer (2002 – 2003)
  Caltech Engineering Company Private Limited, India

Certifications or professional registrations

- None

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME)
- International Solar Energy Society (ISES)
- American Institute of Aeronautics & Astronautics (AIAA)
- Society of Women Engineers (SWE)

Honors and awards

- ASME Florida Tech. Chapter Best Professor, Graduate Travel Award, Tau Beta Pi, National Scholars Honor Society

Professional Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation, Department of Energy
- Reviewer, 13 international journals in the areas of thermal sciences and renewable energy, 2 annual international conferences from 2011
- Track and Session Organizer for ASME Power and Energy Conference and ASME IMECE

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Roberto Venegas, Sarada Kuravi, Krishna Kota, Mary McCay, "Comparative Design Analysis of Geothermal and Solar Thermal Power Plants: A Case Study," International Journal of Renewable Energy Research, Vol.8, No.1, March, 2018.
- Shahin Shafiee, Mary McCay, Sarada Kuravi, "The Effect of Magnetic Field on Thermal-Reaction Kinetics of a Paramagnetic Metal Hydride Storage Bed", Applied Sciences, Vol: 7, pp: 1006, 2017. doi:10.3390/app7101006.
- Shahin Shafiee, Mary McCay, Sarada Kuravi, "Effect of Magnetic Fields on Thermal Conductivity in a Ferromagnetic Packed Bed", Experimental Thermal and Fluid Science, Vol: 86, pp: 160-167, 2017. https://doi.org/10.1016/j.expthermflusci.2017.04.014
- Sesha Srinivasan, Arunachalanadar M. Kannan, Nikhil Kothurkar, Yehia Khalil, and Sarada Kuravi, "Nanomaterials for Energy and Environmental Applications", Journal of Nanomaterials, Article ID 979026, 2015. doi:10.1155/2015/979026
- Haibao Hu, Sarada Kuravi, Feng Ren, Pei-feng Hsu, "Liquid Metal Flow in Manifold Microchannel Heat Sinks", Proceedings of the International Mechanical Engineering Congress and Exposition, Montreal, Canada, November 14-20, 2014.
- Peijie Li, Sarada Kuravi, "Convective Performance of EPCM Slurries of Water, PAO and Engine Oil in Microchannels", Proceedings of the 10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, Orlando, FL, July 14-16, 2014.
- Peijie Li, Sarada Kuravi, "Study of Thermal Performance of Liquid Flow through a Minichannel", Proceedings of International Conference on Research and Innovations in Mechanical Engineering (ICRIME 2013), Ludhiana, India, October 24-26, 2013.
- Sarada Kuravi, Jamie Trahan, Yogi Goswami, Elias Stefanakos, Muhammad Rahman, "Thermal Energy Storage Technologies and System Design for Concentrating Solar Power Plants", Progress in Energy and Combustion Science, Vol: 39, No: 4, pp: 285-319, 2013.
- Sarada Kuravi, Jamie Trahan, Yogi Goswami, Chand Jotshi, Elias Stefanakos, Nitin Goel, "Investigation of a High Temperature Packed Bed Sensible Heat TES System with Large Sized Elements", Journal of Solar Energy Engineering, Vol: 135, No: 4, pp: 041008, 2013.
- Rachana Vidhi, Sarada Kuravi, Yogi Goswami, Elias Stefanakos, Adrian Sabau, "Organic Fluids in a Supercritical Rankine Cycle for Low Temperature Power Generation", Journal of Energy Resources and Technology, Vol: 135, No: 4, pp: 042002(9 pages), 2013.
- Sarada Kuravi, Yogi Goswami, Elias Stefanakos, Manoj Ram, Chand Jotshi, Swetha Pendyala, Jamie Trahan, Prashanth Sridharan, M. Rahman, B. Krakow, "Thermal Energy Storage for Concentrating Solar Power Plants", Technology and Innovation, Journal of the National Academy of Inventors, Vol: 14, No. 2, 2012.
- Dervis Demirocak, Sarada Kuravi, Manoj Ram, Chand Jotshi, Sesha Srinivasan, Ashok Kumar, D. Yogi Goswami, Elias Stefanakos, "Investigation of Polyaniline Nanocomposites and Cross-Linked Polyaniline for Hydrogen Storage", Advanced Materials Research, Vol: 445, pp: 571-576, 2012.

Briefly list the most recent professional development activities

- NMSU Teaching Academy Mentoring Program, PI Training, Lab Safety Training, ABET Thermodynamics Syllabus committee, Faculty Mentor - NM Pre-Freshman Engineering Program (PREP) Academy & Women in STEM Discovering Diversity Program

Young Sup Lee

Education – degree, discipline, institution, year

- Ph.D. in Mechanical Engineering, University of Illinois at Urbana-Champaign (2006)
- MS in Mechanical Engineering, Inha University, South Korea (1995)
- BS in Mechanical Engineering, Inha University, South Korea (1993)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor (08/2014-present), Department of Mechanical and Aerospace Engineering, New Mexico State University
- Assistant Professor (08/2008-08/2014), Department of Mechanical and Aerospace Engineering, New Mexico State University
- Visiting Scholar (01/2011-12/2013), Department of Aerospace Engineering, University of Illinois at Urbana-Champaign
- Postdoctoral Research Associate / Visiting Assistant Professor (09/2006-08/2008), Departments of Mechanical Science and Engineering, and of Aerospace Engineering, University of Illinois at Urbana-Champaign
- Lecturer (03/2001-07/2002), Departments of Electrical, Electronic, and Control Engineering; and of Mechanical Engineering

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Consultant (06/2013-03/2014) Mitsubishi Electric Research Laboratories (MERL), Inc., Boston, MA
- Founding Member of International Joint Research Center for Innovative Technology in Acoustics and Vibrations (12/2012-present)
- R & D Engineer (07/1995-01/2001), Environmental Department, Kumho Institute of Construction Technology, South Korea; and Research and Development Center, Choongwae Medical Corporation, South Korea

Certifications or professional registrations

- None

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME); American Institute of Aeronautics and Astronautics (AIAA); Society for Experimental Mechanics (SEM)

Honors and awards

- Distinguished Alumnus Award, Institute of Aeronautics and Astronautics, National Cheng-Kung University, Taiwan (to receive on November 12, 2016)
- Research Achievement Award, NMSU President and VPR, 2014.
- Outstanding Professor Award, NMSU MAE Academy, 2014.
- Institutions 2011 Thomas Bernard Hall Prize, Institution of Mechanical Engineers, 2011.
- 2008 Professional Engineering (PE) Publishing Award, Lee et al., Institution of

Mechanical Engineers, 2009.
- Mavis Memorial Fund Fellowship, College of Engineering, University of Illinois at Urbana-Champaign, 2005-2006.
- Special Graduate Scholarship and Chungseok Admission Scholarship, Inha University, 1989 and 1994-1995.

Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation
- Conference Symposium Organizer/Co-organizer – ASME International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE), 2012-2016, 2018; EUROMECH European Nonlinear Dynamics Conference (ENOC 2014)
- Conference Chair/Co-Chair - ASME International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE), 2011-2016, 2018; 7th EUROMECH European Nonlinear Dynamics Conference (ENOC 2011); IMAC-XXXI Conference and Exposition on Structural Dynamics, 2013
- Journal Referee Activities - ASME Journals (Journal of Applied Mechanics; Journal of Vibration and Acoustics; Journal of Dynamic Systems, Measurement and Control; Journal of Computational and Nonlinear Dynamics; and Applied Mechanics Reviews); AIAA Journal; Journal of Fluids and Structures; Journal of Sound and Vibration; Mechanical Systems and Signal Processing; International Journal of Non-Linear Mechanics; Nonlinear Dynamics; Journal of Vibration and Control

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Nankali, A., Lee, Y.S., and Kalmar-Nagy, T., Targeted energy transfers for suppressing regenerative machine tool vibrations, ASME Journal of Computational and Nonlinear Dynamics, 12 (1), 011010-1-11, 2017.
- Pak, C.H., and Lee, Y.S., Bifurcation of coupled-mode responses by modal coupling in cubic nonlinear systems, Quarterly of Applied Mathematics, LXXIV(1), 1-26, 2016.
- Xu, M., Wei, M., Yang, T., and Lee, Y.S., An embedded boundary approach for the simulation of a flexible flapping wing at different density ratio, European Journal of Mechanics B/Fluids, 55, 146-156, 2016.
- Chen, H., Kurt, M., Lee, Y.S., McFarland, D.M., Bergman, L.A., and Vakakis, A.F., Experimental system identification of the dynamics of a vibro-impact beam with a view towards structural health monitoring and damage detection, Mechanical Systems and Signal Processing, 46, 91-113, 2014.
- Kurt, M., Chen, H., Lee, Y.S., McFarland, D.M., Bergman, L.A., and Vakakis, A.F., Nonlinear system identification of the dynamics of a vibro-impact beam: Numerical results,' Archive of Applied Mechanics, 82 (10), 1461-1479, 2012.

Briefly list the most recent professional development activities

- ASME International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE), 2012-2016, 2018

Hyeongjun Park

Education – degree, discipline, institution, year

- Ph.D. in Aerospace Engineering, The University of Michigan – Ann Arbor (2014)
- M.S. in Aerospace Engineering, Seoul National University – Republic of Korea (2008)
- B.S. in Mechanical and Aerospace Engineering, Seoul National University – Republic of Korea (2003)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (01/2018 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Postdoctoral Research Associate (05/2015 – 12/2017), Department of Mechanical and Aerospace Engineering, Naval Postgraduate School, Monterey, California
- Postdoctoral Researcher (06/2014 – 04/2015), Department of Aerospace Engineering, University of Michigan, Ann Arbor, Michigan

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Intern (05/2011 – 08/2011)
- Research & Innovation Center, Ford Motor Company, Dearborn, Michigan
- Associate Engineer (02/2008 – 07/2009)
  Mechanical Engineering Department, Samsung Engineering Co. Ltd., Seoul, Republic of Korea
- First Lieutenant (03/2003 – 02/2005)
  Infantry Platoon Leader, Republic of Korea Marine Corps, Pohang, Republic of Korea

Certifications or professional registrations

- None

Current membership in profession organizations

- American Institute of Aeronautics and Astronautics (AIAA), American Society of Mechanical Engineers (ASME), Institute of Electrical and Electronics Engineers (IEEE)

Honors and awards

- Postdoctoral Research Fellowship, U.S. National Research Council (2015, 2016, 2017)
- Best Paper Award, 6th International Conference of Astrodynamics Tools and Techniques (ICATT) Darmstadt, Germany – "Experimental Evaluation of Model Predictive Control and Inverse Dynamics Control for Spacecraft Proximity and Docking Maneuvers", 2016
- Second Placed Winner, Team Manager of Seoul National University Small Satellite

Team, 9th ARLISS Competition, Comeback Mission Competition of International Student Satellites Blackrock Desert, NV, 2007

Service activities (within and outside of the institution)

- Review Editor for Space Robotics Section of
- Frontiers in Astronomy and Space Sciences
- Frontiers in Robotics and AI
- Reviewer – IEEE Transaction on Control Systems Technology, International Journal of Robust and Nonlinear Control, Journal of Guidance, Control, and Dynamics, Mechanical Systems and Signal Processing, International Journal of Adaptive Control and Signal Processing, Advances in Space Research, Acta Astronautica, Journal of Intelligent and Robotics Systems

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- C. Zagaris, H. Park, J. Virgili-Llop, R. Zappulla, I. Kolmanovsky, and M. Romano (2018) Model Predictive Control of Spacecraft Relative Motion with Convexified Keep-Out-Zone Constraints, Journal of Guidance, Control, and Dynamics, accepted.
- M. Mammarella, E. Capello, H. Park, G. Guglieri, and M. Romano (2018) Classical and Robust Model Predictive Control for Spacecraft Rendezvous and Proximity Operations with Additive Disturbance, Aerospace Science and Technology, accepted.
- R. Zappulla, H. Park, J. Virgili-Llop, M. Romano (2018) Real-time autonomous spacecraft rendezvous and docking using an adaptive artificial potential field approach, IEEE Transactions on Control Systems Technology, accepted.
- R. Zappulla, J. Virgili-Llop, C. Zagaris, H. Park, A. Sharp, M. Romano (2017) POSEIDYN test bed: Experimental evaluation of autonomous spacecraft proximity operations and maneuvers, AIAA Journal of Spacecraft and Rockets, Vol. 54, No. 4, pp. 825-839.
- J. Virgili-Llop, C. Zagaris, H. Park, R. Zappulla, M. Romano (2017) Experimental evaluation of model predictive control and inverse dynamics control for spacecraft proximity and docking maneuvers, CEAS Space Journal, pp. 1–13, Invited Paper.
- H. Park, J. Sun, S. Pekarek, P. Stone, D. Opila, R. Meyer, I. Kolmanovsky, R. DeCarlo (2015) Real-time model predictive control for shipboard power management using the IPA-SQP approach, IEEE Transactions on Control Systems Technology, Vol. 23, No. 6, pp. 2129–2143.
- S. Di Cairano, H. Park, I. Kolmanovsky (2012) Model predictive control approach for guidance of spacecraft rendezvous and proximity maneuvering, International Journal of Robust and Nonlinear Control, Vol. 12, No. 4, pp. 1398–1427.

Briefly list the most recent professional development activities

- NMSU Teaching Academy Training Course (Spring, 2018)
- Strategies for Developing Competitive Proposals
- Publish & Flourish: Become a Prolific Scholar

Young Ho Park

Education – degree, discipline, institution, year

- Ph.D. in Mechanical Engineering, University of Iowa – Iowa City (1994)
- MS in Mechanical Design & Production Engineering, Seoul National University – Seoul (1988)
- BS in Mechanical Engineering, Seoul National University – Seoul (1986)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor (2006 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Assistant Professor (2000-2005), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Adjunct Assistant Professor (1999-2000), Mechanical Engineering Department, University of Iowa, Iowa City

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Research Scientist (1996-2000), Center for Computer-Aided Design, University of Iowa, Iowa City
- Research Engineer (1994-1996), Ford Motor Company, Dearborn, Michigan

Current membership in profession organizations

- American Society of Mechanical Engineers (ASME)

Honors and awards

- Synergy Teaching-Research-Serve Award, College of Engineering, New Mexico State University, 2017
- Certificate of Recognition, ASME Pressure Vessel and Piping Division, 2014
- Certificate of Appreciation, ASME Journal of Pressure Vessel Technology, 2012
- Outstanding Conference Paper Award, ASME Pressure Vessel and Piping Division, 2010
- Best Poster Award, 1st National Capstone Design Conference, 2007
- ME Academy Professor of the Year Award, Mechanical Engineering Academy, 2004
- Outstanding Teacher, NMSU ASME/Pi Tau Sigma Student Chapters, 2003
- Mechanical Engineering Innovative Teaching Award, New Mexico State University, 2003
- Outstanding Faculty, NMSU ASME/Pi Tau Sigma Student Chapters, 2001

Service activities (within and outside of the institution)

- Mechanical & Aerospace Engineering Graduate Program Director (2015-present)
- Faculty advisor, Research in Sustainable Technology (RIST) Club (2014 -)
- Academic advisor in undergraduate advising, Mechanical & Aerospace Engineering Department (2005-2016)
- Faculty advisor, Mechanical Engineering Competition Club (2004-2008)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- C. Florez, Y. H. Park, D. Valles-Rosales, A. Lara and E. Rivera (2017) Removal of Uranium from Contaminated Water by Clay Ceramics in Flow-Through Columns, Water, Vol. 9(10), 761.
- Y.H. Park and I. Hijazi (2017), Development of Physics Based Analytical Interatomic Potential for Palladium-Hydride, J. of Molecular Modeling, Vol. 23:108.
- I. Hijazi and Y.H. Park (2016) A Mixed Intermetallic Potentials for Fe-Cu Compounds, Molecular Simulation, Vol. 42 (8), pp. 611-617.
- C. Lee, C. Gillum, K. Toupin, Y. H. Park (2016) B. Donaldson, Environmental performance assessment of utility boiler energy conversion systems, Energy Conversion and Management, Vol. 120, pp. 135-143.
- Y.H. Park, G. Smith, E. Park (2016) Mediator-less microbial fuel cell employing Shewanella oneidensis. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Vol. 38 (12), pp. 1779-1784.
- Alnemrat, S., Park, Y. H., Vasiliev (2014) I. Ab initio study of ZnSe and CdTe semiconductor quantum dots. Physica E:Low-Dimensional Systems and Nanostructures, Vol. 57, pp. 96-10.
- Y. H. Park and I. Hijazi (2013) Structural, electronic, and magnetic properties of 22, 35, and 55-atom core-shell Au-Cu nanoclusters, Molecular Simulation, Vol. 39, No. 6, pp. 505-512.
- Y.H. Park and I. Hijazi (2012) Critical Size of Transitional Copper Clusters for Ground State Structure Determination: Empirical and Ab Initio Study, Molecular Simulation, Vol. 38, No. 3, pp. 241-247

Briefly list the most recent professional development activities

- FERPA Training for NMSU Student System/Data Access (2017)
- Basic Radiation Safety Training (2015)
- Hazardous Waste Management Training (2015)
- NIH Protecting Human Research Participants Training (2015)
- Hazardous Communication (HazCom) training (2014)

Igor Sevostianov

Education – degree, discipline, institution, year

- Ph.D. in Solid Mechanics, St. Petersburg State University (Russia) (1993)
- BS/MS in Solid Mechanics, St. Petersburg State University (Russia) (1989)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- D. L. and A. Chapman Distinguished Professor (2014 – present)
- Professor (2015 – present)
- Associate Professor (2006 – 2015)
- Assistant Professor (2001 – 2006)
- Graduate Coordinator (2008 – 2013), Mechanical and Aerospace Engineering
- Academy Professor (2012-2014) Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, NM.
- Senior Research Associate (1998 – 2001) Department of Mechanical Engineering, Tufts University, Medford, MA.
- Senior Research Associate (1997-1998) Department of Mechanical Engineering, University of Natal, Durban, South Africa.
- Visiting Scientist (1993-1996) Max-Planck Research Group "Mechanics of Heterogeneous Solids", Dresden, Germany.
- Visiting Professor BAM, Berlin, Germany (summers of 2016, 2017); University of Modena and Reggio Emilia, Italy (summers of 2014, 2015); TU Vienna, Austria, (2013, sabbatical); University of Lorrain, Nancy, France (summer 2012).

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Consultant New England Research Inc, (White River, VT), (2006); ALSTOM Power Inc., Zurich, Switzerland (2002-2004); General Electric Corporate R&D, Schenectady, NY (2001-2002).

Certifications or professional registrations

- None

Current membership in profession organizations

- ASME, SES

Honors and awards

- US Department of State Fulbright Professor 2012-2013
- Journal of Thermal Spray Technology 2009 best paper award.
- Elsevier award for authorship of the most cited paper in the IJSS during 2005-2008.
- NMSU Research Council Award for Achievements in Scholarly Activity, 2006.
- NMSU ME Academy Professor of the Year, 2007.

Service activities (within and outside of the institution)

- Member of the editorial boards: International Journal of Engineering Science (Elsevier); Mathematical Methods in the Applied Sciences (Wiley); International

Journal of Theoretical and Applied Multiscale Mechanics (Inderscience); Nanomechanics Science and Technology (Begell); International Journal of Materials (NAUN); International Journal of Mechanics (NAUN); Journal of the Computational Engineering (Hindawi); World Journal of Methodology (Baishideng); Acta Mechanica et Automatica (Poland); Journal of Applied and Computational Mechanics (Iran); Vestnik of DSTU (Russia); Scientific Letters of Rzeszow University of Technology (Poland).

- Member of the best paper award committee: Journal of Thermal Spray Technology
- Reviewer for scientific journals and publishing companies on mechanics of materials – 35-45 papers and 1-2 books per year.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Kachanov, M. and Sevostianov, I. Micromechanics of Materials, with Applications, Springer, 2018. ISBN 978-3-319-76204-3
- Kachanov, M. and Sevostianov, I. Effective properties of heterogeneous materials, Springer, 2013. ISBN 978-94-007-5714-1
- Sevostianov, I. On the shape of effective inclusion in the Maxwell homogenization scheme for anisotropic elastic composites. Mechanics of Materials 75 (2014) 45-59.
- Sevostianov, I. On the thermal expansion of composite materials and cross-property connection between thermal expansion and thermal conductivity, Mechanics of Materials, 45 (2012) 20-33.
- Sevostianov, I. and Kachanov, M. Connections between elastic and conductive properties of heterogeneous materials, Advances in Applied Mechanics, 42, (2009), 69-252.

Briefly list the most recent professional development activities

- Member of NMSU Teaching Academy.
- NSF Workshop for teaching solid mechanics courses for undergraduate students
- NSF QEM Workshop for Underrepresented Minority Engineering & Materials Science Graduate Students and Senior Faculty/Advisors

Banavara Shashikanth

Education – degree, discipline, institution, year

- Ph.D. in Aerospace Engineering, University of Southern California (1998)
- M. E. in Aerospace Engineering, Indian Institute of Science, Bangalore--India (1991)
- B. Tech in Aerospace Engineering, Indian Institute of Technology, Madras--India (1989)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor (2010 – present), Department of Mechanical and Aerospace Engineering, New Mexico State University
- Assistant Professor (2001 – 2007, 2007—2010 (with tenure)), Department of Mechanical and Aerospace Engineering, New Mexico State University

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Postdoctoral Scholar (1998--2000), Control and Dynamical Systems, California Institute of Technology, Pasadena, California.
- Research Scientist (1991--1993), Experimental Aerodynamics Division, National Aerospace Laboratories, Bangalore—India.

Certifications or professional registrations

- None

Current membership in profession organizations

- None

Honors and awards

- Alexander von Humboldt Fellowship, Alexander von Humboldt Foundation, Germany (2008, 2009, 2010 and 2015)

Service activities (within and outside of the institution)

- Reviewer – Journal of Nonlinear Science, SIAM Journal of Applied Mathematics, Physics of Fluids, Journal of Fluid Mechanics

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- A. Hernández-Garduño and B. N Shashikanth (2018), Reconstruction phases in the planar three- and four-vortex problems, Nonlinearity, Vol. 31, pp. 783--814.
- B. N. Shashikanth (2017), On the Hamiltonian equations for the coupled system of a free surface and a rigid body, The IV AMMCS International Conference, Waterloo, Ontario, Canada, August 20-25.
- B. N. Shashikanth (2016), Kirchhoff's equations of motion via a constrained Zakharov system, Journal of Geometric Mechanics, Vol. 8(4), pp. 461--485.
- B. N. Shashikanth (2014), On compressible adiabatic inviscid flow equations in divergence form and their Lie-Poisson brackets, 17th U.S. National Congress on

Theoretical and Applied Mechanics, Michigan State University, USA, 15-20 June.

- D. Hartmann, W. Schröder and B. N. Shashikanth (2012), Non-invasive determination of external forces in vortex-pair-cylinder interactions, Physics of Fluids, Vol. 24, 061903, (27 pages).
- B. N. Shashikanth (2012), Vortex dynamics in R^4, Journal of Mathematical Physics, Vol. 53, issue 1, 013103 (21 pages).

Briefly list the most recent professional development activities

Sabbatical Leave & Research Visits:

- Department of Mathematics, University of Toronto, Toronto, Canada. March 2015 (2 weeks)
- Department of Mechanical Engineering and Engineering Science, University of North Carolina, Charlotte, USA. Feb 2015 (2 weeks)
- Aerodynamics Institute, RWTH-Aachen University, Aachen, Germany. May 2015
- Department of Mathematical Sciences, New Jersey Institute of Technology, Newark, New Jersey, USA. Feb 2015 (2 weeks)

Fangjun Shu

Education – degree, discipline, institution, year

- Ph.D. in Mechanical Engineering, Purdue University – West Lafayette (2005)
- MS in Mechanical Engineering, University of Science and Technology of China – P. R. China (2000)
- BS in Mechanics and Mechanical Engineering, University of Science and Technology of China – P. R. China (1997)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor (08/16 – present), Assistant Professor (08/2010 – 08/2016), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Research Scientist (03/2009 – 07/2010), Department of Mechanical and Aerospace Engineering, the George Washington University, Washington, District of Columbia
- Postdoctoral Research Associate (01/2007 – 02/2009), Department of BioEngineering and Surgery, University of Pittsburgh, Pittsburgh, Pennsylvania
- Post Postdoctoral Research Associate (01/2006 – 12/2006), Department of BioMedical Engineering, Carnegie Mellon University, Pittsburgh, Pennsylvania

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- None

Certifications or professional registrations

- None

Current membership in profession organizations

- American Physical Society (APS), The American Institute of Aeronautics and Astronautics (AIAA)

Honors and awards

- Outstanding Teaching Professor, MAE academy of New Mexico State University, 2018
- Donald C. Roush Excellence in Teaching Award, New Mexico State University, December, 2016
- Reported by Engineering TV, May 1, 2007
- Group work was reported in Voice of America (VOA), October 3, 2006
- Reported in MEMO, the School of Mechanical Engineering magazine at Purdue University, 2005
- Frederick A. Environmental Award, Purdue University, August 2004
- Guang-Hua Educational Scholarship, USTC, 1998-1999
- Excellent Student Scholarship of USTC, 1995-1996 and 1994-1995

Service activities (within and outside of the institution)

- Proposal reviewer, National Science Foundation
- College of Engineering Graduate Committee, member
- MAE department ABET Committee, member
- Reviewer – Physics of Fluids, Mechanical Systems and Signal Processing, Journal of Renewable and Sustainable Energy, ASME Journal, AIAA conference, Journal of Engineering in Medicine, Artificial Organs, International Journal of Aerospace and Lightweight Structures, Experiments in Fluids, European Journal of Mechanics - B/Fluids, The Annals of Thoracic Surgery, Hemodialysis International, IEEE Control Systems Society Conference, Energies, and International Journal of Micro Air Vehicles

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- J. Ahumada, M. De la Torre, Fangjun Shu, R.H. Chen (2018), Experimental Study of an Underexpanded Supersonic Jet under Non-Swirling and Swirling Conditions, AIAA Science and Technology Forum, Kissimmee FL.
- M. Talavera, and Fangjun Shu (2017) Experimental Study of Turbulence Intensity Influence on Wind Turbine Performance and Wake Recovery, Renewable Energy, Vol. 109, 363-371.
- S. D. Rodriguez, H.N. Chung, K. K. Gonzales,J. Vulcan, Y. Li, J. A. Ahumada, H.M. Romero, M. De La Torre, Fangjun Shu, and I. A. Hansen, (2017) Efficacy of Some Wearable Devices Compared with Spray-On Insect Repellents for the Yellow Fever Mosquito, Aedes aegypti (L.) (Diptera: Culicidae), Journal of Insect Science, 17(1): 24; 1-6.
- Fangjun Shu, R. Tian, S. Vandenberghe, and J. Antaki (2016) Experimental study of microscale Taylor vortices within a co-axial mixed-flow blood pump, Artificial Organs, 40(11):1071-1078.
- R. Tian, E. Marquez, H. Bocanegra, B.J. Balakumar, and Fangjun Shu (2015) Experimental study of Reynolds number and gust influence on transient force and flow generated by a robotic Hummingbird, International Journal of Micro Air Vehicles, 7 (3), 347-360.
- Fangjun Shu, S. Vandenberghe, J. Brackett , and J. Antaki (2015) Classification of Unsteady Flow Patterns in a Rotodynamic Blood Pump: Introduction of Non-Dimensional Regime Map, Cardiovascular Engineering and Technology, 6(3), 230-241.
- S.E. Jahren, G. Ochsner, Fangjun Shu, R. Amacher, J. Antaki, and S. Vandenberghe (2014) Analysis of Head-pump Flow Loops of Pulsatile Rotodynamic Blood Pumps, Artificial Organs, 38(4) 316-326.
- R. Tian, R. Mitchell, L. Martin-Alarcon, and Fangjun Shu (2013) Experimental Investigation of 2D Flexible Plunging Hydrofoil, Journal of Flow Visualization and Image Processing, 20(4), 243-260.
- A.L. Glenn, K.V. Bulusu, Fangjun Shu and M.W. Plesniak (2012) Secondary Flow Structures Under Stent-Induced Perturbations for Cardiovascular Flow in a Curved Artery Model, International Journal of Heat and Fluid Flow, Vol. 35, 76-83.

Briefly list the most recent professional development activities

- Attended APS division of fluid dynamics annual conferences and AIAA Scitech conferences 2018.

Liang Sun

Education – degree, discipline, institution, year

- Ph.D. in Electrical and Computer Engineering, Brigham Young University (2012)
- MS in Electrical Engineering and Automation, Beihang University - China (2017)
- BS in Electrical Engineering and Automation - China (2004)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor (08/2015 - present), Department of Mechanical and Aerospace Engineering, New Mexico State University, Las Cruces, New Mexico
- Post-doctoral Research Fellow (08/2014 - 08/2015), Department of Electrical and Computer Engineering, The University of Texas at San Antonio, San Antonio, Texas
- Post-doctoral Research Fellow (04/2013 - 08/2014), Department of Electrical and Computer Engineering, United States Air Force Academy, Colorado
- Research Assistant (09/2007 - 04/2013), Department of Electrical and Computer Engineering, Brigham Young University, Provo, Utah

Certifications or professional registrations

- None

Current membership in profession organizations

- American Institute of Aeronautics and Astronautics (AIAA)
- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Robotics and Automation Society, IEEE Control Systems Society
- IEEE Aerospace and Electronic Systems Society

Honors and awards

- Outstanding Graduate Award, (10/180), Beihang University, 2005
- Beijing Outstanding Undergraduate Award, (10/360), Beihang Univeristy, 2004
- Top Ten Outstanding League Cadre Award, (10/360), Beihang University, 2004
- Excellent Student Cadre Award, (10/360), Beihang University, 2003
- Merit Student Awards, (10/360), Beihang University, 2000-2002
- Third-class People's Scholarship Award, (20/360), Beihang University, 2000
- Second-Class People's Scholarship Award, (10/360), Beihang University, 2000

Service activities (within and outside of the institution)

- Proposal reviewer/panelist, National Science Foundation, 2017 (twice)
- Faculty Search Committee, New Mexico State University, 2017 (twice)
- Associate Editor, International Journal of Advanced Robotic Systems (2015-present)
- Conference Session Chair, IEEE ICUAS (2016, 2017), ASME DSCC (2016)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Selije II, R. and Sun, L., "A Survey of Hardware Advances and Techniques for Vision-Based Object Detection, Classification, and Tracking", International Conference of Control, Dynamic Systems, and Robotics, Niagara Falls, Canada, June 2018, accepted.
- Gala, D., Lindsay, N., and Sun, L., "Three-Dimensional Sound Source Localization for Unmanned Ground Vehicles with a Self-Rotational Two-Microphone Array", International Conference of Control, Dynamic Systems, and Robotics, Niagara Falls, Canada, June 2018, accepted.
- Dutta, R., Sun, L., and Pack, D., "A Novel Decentralized Formation Controller for Multiple Unmanned Systems with Maintaining and Tracking Network Connectivity", IEEE Transactions on Control Systems Technology, accepted, in press, 2017.
- Farmani, N., Sun, L., and Pack, D., "A Scalable Multi-Target Tracking System For Cooperative Unmanned Aerial Vehicles", IEEE Transactions on Aerospace and Electronic Systems, vol. 53(4), 2017, pp. 1947-1961.
- Zhong, X., Sun, L., and Yost, W, "Active Binaural Localization of Multiple Sound Sources", Robotics and Autonomous Systems, Vol. 85, 2016, pp. 83-92.
- Zhao, H., Jin, T., Wang, S., and Sun, L., "A Real-Time Selective Harmonic Elimination Based on A Transient-free, Inner Closed-Loop Control for Cascaded Multilevel Inverter", IEEE Transactions on Power Electronics, Vol. 31(2), 2016, pp. 1000-1014.
- Sun, L., Castagno, J., Hedengren, J. D., and Beard, R. W., "Parameter Estimation for Towed Cable Systems Using Moving Horizon Estimation", IEEE Transactions on Aerospace and Electronic Systems, Vol. 51(2), 2015, pp. 1432-1446.
- Lwowski, J., Sun, L., Mexquitic-Saavedra, R., Sharma, S., and Pack, D., "A Reactive Bearing An- gle Only Obstacle Avoidance Technique for Unmanned Ground Vehicles", Journal of Automation and Control Research, Vol. 1(1), 2014, pp. 22-28.
- Nichols, J. W., Sun, L., Beard, R. W., and McLain, T. W., "Aerial Rendezvous of Small Unmanned Aircraft Using a Passive Towed Cable System", AIAA Journal of Guidance, Control, and Dynamics, Vol. 37(4), 2014, pp. 1131-1142.
- Sun, L., Hedengren, J. D., and Beard, R. W., "Optimal Trajectory Generation Using Model Predictive Control for Aerially Towed Cable Systems", AIAA Journal of Guidance, Control, and Dynamics, Vol. 37(2), 2014, pp. 525-539.
- Al-Radaideh, A. and Sun, L., "Self-Localization of a Tethered Quadcopter Using Onboard Sensors in a GPS-Denied Environment", IEEE International Conference on Unmanned Aircraft Systems, Miami, FL, USA, June 2017, pp. 271-277.

Briefly list the most recent professional development activities

- n.a.

Engineering Physics Program

(Bachelor of Science in Engineering Physics)

at

New Mexico State University

Tenured & Tenure-Track Faculty – Department of Electrical & Computer Engineering

Abdel-Hameed Badawy

Education - degree, discipline, institution, year

- PhD Computer Engineering University of Maryland, College Park, MD, USA
- 2013
- MSc Computer Engineering University of Maryland, College Park, MD, USA
- 2002
- BSc Electronics Engineering Mansoura University 1996 3. Academic Experience:

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor.,June 2016 – Present, FT
- Arkansas Tech University, Assistant Professor, August 2013 – May 2016, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- The George Washington University, Lead Research Scientist, May 2014 – Jan 2016, PT

Certification or professional registration

- MSU Online Course Improvement Program (OCIP) New2Online (N2O), December 2016
- eTech Online Certification Program, December 2013

Membership in professional organizations

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Association of Computing Machinery (ACM)

Honors and awards

- Listed in Who's Who since 2014
- Award of Excellence for presentation at GRID 2004, UMD

Service activities (within and outside of the institution)

- Faculty Search committee member
- Member of technical program committee member for many conferences

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Nafiul A. Siddique, Patricia Gruble, Abdel-Hameed A. Badawy, and Jeanine Cook, "A Performance Study of the Time-Varying Cache Behavior – A Study on APEX, Mantevo, NAS, and PARSEC", Appears in The Journal of Supercomputing, Springer, September 2017
- Abdel-Hameed A. Badawy, and Donald Yeung, "Guiding Locality Optimizations for Graph Computations via Reuse Distance Analysis", Appears in IEEE Computer Architecture Letters, April 2017

- Vikram Narayana, Shuai Sun, Abdel-Hameed A. Badawy, Volker Sorger, and Tarek El-Ghazawi, "MorphoNoC: Exploring the Design Space of a Configurable Hybrid NoC using Nanophotonics", Appears, Microprocessors and Microsystems (MICPRO), Elsevier, March 2017
- Joe Touch, and Abdel-Hameed A. Badawy, "Optical Computing", Appears as an editorial in a Special Issue on Optical Computing in the Nanophotonics, published by DE GRUYTER, 2017
- Abdel-Hameed A. Badawy, Gabriel Yessin, Vikram Narayana, Tarek ElGhazawi, and David Mayhew, "Optimizing Thin Client Caches for Mobile Cloud Computing", Appears in Concurrency and Computation: Practice & Experience, October 2016
- Ahmad Anbar, Olivier Serres, Engin Kayraklioglu, Abdel-Hameed Badawy, and Tarek El-Ghazawi, "Exploiting Hierarchical Locality in Deep Parallel Architectures", Appears in ACM Transactions on Architecture and Code Optimization (TACO), June 2016
- Shuai Sun, Abdel-Hameed A. Badawy, Vikram Narayana, Tarek El-Ghazawi, and Volker Sorger, "HyPPI: Hybrid Photonic Plasmonic Interconnects: A Low Latency, Area and Energy Efficient Onchip Interconnects", Appears in the IEEE Photonics Journal, Volume 7, Issue 6, December 2015

Briefly list the most recent professional development activities

- Several training workshops at the Teaching Academy at New Mexico State University
- Attended the NMTIE conference for Educational Technology.

Deva K. Borah

Education - degree, discipline, institution, year

- BE Electronics & Communications Eng. Indian Institute of Science, Bangalore, India 1987
- ME Electrical Communications Eng. Indian Institute of Science, Bangalore, India 1992
- PhD Telecommunications Eng. Australian National University, Canberra 2000

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Professor, 2012 – Present, FT
- New Mexico State University, Associate Professor, 2006 – 2012, FT
- New Mexico State University, Assistant Professor, 2000 – 2006, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Oxford University Press, Accuracy checker for a textbook and problem solutions, 2015 – 2016, PT
- McGraw-Hill Higher Education , Accuracy checker for a textbook and problem solutions, 2010 – 2012, PT

Membership in professional organizations

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)

Honors and awards

- Best Paper Award, IEEE Global Communications Conference (Globecom), Washington DC, Dec. 2016.
- Author of a featured article, Electronics Letters, October 2011.
- Advisor (Co-author) of multiple best student paper awards at the annual International Telemetry Conference held during 2012-2016.

Service activities (within and outside of the institution)

- Graduate Program Coordinator, ECE Department, NMSU, 2017 - Present
- Technical Program Committee Member of many international conferences, such as IEEE MILCOM 2017, IEEE ICC 2017, IEEE ICCVE 2016, IEEE Globecom 2016, IEEE MILCOM 2016 etc.
- Member, Admission Appeals Committee, NMSU, Jan. 2012 – Jan. 2017.
- Member, ECE Departmental Promotion and Tenure Committee, 2017–Present.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- J. Perez-Ramirez and D. K. Borah, "Compressive Parameter Estimation for Correlated Frames in MIMO Visible Light Communications" IEEE Signal Processing Letters, Vol. 23, pp. 174-178, Jan. 2016.

- Y. Sun, D. K. Borah and E. Curry " Optimal Symbol Set Selection in GSSK Visible Light Wireless Communication Systems " IEEE Photonics Technology Letters, Vol. 28, pp. 303-306, Feb. 1, 2016.
- K. Kumar and D. K. Borah, "Quantize and Encode Relaying through FSO and Hybrid FSO/RF Links" IEEE Transactions on Vehicular Technology, vol. 64, pp. 2361-2374, June 2015.
- J. Perez-Ramirez, D. K. Borah, and D. G. Voelz, "Optimal 3D Landmark Placements for Vehicle Localization using Heterogeneous Sensors," IEEE Transactions on Vehicular Technology, vol. 62, pp. 2987-2999, Sept. 2013.

Briefly list the most recent professional development activities

- Attending NMSU Teaching Academy seminars, e.g., effective learning strategies 2016, and flipping classroom – just-in-time teaching workshop 2014

Laura E. Boucheron

Education - degree, discipline, institution, year

- B.S. Electrical Engineering, New Mexico State University, 2001
- M.S. Electrical Engineering, New Mexico State University, 2003
- Ph.D. Electrical & Computer Engineering, University of California Santa Barbara, 2008

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Associate Professor, 2017—present, FT
- New Mexico State University Assistant Professor, 2011—2017, FT
- New Mexico State University. Research Assistant Professor, 2010-2011, FT
- New Mexico State University, Postdoctoral Fellow, 2008-2009, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Los Alamos National Laboratory, Graduate Research Assistant, 2005-2007, FT

Certification or professional registration

- None.

Membership in professional organizations

- Member, Institute of Electrical and Electronics Engineers (IEEE), Signal Processing Society, Engineering in Medicine and Biology Society
- Member, American Society of Engineering Educators (ASEE)
- Member, Eta Kappa Nu (HKN)

Honors and awards:

- Donald C. Roush Excellence in Teaching Award, NMSU, 2014

Service activities (within and outside of the institution):

- Chair elect, University Research Council (URC), 2017—present
- Member, ECE Undergraduate Studies Committee, 2017—present
- Faculty Advisor, Women in STEM (WiSTEM), 2015—present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- L. E. Boucheron, M. Valluri, and R. T. J. McAteer, "Segmentation of Coronal Holes Using Active Contours Without Edges," Solar Physics, vol. 291, pp. 2353-2372, 2016.
- Al-Ghraibah, L. E. Boucheron, and R. T. J. McAteer, "An automated classification approach to ranking photospheric proxies of magnetic energy build-up," Astronomy & Astrophysics, vol. 579, p. A64, 2015.
- S. M. Bannister, L. E. Boucheron, and D. G. Voelz, "A numerical analysis of a frame calibration method for video-based all-sky camera systems," Publications of the Astronomical Society of the Pacific, vol. 125, no. 931, pp. 1108-1118, 2013.

- J. M. Stiles, R. Pham, R, K. Rowntree, C. Amaya J. Battiste, L. E. Boucheron, D. C. Mitchell, and B. A. Bryan, “Morphological restriction of human coronary artery endothelial cells substantially impacts global gene expression patterns,” FEBS Journal, vol. 280, no. 18, pp. 4474-4494, 2013.

Briefly list the most recent professional development activities

- SF EEC Grantees Conference, 2017 b. NMSU Teaching Academy, How Learning Works Book Club, 2015

Sukumar Brahma

Education – degree, discipline, institution, year

- 1989, B.Eng., Gujarat University, Ahmedabad, India. 1997
- M.Tech., Indian Institute of Technology, Bombay, India
- 2003 Ph.D.: Clemson University, Clemson, USA.

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- August 2012 – Present, Associate Professor, Klipsch School of Electrical and Computer Engineering, New Mexico State University •
- July 2007 – July 2012, Assistant Professor, Klipsch School of Electrical and Computer Engineering, New Mexico State University
- September 2003-June 2007, Assistant Professor, Department of Electrical Engineering, Widener University
- December 1990- August 1999, Lecturer, Department of Electrical Engineering, B. V. M. Engineering College, India

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- September 1990 - December 1990, Assistant Engineer, Ahmedabad Electricity Company, India
- August 1989 – August 1990, Graduate Trainee, Ahmedabad Electricity Company, India

Membership in professional organizations:

- Senior Member, IEEE
- Member IEEE Power and Energy Society (PES)

Honors and awards

- Received Donald C. Roush Award for Excellence in Teaching from New Mexico State University in Spring 2016.
- William Kersting Endowed Chair, starting January 2014.
- Member of three working groups of IEEE Power System Relaying and Control Committee (PSRCC) that won best WG awards.
- IEEE PSRC Working Group K15 (member), "Advancements in Centralized Protection and Control within a Substation," IEEE Transactions on Power
- Delivery – Special Issue on Frontiers of Power System Protection, Vol. 31, No. 4, pp. 1945 – 1952, August 2016. - Best paper award, 2016.

Service activities (within and outside of the institution)

- Chair Power and Energy Education Committee (PEEC); Past Chair Lifelong Learning Subcommittee
- Member Power System Relaying Committee
- Member Power System Analysis, Computing and Economics Committee; Past Chair Distribution System Analysis Subcommittee.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation:

- Yinan Cui, Rajesh Kavasseri, and Sukumar Brahma, "Dynamic State Estimation Assisted Out-of-Step Detection for Generators Using Angular Difference", IEEE Trans. Power Delivery, Vol. 32, No. 3, pp. 1441 - 1449, June 2017.
- S. Brahma, R. Kavasseri, Huiping Cao, N. R. Chaudhuri, T. Alexopoulos, and Y. Cui, "Real Time Identification of Dynamic Events in Power Systems using PMU data, and Potential Applications – Models, Promises, and Challenges", IEEE Trans. Power Delivery – Special Issue on Innovative Research Concepts for Power Delivery Engineering, Vol. 32-1, pp. 294 - 301, Feb. 2017.
- P. H. Gadde, Milan Biswal, Sukumar Brahma, and Huiping Cao, "Efficient Compression of PMU Data in WAMS", IEEE Trans. Smart Grid – Special Issue on Big Data Analytics for Grid Modernization, Vol. 7, No. 5, pp.2406 – 2413, September 2016.
- Milan Biswal, Sukumar Brahma, and Huiping Cao, "Supervisory Protection and Automated Event Diagnosis using PMU Data, IEEE Trans. Power Delivery – Special Issue on Frontiers of Power System Protection, Vol. 31, No. 4, pp. 1855 – 1863, August 2016.
- Om Prasad Dahal, S. M. Brahma, and Huiping Cao, "Comprehensive Clustering of Disturbance Events Recorded by Phasor Measurement Units", IEEE Trans. Power Delivery, Vol. 29-3, pp. 1390-1397, June 2014.

Briefly list the most recent professional development activities

- Member of 16 working groups of IEEE Power System Relaying and Control Committee (PSRCC). I chair one WG.
- Editor, IEEE Transactions on Power Delivery, Guest Editor in Chief, Special Issue of Frontiers in power System Protection, IEEE Transactions on Power Delivery, Volume 31-4, Aug. 2016.
- Served on Guest Editorial Board of Special Issue on Innovative Research Concepts for Power Delivery Engineering from IEEE Transactions on Power Delivery – 2016-17.

Sang-Yeon Cho

Education - degree, discipline, institution, year

- Doctor of Philosophy, Electrical and Computer Engineering, Georgia Institute of Technology, 2003
- Master of Science, Electrical and Computer Engineering, Georgia Institute of Technology, 2000
- Bachelor of Science, Electrical and Computer Engineering, Sungkyunkwan University. 1996

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Associate Professor, 2013-present, FT
- New Mexico State University, Assistant Professor, 2007-2013, FT
- Duke University, Assistant Research Professor, 2004-2007, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Air Force Research Laboratory, Visiting Faculty Researcher, Design photonic devices, 2008, FT
- Oak Ridge National Laboratory, Visiting Faculty Researcher, Design cavity-based quantum devices, 2016, FT

Certification or professional registration

- None

Membership in professional organizations

- Senior Member, Optical Society of America
- Member, The Institute of Electrical and Electronics Engineers

Honors and awards

- Foreman Faculty Excellence Award, College of Engineering, NMSU, 2015
- Research Achievement Award, NMSU, 2012
- Recipient of the Grand Challenges Explorations, Bill and Melinda Gates Foundation, 2010

Service activities (within and outside of the institution)

- Journal Reviewer (Journals published by American Institute of Physics (AIP), Optical Society of America (OSA), and IEEE).
- National Science Foundation (NSF) Panelist, 2010 (ECCS), 2012(CMMI), 2013 (ECCS).
- National Aeronautics and Space Administration (NASA) Reviewer, 2015, 2016

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Charles Pelzman and Sang-Yeon Cho, "Control of Plasmon Resonance by Mode Coupling in Metal-Dielectric Nanostructures," AIP Journal of Applied Physics 121, 133102, 2017.
- Charles Pelzman, Sang-Yeon Cho, “Deformable Plasmonic Metamembrane,” The 2017 IEEE Photonics Conference, 30th Annual Conference of the IEEE Photonics Society, WP-23, 1-5 October, 2017.
- Charles Pelzman, Sang-Yeon Cho, “Active Plasmonic Nanospirals,” The 2017 IEEE Photonics Conference, 30th Annual Conference of the IEEE Photonics Society, WP- 22, 1-5 October, 2017.
- Jordan Hachtel, Roderick Davidson, Matthew Chisholm, Richard F Haglund, Sokrates Pantelides, Sang-Yeon Cho, Benjamin Lawrie, “Nano-chirality detection with vortex plasmon modes,” Conference on Lasers and Electro-Optics (CLEO), FM3H.5, 2017.
- Charles Pelzman and Sang-Yeon Cho, “Plasmonic Metasurface for Simultaneous Detection of Polarization and Spectrum,” OSA Optics Letters 41, 1213-1216, 2016.
- Charles Pelzman and Sang-Yeon Cho, “Polarization-Selective Optical Transmission Through a Plasmonic Metasurface,” AIP Applied Physics Letters 106, 251101, 2015.

Briefly list the most recent professional development activities

- Talks attended at IEEE and OSA Conferences
- Seminars attended at New Mexico State University

Charles D. Creusere

Education - degree, discipline, institution, year

- B.S. Electrical & Computer Engineering, University of California, Davis, 1985
- M.S. Electrical & Computer Engineering, University of California, Santa Barbara, 1990
- Ph.D. Electrical & Computer Engineering, University of California, Santa Barbara, 1993

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Assistant Professor, 2000-2004, FT
- NMSU, Associate Professor, 2004-2010, FT
- NMSU, Professor & Frank Carden Chair, 2010-present, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- NAVAIR MTS, Engineering Design/Analysis, 10/198512/1999, FT
- Bell Labs, Summer Intern, Research, Summer 1992, PT

Certification or professional registration

- None

Membership in professional organizations

- Institute of Electrical & Electronic Engineers (IEEE)
- Signal Processing Society of IEEE
- Geoscience and Remote Sensing Society of IEEE

Honors and awards

- Current holder of Frank Carden Chair in Telemetry and Telecommunications
- 1st awardee of the International Foundation for Telemetering Professorship

Service activities (within and outside of the institution)

- Senior Area Editor IEEE Transactions on Image Processing
- Technical Program Chair, IEEE SSIAI 2012/2014, International Telemetering Conference 2015
- Past Associate Editor, 2 3-year terms IEEE Trans. on Image Processing, IEEE Transactions on Multimedia
- Chair, ECE P&T Committee
- Member, College of Engineering Awards Committee

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation:

- V. Thilak, C.D. Creusere, and D. Voelz, "Passive Polarimetric Imagery-Based Material Classification Robust to Illumination Source Position and Viewpoint," Image Processing, IEEE Transactions on , vol.20, no.1, pp.288-292, Jan. 2011.

- C.D. Creusere and J. Hardin, "Assessing the Quality of Audio Containing Temporally Varying Distortions," Audio, Speech, and Language Processing, IEEE Transactions on , vol.19, no.4, pp.711-720, May 2011.
- Castorena, J.; Creusere, C.D., "The Restricted Isometry Property for Banded Random Matrices," Signal Processing, IEEE Transactions on , vol.62, no.19, pp.50735084, Oct.1, 2014.
- Castorena, J.; Creusere, C.D., "Sampling of Time-Resolved Full-Waveform LIDAR Signals at Sub-Nyquist Rates," Geoscience and Remote Sensing, IEEE Transactions on , vol.53, no.7, pp.3791-3802, July 2015.

Briefly list the most recent professional development activities

- Title IX Training, 10/17/2017

Muhammad Dawood

Education - degree, discipline, institution, year

- Ph.D Electrical Engineering, University of Nebraska, Lincoln, 2002
- M.S. Electrical Engineering, University of Nebraska, Lincoln, 1998
- B.E. Electrical Engineering (Avionics), NED University of Engineering and Technology, Pakistan, 1985

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Associate Professor, 2011-present, FT
- New Mexico State University, Assistant Professor, 2005-2010, FT
- University of Kansas, Research Assistant Professor, 2002-2005, FT
- University of Nebraska, Instructor, 2002, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Tellabs Inc., Research Engineer, RF/Wireless/ UWB Systems, April 2001 - Dec 2001, FT
- PIA, Researcher, RF Boards and Systems, 1995-1996, FT

Certification or professional registration

- None

Membership in professional organizations

- Member, IEEE

Honors and awards

- Most Distinguished Member for 2006-2007, Teaching Academy, NMSU
- First Prize: Graduate Student Paper Competition, University of Nebraska, Lincoln, 1999.

Service activities (within and outside of the institution)

- Member UGS at NMSU
- Reviewer IEEE AES, APS, Radar, and IET
- Advisor, IEEE Student Chapter, NMSU, 2007– 2012

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- M. Dawood, "Student Study Habits, Learning and Grades," Frontiers of Engineering Education, National Academy of Engineering, 8th Annual FOEE Symposium, 09/25-28/2016.
- M. Dawood, J. Tapia, M. Guynn, K. Trujillo, and P. Wojahn,"Preliminary results on students' study habits and their grades in STEM courses", 2017 IEEE International

Symposium on Antennas and Propagation – URSI Radio Science Meeting, San Diego, July 9 to July 14, 2017.

- M. Dawood, E. Sharif, and J. A. Boehm III, "Experimental Results for Sidelobe Reductions in Random Noise and Deterministic Signals," Electronics Letters (IET), Volume 53, Issue 8, April 2017, p. 564 - 566.
- V. Alejos, M. Dawood, and H. R. Mohammed, "Estimation of Sidelobe Level Variations of Phased Codes in Presence of Random Interference for Bistatic Wideband Noise Radar," International Journal of Antennas and Propagation, Article ID 297823, 2015, 11 pages.
- Dawood, M, Quraishi, N., Alejos, A., V., "Superresolution Doppler Estimation using UWB Random Noise Signals and MUSIC," IEEE Trans. Aerospace and Electronic Systems, Vol. 49, no. 1, pp. 325-340, January 2013.

Briefly list the most recent professional development activities

- Workshops on Metacognition and Student Learning, 2013-2017, NMSU
- Presentations on various antenna related technologies, IEEE APS/URSI, San Diego, July 9-14, 2017.

Phillip L. De Leon

Education - degree, discipline, institution, year

- B.S. Electrical Engineering, Univ of Texas at Austin, 1989
- B.A. Mathematics, Univ of Texas at Austin, 1990
- M.S. Electrical Engineering, Univ of Colorado at Boulder, 1992
- Ph.D. Electrical Engineering, Univ of Colorado at Boulder, 1995

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Professor & Associate Dean of Research, 2016-present, FT
- NMSU, Professor & Klipsch Distinguished Prof, 2006-present, FT
- NMSU, Associate Prof, 2002-2005, FT
- NMSU, Assistant Prof, 1996-2001, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Sandia National Laboratories, Faculty Summer Fellow, Research in signal processing, Jun-Aug 2016 and May-Aug 2017, PT
- ParisTech Telecom & EURECOM, Visiting Faculty, Sabbatical research, Feb-May 2017, FT
- Vienna Univ of Technology, Visiting Faculty, Sabbatical research, Aug-Dec 2008, FT

Certification or professional registration

- N/A

Membership in professional organizations

- Senior Member, IEEE

Honors and awards

- Paul W. and Valerie Klipsch Endowed Professorship, 2015
- John and Tome Nakayama Professorship for Excellence in Teaching, 2012

Service activities (within and outside of the institution)

- ECE curriculum revision committee (chair), 2014-2015
- University Research Council (Engineering, Chair Elect, Chair), 2009-2012

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- S. Sandoval and P. L. De Leon, "Advances in Empirical Mode Decomposition for Computing Instantaneous Amplitudes and Instantaneous Frequencies," Proc. IEEE Int. Conf. on Acoustics, Speech & Signal Processing (ICASSP), 2017.
- M. Martinez, P. L. De Leon, and D. Keeley, "Novelty Detection for Predicting Falls Risk using Smartphone Gait Data," Proc. IEEE Int. Conf. on Acoustics, Speech & Signal Processing (ICASSP), 2017.

- Z. Wu, P. L. De Leon, C. Demiroglu, A. Khodabakhsh, S. King, Z. Ling, D. Saito, B. Stewart, T. Toda, M. Wester, and J. Yamagishi, "Anti-Spoofing for Text-Independent Speaker Verification: An Initial Database, Comparison of Countermeasures, and Human Performance," IEEE Trans. Audio, Speech, and Language Proc., vol. 24, no. 4, pp. 768-783, Apr. 2016.
- S. Sandoval, P. L. De Leon, and J. M. Liss, "Hilbert Spectral Analysis of Vowels using Intrinsic Mode Functions," in Proc. IEEE Automatic Speech Recognition & Understanding Workshop (ASRU), 2015.
- R. McClanahan and P. L. De Leon, "Reducing Computation in an i-Vector Speaker Recognition System using a Tree-Structured Universal Background Model," Speech Communication, vol. 66, pp. 36-46, Feb. 2015.

Briefly list the most recent professional development activities

- iOS Programming with Swift, Big Nerd Ranch, June 2015

Paul M. Furth

Education - degree, discipline, institution, year

- B.A. French, Grinnell College, 1984
- B.S. Engineering (Electrical), California Inst. of Tech., 1985
- M.S. Electrical Engineering, Johns Hopkins University, 1992
- Ph.D. Electrical Engineering, Johns Hopkins University, 1996

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State Univ. (NMSU), Associate Professor, 2001-present, FT
- NMSU, Associate Department Head, 2002-2006, 2015-present, PT
- NMSU, Interim Department Head, 2009-2010, FT
- NMSU, Assistant Prof., 1995-2001, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Sandia National Laboratories, University Summer Faculty, Summer 2008, FT
- Micron Semi., Visiting Faculty, Summer 2007, FT
- Motorola & JTA, Consulting IC Designer, Design mixed-signal ICs, Summers 2000 and 2003, FT
- TRW Technar, Project Engineering, Design test equipment, 1985-1989,FT

Certification or professional registration

- None

Membership in professional organizations

- Senior Member, IEEE (Institute of Electrical and Electronic Engineers)
- Member, NMSU (New Mexico State University) Teaching Academy

Honors and awards

- John Kaichiro and Tome Miyaguchi Nakayama Professorship for Teaching Excellence, 2015
- Donald C. Roush Excellence in Teaching Award, NMSU, 2012
- Bromilow Teaching Award for Teaching Excellence, 2008

Service activities (within and outside of the institution)

- Steering Committee Member, IEEE Midwest Symposium on Circuits and Systems Conference MWSCAS 1996-2000, 2011-present
- Chair, ECE Undergraduate Studies Committee, 2010-2011, 2015-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Y. Liu, P.M. Furth and W. Tang, “Hardware-Efficient Delta Sigma-Based Digital Signal Processing Circuits for the Internet-of-Things,” Journal of Low Power Electronics and Applications, 5(4), 234-256, Nov. 2015.
- P.R. Surkanti, V. Siripurapu, and P.M. Furth, “A high precision and high speed voltage-mode loser/winner-take-all circuit,” 58th IEEE Midwest Symposium on Circuits and Systems, Fort Collins, CO, August 2015.
- H. Valapala and P. M. Furth,”Fully Integrated 1.2-µA and 13-µA Quiescent Current LDOs with Improved Transient Response,” Analog Integrated Circuits and Signal Processing, vol. 78, no. 2, pp. 287-297, Feb. 2014.

Briefly list the most recent professional development activities

- NMSU Teaching Academy, Workshop Series, “Evidence-Based Instructional Practices,” Spring, 2017.
- NMSU Teaching Academy, Workshop, “Getting Our Students to Work in Every Class,” Ed Prather, Jan. 30, 2017.

Hong Huang

Education - degree, discipline, institution, year

- B.Engr. Engineering Physics, Tsinghua University, 1985
- M.S. Electrical & Computer Engineering, Georgia Institute of Technology, 2000
- Ph.D. Electrical & Computer Engineering, Georgia Institute of Technology, 2002

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Associate Professor, 2009-present, FT
- New Mexico State University, Assistant Professor, 2003-2009, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Junda Inc., Engineer, Engineering and Design, 1985-1996, FT

Certification or professional registration

- None

Membership in professional organizations

- Member, IEEE

Honors and awards

- Research Achievement Award, NMSU, 2016
- Best Paper Award, IEEE High Performance Switching and Routing Conference, 2002
- Amelio Prize ($1500), for excellent academic performance, Georgia Tech, 1999
- Excellent Graduates, for ranking 1st in Class (department) on graduation, Tsinghua Univ. 1985

Service activities (within and outside of the institution)

- Session chair in the IEEE VTC 2005
- TPC member in the IEEE ICC 2006 and IEE MILCOM 2016.
- Member of faculty senate, EE department head advisory committee, graduate studies committee, faculty search committees at NMSU.

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Y. Jaradat, H. Huang, M. Masoud, and I. Janoud, “Capacity of Wireless Networks with Directed Energy Links in the Presence of Obstacles,” IEEE Transactions on Wireless Communications (under revision).
- H. Huang, Y. Jaradat, R. A.-Cacheda, S. Misra, R. Tourani, M. Masoud and I. Jannoud, "Capacity of Large-Scale Wireless Networks Under Jamming: Modeling and Analyses," IEEE Transactions on Vehicular Technology, in press.

- S. Misra, R. Tourani, F. Natividad, T. Mick, N. Majd, and H. Huang, “FaSt: A Framework for Secure Content Delivery in Information-Centric Networks,” IEEE Transactions on Dependable and Secure Computing, in press.

Briefly list the most recent professional development activities

- IEEE Webinar on 5G Wireless Technology, Oct., 2017

David G. M. Mitchell

Education - degree, discipline, institution, year

- B.Sc. Mathematics, University of Edinburgh, UK, 2005
- Ph.D. Electrical Engineering, University of Edinburgh, UK, 2009

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor, 2015-present, FT
- University of Notre Dame, Visiting Assistant Professor, 2012-2015, FT
- University of Notre Dame, Post-Doctoral Research Associate, 2009-2012, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- none

Certification or professional registration

- none

Membership in professional organizations

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, IEEE Information Theory Society

Honors and awards

- New Mexico State University, Distinguished Member of the Teaching Academy, 2015.
- Striving for Excellence in College and University Teaching Award, University of Notre Dame, July 2015
- Best Paper Award, International Symposium on Turbo Codes, 2012.

Service activities (within and outside of the institution)

- Member, Hiring Committee, Klipsch School of ECE, 2016-present
- Chair, Klipsch School of ECE, Ph.D. Qualifying Exam Committee, 2016-present
- Publicity Chair, 2018 IEEE Information Theory Workshop
- Organizer, Las Cruces "Touch-a-Truck" event (community outreach), 2015-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- M. Zhu, D. G. M. Mitchell, M. Lentmaier, D. J. Costello, Jr., and B. Bai, "Braided Convolutional Codes with Sliding Window Decoding," IEEE Transactions on Communications, vol. 65, no. 9, pp. 3645-3658, Sept. 2017
- L. Wei, D. G. M. Mitchell, T. E. Fuja, and D. J. Costello, Jr., "Design of Spatially Coupled LDPC Codes Over GF(q) for Windowed Decoding," IEEE Transactions on Information Theory, vol. 62, no. 9, pp. 4781-4800, Sept. 2016.

- D. G. M. Mitchell, M. Lentmaier, A. E. Pusane, and D. J. Costello, Jr., "Randomly Punctured LDPC Codes," IEEE Journal on Selected Areas in Communications, vol. 34, no. 2, pp. 408-421, Feb. 2016.
- D. G. M. Mitchell, M. Lentmaier, and D. J. Costello, Jr., "Spatially Coupled LDPC Codes Constructed from Protographs," IEEE Transactions on Information Theory, vol. 61, no. 9, pp. 4866-4889, Sep. 2015.
- K. Huang, D. G. M. Mitchell, L. Wei*, X. Ma, and D. J. Costello, Jr., "Performance Comparison of LDPC Block and Spatially Coupled Codes over GF(q)," IEEE Transactions on Communications, vol. 63, no. 3, pp. 592-604, Mar. 2015.

Briefly list the most recent professional development activities

- Self-regulated learning: active learning on the inside, NMSU Teaching Academy, Fall 2017.
- New2Online Teaching Scholarship, NMSU Teaching Academy, 2015-2016.

Kwong T. Ng

Education - degree, discipline, institution, year

- B.Eng. (Hons.) Electrical Engineering McGill University, Canada, 1979
- M.Sc. Electrical Engineering, The Ohio State University, 1981
- Ph.D. Electrical Engineering, The Ohio State University, 1985

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Professor, 1995-present, FT
- New Mexico State University, Associate Professor, 1990-95, FT
- University of Virginia, Assistant Professor,1986-89, FT
- University of Virginia, Research Assistant Professor, 1985, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- None

Certification or professional registration

- None

Membership in professional organizations

- Senior Member, Institute of Electrical and Electronics Engineers
- Member, Biomedical Engineering Society

Honors and awards

- Paul W. and Valerie Klipsch Distinguished Professor
- Who's Who Among America's Teachers
- Who's Who in Science and Engineering

Service activities (within and outside of the institution)

- NMSU College of Engineering Promotion and Tenure Committee
- NMSU College of Engineering Research and Development Team
- NMSU Library Liaison, Electrical and Computer Engineering
- NMSU ECE Promotion and Tenure Committee
- NMSU Professorship Review Committee
- NMSU Director, Electromagnetics and Microwave Laboratory

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- R. Khan and K. T. Ng, "Higher Order Finite Difference Modelling of Cardiac Propagation," Proceedings 2017 IEEE International Conference on Bioinformatics and Biomedicine, Kansas City, MO, November 13-16, 2017

- Sturdevant, R. Garcia, and K. T. Ng, “Efficient Implementation of EEG Beamformers for Source Detection on Mobile Platforms,” Proceedings Biomedical Engineering Society Annual Meeting, Minneapolis, MN, October 58, 2016.
- H. V. Dang, K. T. Ng, and J. K. Kroger, “Novel Beamformers for Multiple Correlated Brain Source Localization and Reconstruction,” Proceedings 36th International Conference on Acoustics, Speech and Signal Processing, Prague, Czech Republic, May 22-27, 2011.
- H. V. Dang and K. T. Ng, “Finite Difference Neuroelectric Modeling Software,” Journal of Neuroscience Methods, vol. 198, pp. 359-363, 2011.

Briefly list the most recent professional development activities

- NMSU Teaching Academy
- Seminars at NMSU: 10

Krist Petersen

Education - degree, discipline, institution, year

- PhD Electrical Engineering, New Mexico State Univ., 1998
- MSEE Electrical Engineering, New Mexico State Univ., 1986
- BS Biology, Eastern New Mexico Univ., 1973

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State Univ., Assoc. Prof., Adjunct faculty, 9/13 – present, PT
- New Mexico State Univ., Assoc. Prof., College faculty, 9/11 – 5/13. FT
- New Mexico State Univ., Assoc. Prof & Associate Dean, 9/04 – 9/11, FT
- New Mexico State Univ., Assoc. Prof. & Department Head, 9/03 – 9/04, FT
- New Mexico State Univ., Assoc.Prof. & Associate Dean, 9/02 – 9/03, FT
- New Mexico State Univ., Assoc.Prof. & Assist. Dept. Head, 9/96 – 9/02, FT
- New Mexico State Univ.., Assist. Prof, College faculty, 9/86 – 5/96, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Eastern NM Univ., Computer learning lab director, Supervise student computer labs, 9/80 – 5/83, FT
- Armco Security, Director of data operations, Oversee computerization transition , 9/79 – 9/80, FT
- AAA Security, Computer manager, pversee computerization transition, 5/73 – 9/79, FT

Certification or professional registration

- None (retired)

Membership in professional organizations

- None (retired)

Honors and awards

- None (retired)

Service activities (within and outside of the institution)

- None (retired)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- None (retired)

Briefly list the most recent professional development activities

- None (retired)

Nadipuram (Ram) R. Prasad

Education - degree, discipline, institution, year

- B.E. Electrical Engineering, Mysore University, India, 1966
- Ph.D. Electrical Engineering, New Mexico State University, 1989

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Assoc. Prof, 1996 – Present, FT
- NMSU, Asst. Prof, 1990 – 1995, FT
- NMSU, College Prof, 1986 – 1989, FT
- Northeastern Univ., Instructor, 1971 – 1975, PT
- Lowell Tech, Instructor, 1973 – 1974, PT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Amer. Elec. Power (AEP), Planning Manager, R&D in Power Systems, 1976 – 1985, FT
- Chas T. Main, Inc., Senior Engineer, Planning & Development, 1967 – 1975, FT
- General Elec. India, Employee Intern, Power System Design, 1966-1967, FT

Certification or professional registration

- None

Membership in professional organizations

- Member, IEEE, 1972 - Present
- Founding Member, Vietnamese Fuzzy Systems

Honors and awards

- NASA Administrator Fellowship Program (NAFP) Award, Cohort 5, 20012002
- NMSU Bromilow Award for Teaching, 1996

Service activities (within and outside of the institution)

- Faculty Advisor, Indian Students Association and ATO
- U.S. Fulbright Scholar to Vietnam, 2012, Cultural Ambassador

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Tam Nguyen, Nho Nguyen, Nadipuram R, Prasad, “Eliminated Common-Mode Voltage Pulse-width Modulation to Reduce Output Current Ripple for Multilevel Inverters”, IEEE Transactions on Power Electronics, Vol. 31, Issue 8. 2016.
- Tam Nguyen, Nho Nguyen, Nadipuram R, Prasad, “Novel Eliminated CommonMode Voltage PWM Sequences and an Online Algorithm to Reduce Current Ripple for a Three-Level Inverter”, IEEE Transactions on Power Electronics, Vol. 32, Issue 10. 2016.

- Prasad, N. R., Ranade, S. J., Nguyen, H. P., “Low-Head Hydropower Energy Resource Harvesting: Design and manufacture of the (HyPER) Harvester”, Journal of Science & Technology Development, Vol. 18, 2016, ISSN 1859-0128.
- Prasad, N. R., Ranade, S. J., Nguyen, H. P., “Low-Head Hydropower Energy Resource Harvesting: Estimation of maximum harvestable power”, Journal of Science & Technology Development, Vol. 18, 2016, ISSN 1859-0128.
- Prasad, N. R., Ranade, S. J., Nguyen, H. P., Huynh, T. H., “Exploring Low-head Hydropower Energy Resource (HyPER) in waterways of Vietnam” 5th Regional Conference on Advances in Systems and Information, Thailand, July 2013.
- Prasad, N.R., Ranade, S, J., Nguyen, H. P., Huynh, T. H., “Hydropower Energy Recovery (HyPER) from water-flow systems in Vietnam”, 10th International Power and Energy Conference, Ho Chi Minh City, Vietnam, December 12-14, 2012.

Briefly list the most recent professional development activities

- Teaching Academy, Writing to Learn (W2L), Cohort 3, 2016-2018 AY
- Invited Member, Mekong River Commission, Vietnam

Jaime Ramirez-Angulo

Education - degree, discipline, institution, year

- PhD Electrical Engineering, University of Stuttgart, Germany, 1982
- MsC Electrical Engineering, CINVESTAV-IPN, Mexico 1976
- BsC Electrical Engineering, National Polytechnic Institute (ESIME-IPN), Mexico, 1973

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- INAOE, Puebla Mexico, Instructor, Aug 1982- August 1984, FT
- Texas A&M University, College Station TX, Assistant Professor, August 1984- August 1984, FT
- New Mexico State University, Professor, August 1990- December 2017, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- NASA Goddard Space Center, Researcher. Design of charge amplifiers, Summer 2006 and Summer 2007, FT
- NASA Ames Space Center, Researcher Nanoelectronic circuits, Summer 2004, FT
- Texas Instruments, Researcher Design of D/A converters, Summer 2001 and Summer 2002, FT

Certification or professional registration

- Professional Engineer 1974

Membership in professional organization

- Institute of Electrical and Electronic Engineers IEEE

Honors and awards

- IEEE Fellow Member since May 2000
- Westhafer Award for Research Excellence, New Mexico State University
- Distinguished Achievement Award Professor

Service activities (within and outside of the institution)

- Chair of Promotion and Tenure Committee

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- S. Pourashraf, J. Ramírez-Angulo, et al., “An Amplified Offset Compensation Scheme and its Application in a Track and Hold Circuit.” IEEE Transactions on Circuits and Systems II (TCAS-II), April 2017, In print, available online, DOI: 10.1109/TCSII.2017.2695162
- S. Pourashraf, J. Ramírez-Angulo, et al., “Super Class-AB OTA without Open Loop Gain Degradation Based on Dynamic Cascode Biasing.” International Journal of Circuit Theory and Application (IJCTA), In print. DOI: 10.1002/cta.2367

- S. Pourashraf, J. Ramírez-Angulo, et al., "±0.18 V Supply Gate Driven PGA with 0.7 Hz to 2 kHz Constant Bandwidth and 0.15 µW Power Dissipation." IJCTA, Accepted, 2017.
- Garcia-Alberdi, Coro; Lopez-Martin, Antonio J.; Galan, Juan A. and Ramirez-Angulo J Low-Power Analog Channel Selection Filtering Techniques., CIRCUITS SYSTEMS AND SIGNAL PROCESSING Vol. 36 Issue: 3 Pages: 895-915, MAR 2017

Briefly list the most recent professional development activities

- Development of Techniques for Design of Analog and Mixed Signal Circuits in deep submicrometer CMOS Technologies
- Design of Analog Circuits operating from Ultra low supply Voltage

Satish J. Ranade

Education - degree, discipline, institution, year

- B. Sc Physics, Chemistry, Mathematics, Saugar University, India, 1973
- B. E. Electrical, Indian Institute of Science, 1976
- MSEE Electrical, New Mexico State University, 1977
- Ph. D. Electrical, University of Florida, 1981

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor, 1981-1986 , FT
- New Mexico State University, Associate Professor, 1986-1992, FT
- New Mexico State University, Professor, 1992- present, Department Head (2012-2017)

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- ECCO Intl., Consultant, Reliability Modeling, 2015, PT

Certification or professional registration

- none

M*embership in professional organizations*

- IEEE

Honors and awards

- Bromilow Teaching Award, NMSU College of Engineering, 2012
- Energy Engineer of the Year, NMAEE, 2013
- Klipsch Distinguished Professor 1998-
- PNM Chair Professor, 2002-

Service activities (within and outside of the institution)

- TCPC, Secretary, Vice-chair, Chairman IEEE PES Transmission and Distribution Committee
- Chair, IEEE PES Career Promotion Subcommittee, Education Committee

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Wei Zhang, Ye Ma, Wenxin Liu, and Satish Ranade, "Distributed Optimal Active Power Dispatch under Constraints for Smart Grids," IEEE Transactions on Industrial Electronics, June 2017, Volume: 64, Issue:6, pp. 5084-5094, DOI 10.1109/TIE.2016.2617821
- Ye Ma, Satish Ranade, Jose Tabarez, Ankith Nadella, Nataraj Pragllapati, Wenxin Liu “Stochastic Distributed Energy Resource Management”, 7th. ICMS 2017, 21-23 December, 2017, Pune, India.

Briefly list the most recent professional development activities

- ABET Workshop, ECE Department Heads Association, Destin, FL, 2017
- Several presentations at the NMSU teaching Academy
- USDOE Energy Storage Systems Program, Peer Reviewer 2012-2016, Peer Review Participant 2017

Steven Sandoval

Education - degree, discipline, institution, year

- B.S. Electrical Engineering, New Mexico State University, 2007
- M.S. Electrical Engineering, New Mexico State University, 2010
- Ph. D Electrical Engineering, Arizona State University, 2016 3

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor, 2016-present. FT
- New Mexico State University, Affiliate Faculty, 2016, PT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Cirrus Logic Signal Processing, Research Intern, Progress Research, 2016, PT
- Atamir-WSMR, Systems Analyst, Test Reporting/ Documentation, 2008-2016, FT
- NCI Info. Systems Inc., Systems Analyst, Test Reporting/ Documentation, 2007-2008, FT
- Honeywell Int. Inc, Student Engineer, Industry Internship, 2006, FT

Certification or professional registration

- N/A

Membership in professional organizations

- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, Acoustical Society of America (ASA)

Honors and awards

- Minority Fellowship, Acoustical Society of America (ASA)
- Minority Doctoral, New Mexico Higher Education Department

Service activities (within and outside of the institution)

- Member, Engineering Research Distinguished Lecturer Committee
- Member, Graduate Admissions Committee 2017-Present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- S. Sandoval, V. Berisha, R. L. Utianski, J. M. Liss, and A. Spanias, "Automatic assessment of vowel space area," The Journal of the Acoustical Society of America, vol. 134, no. 5, pp. EL477-EL483, 2013
- L. E. Boucheron, P. L. De Leon, and S. Sandoval, "Low Bit-Rate Speech Coding through Quantization of Mel-Frequency Cepstral Coefficients," Audio, Speech, and Language Processing, IEEE Transactions on, vol.20, no.2, pp.610-619, Feb. 2012

- S. Sandoval, P. L. DeLeon, and J. M. Liss, “Hilbert Spectral Analysis of Vowels using Intrinsic Mode Functions,” IEEE Automatic Speech Recognition and Understanding Workshop (ASRU), 2015
- S. Sandoval, & P.L. De Leon "Advances in Empirical Mode Decomposition for computing Instantaneous Amplitudes and Instantaneous Frequencies." Acoustics, Speech and Signal Processing (ICASSP), 2017 IEEE International Conference on. IEEE, 2017.

Recent professional development activities

- N/A

Steven Stochaj

Education - degree, discipline, institution, year

- PhD Physics, University of Maryland,1990
- BA Physics and Mathematics, Franklin and Marshall, 1987

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- NMSU, Professor 2005 – Present, FT
- NMSU, Associate Professor, 2001 – 2005, FT
- NMSU, Assistant Professor, 1995 – 2001, FT
- NMSU, College Professor, 1990 – 1994, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- none

Certification or professional registration

- none

Membership in professional organizations

- IEEE
- ASEE

Honors and awards

- none

Service activities (within and outside of the institution)

- College P&T Committee
- Regents' Budget Committee

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Thelen, A.E., Chanover, n., Murphy, J., Rankin, K., and Stochaj, S. "A Europa CubeSat Concept Study for Measuring Atmospheric Density and Heavy Ion Flux" JoSS, Vol. 06, No. 02 (August 2017) pp. 591607
- Bruno, A., et al. "Geomagnetically trapped, albedo and solar energetic particles: trajectory analysis and flux reconstruction with PAMELA." Advances in Space Research (2016).
- Bruno, A., et al. "The May 17, 2012 solar event: back-tracing analysis and flux reconstruction with PAMELA." Journal of Physics: Conference Series. Vol. 675. No. 3. IOP Publishing, 2016.
- Adriani, O., et al. "Pamela?s measurements of magnetospheric effects on high-energy solar particles." The Astrophysical Journal Letters 801.1 (2015): L3.

- Martucci, Matteo, et al. “Analysis on H spectral shape during the early 2012 SEPs with the PAMELA experiment.” Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 742 (2014): 158-161. 10.

Briefly list the most recent professional development activities

- none

Wei Tang

Education - degree, discipline, institution, year

- B.S. Microelectronics, Peking University, 2006
- Ph.D. Electrical Engineering, Yale University, 2012

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor, 2012-Present, FT
- Nanyang Technological Univ., Visiting Scholar, NSF Sensor Research, Dec 2015, PT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- none

Certification or professional registration

- none

Membership in professional organizations

- Member, IEEE

Honors and awards

- NSF Faculty Early Career Award, 2017

Service activities (within and outside of the institution)

- Member, Graduate Study Committee, 2016-Present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Djuro Zrilic, Grozdan Petrovic, Wei Tang: "Novel Solutions of Delta-Sigma Based Rectifying Encoder". IEEE Transactions on Circuits and Systems – II Express Briefs (TCAS-II). vol 64, no. 10. pp. 1242-1246, October 2017.
- Xiaochen Tang, Qisong Hu, Wei Tang: "Delta-Sigma Encoder for Low Power Wireless Bio-sensors using Ultra Wideband Impulse Radio". IEEE Transactions on Circuits and Systems – II Express Briefs (TCAS-II). vol 64, no. 7, pp. 747-751, July 2017.
- Qisong Hu, Xiaochen Tang, Wei Tang: "Integrated Asynchronous Ultra Wideband Impulse Radio with Automatic Clock and Data Recovery". IEEE Microwave and Wireless Components Letters (MWCL). vol 27, no. 4, pp. 416-418, April 2017.
- Hang Yu, Wei Tang, Menghan Guo, Shoushun Chen: "A Two-Step Prediction ADC Architecture for Integrated Low Power Image Sensors". IEEE Transactions on Circuits and Systems – 1 Regular Paper (TCAS-I), vol. 64, no. 1, pp.50-60, January 2017.

Briefly list the most recent professional development activities

- Organizer of Graduate Student Seminar of ECE

David G. Voelz

Education - degree, discipline, institution, year

B.S. Electrical Engineering, New Mexico State University, 1981
M.S. Electrical Engineering, University of Illinois, 1983
Ph.D. Electrical Engineering, University of Illinois, 1987

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Professor, 2010-Present, FT
- New Mexico State University, Associate Professor, 2001-2010, FT

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Air Force Research Laboratory, Engineer/ Scientist – Principal Investigator, Imaging and remote sensing research, 1987-2001, FT

Certification or professional registration

- None

Membership in professional organizations

- International Society for Optics and Photonics (SPIE)
- Optical Society of America (OSA)

Honors and awards

- Fellow of the Optical Society of America (OSA), 2015
- Distinguished Career Award NMSU - University Research Council, 2010
- Paul W. and Valerie Klipsch Professorship, 2007
- Bromilow Award for Research Excellence, NMSU College of Eng., 2007
- Fellow of the International Society for Optics and Photonics (SPIE), 1999
- Engineering Excellence Award, Optical Society of America, 1995
- Giller Award - Technical Achievement, Air Force Research Lab, 1988

Service activities (within and outside of the institution)

- Chair, Free-Space Laser Communication and Laser Imaging Conference, SPIE, 2001-2005
- Member, Rudolph Kingslake Medal Committee, SPIE, 2001-Present
- Program Committee, SPIE and OSA Conferences (32), 1992-Present
- Short Course Instructor, Computational Fourier Optics, SPIE Symposia, 2012-Present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- X. Xiao, D. G. Voelz, S. R. Bose-Pillai, and M. W. Hyde, "Modeling random screens for predefined electromagnetic Gaussian–Schell model sources," Opt. Express 25, 3656-3665 (2017).

- H. Zhan, D. G. Voelz. Modified polarimetric bidirectional reflectance distribution function with diffuse scattering: surface parameter estimation. Opt. Eng., 55(12), 123103–123103 (2016).
- D. Voelz, X. Xiao, and O. Korotkova, "Numerical modeling of Schell-model beams with arbitrary far-field patterns," Opt. Lett. 40, 352-355 (2015).
- Hyde, Milo W. and Basu, Santasri and Voelz, David G. and Xiao, Xifeng, "Experimentally generating any desired partially coherent Schell-model source using phase-only control, Journal of Applied Physics, 118, 093102 (2015).

Briefly list the most recent professional development activities

- None

Engineering Physics Program

(Bachelor of Science in Engineering Physics)

at

New Mexico State University

Tenured & Tenure-Track Faculty – Department of Chemical & Materials Engineering

Paul K. Andersen

Education – degree, discipline, institution, year

- Ph.D., Chemical Engineering, University of California-Berkeley (1987)
- B.S., Chemical Engineering, Brigham Young University (1981)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Associate Professor (1997 to present)
- New Mexico State University, Institute for Energy & the Environment, Executive Director (2015–2016)
- Purdue University, Assistant/Associate Professor (1987–1997)
- Lawrence Berkeley Laboratory, Materials and Molecular Research Division, Berkeley, CA Graduate research assistant. (January 1982 to December 1987).

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Bechtel Petroleum, Slurry Pipeline Group, San Francisco, CA (Summer 1980; June 1981 to January 1982).

Certifications or professional registrations

- None

Current membership in professional organizations

- None

Honors and awards

- None

Service activities (within and outside of the institution)

- NMSU Faculty Senate
- Provost's General Education Task Force
- CHME PhD Qualifying Examination Coordinator

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- K. Andersen (2018). *Electric Power*: *Energy Sources, Power Plants, and Electrical Grids*. Boca Raton, FL: CRC Press (under contract).
- K. Andersen, M. G. Scarbrough, and J. P. Andersen (2018). *Essential C*, 2nd ed. Cary, NC: Oxford University Press (in preparation).
- Xu, L. Fei, E. Fu, Q. Lin, B. Yuan, J. Hill, S. Deng, P. K. Andersen, Y. Wang, and H. M. Luo. (2013). "A general polymer-assisted solution approach to grow transition metal oxide nanostructures directly on nickel foam as anodes for Li-ion batteries." *Journal of Power Engineering*, 242, 604–609.
- Xu, R. Yi, B. Yuan, Q. Lin, L. Fei, S. Deng, P. K. Andersen, D. Wang, and H. M. Luo. (2012) "High Capacity MoO_2/Graphite Oxide Composite Anode for Lithium-Ion Batteries," *Journal of Physical Chemistry Letters*, 3(3), 309–314.

- H. Munson-McGee, A. Mannarswamy, and P. K. Andersen (2011). "D-optimal Designs for Sorption Kinetics Experiments: Slabs," *Journal of Food Engineering*, 104(3), 461–466.
- H. Munson-McGee, A. Mannarswamy, and P. K. Andersen (2011). "D-optimal Designs for Sorption Kinetics Experiments: Cylinders," *Journal of Food Engineering*, 104(2), 202–207.
- H. Munson-McGee, A. Mannarswamy, and P. K. Andersen (2010). "Designing Experiments to Differentiate between Adsorption Isotherms using T-optimal Designs," *Journal of Food Engineering*, 101(4), 386–393.
- Mannarswamy, S. H. Munson-McGee, and P. K. Andersen (2010). "D-optimal Designs for the Cross Viscosity Models Applied to Guar Gum Mixtures," *Journal of Food Engineering*, 97(3), 403–409.
- Mannarswamy, S. H. Munson-McGee, R. Steiner, and P. K. Andersen (2009). "D-optimal Experimental Designs for Freundlich and Langmuir Adsorption Isotherms." *Chemometrics and Intelligent Laboratory Systems*, 97, 2, 146–151.

Briefly list the most recent professional development activities

- NMSU Teaching Academy, Evidence-Based Instructional Practices (July–August 2017)
- NMSU Teaching Academy, Excel at teaching (April 2017)
- NMSU OGC, Principal Investigator Training (April 2017)
- NMSU OCIP: Creating Whiteboard Videos (March 2017)
- NMSU Annual Compliance Training (November 2016)
- NMSU Laboratory Safety Refresher (October 20016)
- NMSU Basic Radiation Safety (August 2016).

Catherine E. Brewer

Education – degree, discipline, institution, year

- Ph.D., Iowa State University, Chemical Engineering and Biorenewable Resources & Technology (2012)
- B.S., Chemistry, Indiana University of Pennsylvania Indiana (2007)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor, 2013-present, full time
- Rice University, Postdoctoral Research Associate, 2012-2013, full time
- Iowa State University, Graduate Research and Teaching Assistant, 2007-2012, part time
- Indiana University of Pennsylvania, Undergraduate Research Assistant, 2006-2007, part time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Institute of Chemical Engineers
- American Society of Agricultural & Biosystems Engineers
- International Biochar Initiative
- Pink Boots Society

Honors and awards

- NMSU University Research Council Early Career Research Award, 2017
- 2nd Place, Dark & Malty Category, AICHE Young Professionals 1st Annual Brewing Competition, 2017
- ISU Graduate College Teaching Excellence Award, 2012
- ISU Bioeconomy Institute George Washington Carver Award, 2011
- AICHE Forest & Bioproducts Division Student Research Travel Award, 2011
- ISU James R. Katzer Graduate Research in Energy Fellow, 2011-2012
- National Science Foundation Graduate Research Fellow, 2008-2011
- ISU Plant Sciences Institute Graduate Research Fellow, 2007-2008, 2011-2012

Service activities (within and outside of the institution)

- Journal Peer Reviewer for *Biomass & Bioenergy, Bioresource Technology, Environmental Progress & Sustainable Energy, Bioenergy Research*, *Industrial Crops & Products,* and several others
- Proposal Review Panelist and Ad Hoc Reviewer for the National Science Foundation and the USDA, 2013-present
- Session Chair, Forest & Bioproducts Division, AICHE Annual Meetings, 2013-present
- Young Professionals Director, AICHE Rio Grande Local Section, 2017-present

- Undergraduate Research Scholar Selection Committee, NM Alliance for Minority Participation, New Mexico State University, 2015-present
- Session Presenter, NMSU Pre-Engineering Summer Academy for Middle School and High School Students, 2016-present
- Outreach Session Leader and Volunteer, Expanding Your Horizons (for Middle School Girls), New Mexico State University, 2014-present
- Library Faculty Liaison, Department of Chemical & Materials Engineering, New Mexico State University 2016-present
- Faculty Advisor, Chemical Engineering Graduate Student Organization, New Mexico State University, 2013-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Amiri, A., Al-Rawajfeh, A., Brewer, C.E. (2018) Simulation of small-scale thermal water desalination using biomass energy, *Desalination & Water Treatment*, accepted, in press.
- Cheng, F., Cui, Z., Chen, L., Jarvis, J., Paz, N., Schaub, T., Nirmalakhandan, N., Brewer, C.E. (2017) Hydrothermal liquefaction of high- and low-lipid algae: bio-crude oil chemistry, *Applied Energy*, 206, 278-292, DOI: 10.1016/j.apenergy.2017.08.105.
- Idowu, O.J., Sanogo, S., Brewer, C.E. (2017) Short term impacts of pecan waste byproducts on soil quality in texturally different arid soils, *Communications in Soil Science & Plant Analysis,* 48 (15), 1781-1791, DOI: 10.1080/00103624.2017.1395448.
- Wang, K., Zheng, Y., Zhu, X., Brewer, C.E., Brown, R.C. (2017) Ex-situ catalytic pyrolysis of wastewater sewage sludge—a micro-pyrolysis study, *Bioresource Technology*, 232, 229-234, DOI: 10.1016/j.biortech.2017.02.015.
- Cheng, F., Brewer, C.E. (2017) Producing jet fuels from biomass lignin: potential pathways to alkyl-benzenes and cycloalkanes, *Renewable and Sustainable Energy Reviews*, 72, 673-722, DOI: 10.1016/j.rser.2017.01.030.
- Brewer, C.E., Hall, E.T., Schmidt-Rohr, K., Laird, D.A., Brown, R.C., Zygourakis, K. (2016) Temperature and reaction atmosphere effects on properties of corn stover biochar, *Environmental Progress & Sustainable Energy*, 36(3), 696-707, DOI: 10.1002/ep.12503.
- Zhang, Y., Idowu, O.J., Brewer, C.E. (2016) Using agricultural residue biochar to improve soil quality of desert soils, *Agriculture*, 6 (1), 10, DOI: 10.3390/agriculture6010010.
- Brewer, C.E., Chuang, V.J., Masiello, C.A., Gonnermann, H., Gao, X., Dugan, B., Driver, L.E., Panzacchi, P., Zygourakis, K., Davies, C. (2014) New approaches to measuring biochar density and porosity, *Biomass & Bioenergy*, 66, 176-185.

Briefly list the most recent professional development activities

- Web-Based Concise Course in Brewing Technology, Siebel Institute of Technology, Aug-Nov 2017
- Summer School for Chemical Engineering Faculty, American Society of Engineering Education, July-Aug 2017
- National Science Foundation Innovation Corps, July-August 2016
- Publish & Flourish and Team Mentoring Program, Teaching Academy, New Mexico State University, 2013-2015

Reza Foudazi

Education – degree, discipline, institution, year

- Ph.D. Chemical Engineering, Cape Peninsula University of Technology (2010)
- M.Sc. Polymer Engineering, Amirkabir University of Technology (2004)
- B.Sc. Polymer Engineering, Amirkabir University of Technology (2002)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor, Department of Chemical and Materials Engineering, New Mexico State University, New Mexico (August 2013 – date). Full time
- Visiting Faculty, The University of Minnesota Materials Research Science and Engineering Center (MRSEC), Minnesota (June 2016 – August 2016). Full time
- Research Associate, Department of Macromolecular Science and Engineering, Case Western Reserve University, Cleveland, Ohio (June 2011 – August 2013). Full time
- Postdoctoral Fellow, Material Science and Technology group, Cape Peninsula University of Technology, Cape Town, South Africa (Jan. 2010 – May 2011). Full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- Society of Rheology, SoR (2010 – present)
- American Chemical Society, ACS (2012 – present)
- American Institute of Chemical Engineers, AIChE (2013 – present)
- Iranian Society of Rheology (2015 – present)
- North American Membrane Society (2015 – present)
- Royal Society of Chemistry, UK (2016 – present)

Honors and awards

- University Research Council, Early Career Award, New Mexico State University (2016)
- Recognized in the Mentoring Excellence program of New Mexico State University (2016)
- PPG Award for Applied Polymer Excellence (2012)

Service activities (within and outside of the institution)

- Member of the team participated in Making Academic Change Happen (MACH) workshop for implementing ENG 100 course for freshmen (2014)
- Organizer of Graduate Weekly Seminar at Chemical Engineering Department of NMSU (2014 – 2015)
- Adviser of local high school students for research experience (2014 – 2015)
- Academic Adviser of Iranian Students Organization (ISO) at NMSU (2014 – 2015)

- Academic Adviser of National Society of Professional Engineers at NMSU (2015 – 2016)
- Member of Founding Board of Iranian Society of Rheology (2015 – present)
- Developed and taught "Introduction to Rheology and Viscoelasticity" workshop, NMSU RISE (Research Initiative for Scientific Enhancement) to the Postdoctorate Program (2016)

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- C. Kuang, S. Qavi, R. Foudazi, "Double-stage phase separation in dynamically asymmetric ternary polymer blends", RSC Advances 6, 92104-92114, 2016.
- N. Khazeni, R. Foudazi, A. Ghassemi, "Zn(NH3)(CO3) inorganic helical framework for selective separation of carbon dioxide", Chemical Engineering Journal 304, 369-375, 2016.
- A. Ghorbani, A. Ghassemi, P.K. Andersen, R. Foudazi, "A Prediction Model of Mass Transfer through an Electrodialysis Cell", Desalination and Water Treatment 57, 22290-22303, 2016.
- R. Zowada, R. Foudazi, "Poly(high internal phase emulsions) as supersorbent hydrogels", 252nd American Chemical Society National Meeting & Exposition, August 21-25, 2016, Philadelphia, PA.\
- R. Zowada, A. Malakian, R. Foudazi, "Arsenic Removal from Water by Porous Polymers", 2015 AIChE Annual Meeting, Poster Presentation, November 8-13, 2015, Salt Lake City, UT.
- A. Malakian, R. Zowada, R. Foudazi, "High Internal Phase Emulsion Templating As a Potential Method for Producing Ultrafiltration Membranes", 2015 North American Membrane Society Meeting, Poster Presentation, May 30 – June 3, 2015, Boston, MA.
- S. Qavi, C. Kuang, R. Foudazi, "Mesophase Templated Porous Polymers As Ultrafiltration Membranes", 2015 North American Membrane Society Meeting, Poster Presentation, May 30 – June 3, 2015, Boston, MA.
- R. Foudazi, C. Bezik, D. Feke, S. Rowan, I. Manas-Zloczower, "Method for the Production of High Internal Phase Emulsion Foams", US Patent 2015/0353699 A1. Dec. 10, 2015.

Briefly list the most recent professional development activities

- University of Minnesota MRSEC Fellowship, University of Minnesota, Minneapolis, MN (2016)
- The Online Course Improvement Program (OCIP): Let's Talk Online Teaching, NMSU Teaching Academy (2016)
- QEM/NSF Career Workshop, Quality Education for Minorities (QEM) Network (March 2015)
- Creating Your FLiP Course Abroad, NMSU Teaching academy (2014)
- Making Academic Change Happen (MACH), Rose-Hulman Institute of Technology (2014)
- i>Clicker Training, NMSU Teaching academy (2014)
- Flipping the Classroom with Just-in-Time Teaching, NMSU Teaching Academy (2014)

Jessica P. Houston

Education – degree, discipline, institution, year

- Ph.D., Chemical Engineering, Texas A&M University (2005)
- B.S., Chemical Engineering, New Mexico State University (2000)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor, Chemical & Materials Engineering, May 2015 – Present
- Associate Professor, Molecular Biology, Aug 2009 – Present
- Associate Department Head Chemical & Materials Engineering, August 2012 – May 2014
- Assistant Professor, Chemical Engineering, Aug 2009 – May 2014

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Director's Postdoctoral Fellow, Los Alamos National Laboratory, May 2006 – Aug 2009

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- International Society for the Advancement of Cytometry
- American Institute of Chemical Engineers
- Optical Society of America

Honors and awards

- 2018-2019 Fulbright Scholar, The Council for International Exchange of Scholars and Japan-U.S. Educational Commission
- 2017 Synergy-One Award Faculty Award, NMSU College of Engineering
- 2015 Best Paper Award for 2014 Cytometry Part A, John Wiley and Sons,
- 2014 College of Engineering Foreman Award: Assistant Professor Level, NMSU
- 2014 New Mexico State University University Research Council Early Career Award
- 2014 Scholar Award; the International Society for the Advancement of Cytometry

Service activities (within and outside of the institution)

- Aggie Innovation Space Faculty Advisory Committee Member 2013 – present
- Biomedical Engineering Society · Faculty advisor, 2015 – present
- Cytometry Part A, Associate Editorial Board Member, 2017 – present
- Engineering Club Mentor/Organizer Las Cruces Academy, 2015 – present
- MAES · Faculty advisor, 2015 – present
- Referee, Journal of Biomedical Optics, Optics Express, Scientific Reports, Journal of Biomedical Optics Express, Applied Optics, Sensors, International Journal of Molecular Sciences, Methods and Applications in Fluorescence, Department of Energy Office of Science; Journal of Undergraduate Research, AAPS PharmSciTech, Advanced Healthcare Materials

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- F. Alturkistany, K. Nichani, W. Li, and J. P. Houston, "Effect of Viscosity on Fluorescence Lifetime Measured Using Flow Cytometry," Conference on Lasers and Electro-Optics, OSA Technical Digest, 2018, Optical Society of America, 2018
- J. Li and J. P. Houston, "A Novel Cell and Particle Sorting Approach Based on Fluorescence Dynamics, Conference on Lasers and Electro-Optics, OSA Technical Digest, 2018, Optical Society of America, 2018
- J. P. Houston, Z. Yang, J. Sambrano, K. Nichani, and G. Vacca, "Overview of fluorescence lifetime measurements in flow cytometry," Flow cytometry Protocols Edition 4Eds. B. Hawley and T. Hawley, Springer 2017.
- A. Filby, and J. P. Houston "Imaging cytometry: Automated morphology and feature extraction," Cytometry A. 2017 Sep;91(9):851-853. doi: 10.1002/cyto.a.23200
- J. P. Houston and M. Naivar U.S. SN 14/072,521: Methods of measuring fluorescence lifetime with a flow cytometer," U.S. Patent, Awarded 2017 via Group Art Unit 1777
- J. Sambrano, Y. Smagley, A. Chigaev, L. A. Sklar, and J. P. Houston, "Using FRET to quantify changes in integrin structures in human leukocytes induced by chemoattractants with multi-frequency flow cytometry," Proc. SPIE 10062, Optical Interactions with Tissue and Cells XXVIII, 100620X, February 15, 2017.
- Z. Yang, J. Houston, B. Rutherford, R. McDonald, "Development of far-red and ultraviolet digital frequency-domain flow cytometry systems," IEEE Journal of Selected Topics in Quantum Electronics, 2017, Volume: 23, Issue: 0 doi: 10.1109/JSTQE.2017.2649463
- W. Li, K. D. Houston, and J. P. Houston, "Shifts in the fluorescence lifetime of EGFP during bacterial phagocytosis measured by phase-sensitive flow cytometry," Sci Rep., 2017, Jan 16;7:40341. doi: 10.1038/srep40341.
- Z. Yang, D. M. Shcherbakova, V. Verkhusha, and J. P. Houston, "Time-resolved flow cytometry for lifetime measurements of near-infrared fluorescent proteins," in Conference on Lasers and Electro-Optics, OSA Technical Digest, 2016, (Optical Society of America, 2016), paper SW4G.1.

Briefly list the most recent professional development activities

- Teaching and Learning STEM, NMSU Teaching Academy, 01/13/2017 – 03/15/2017
- "Just Teaching, Scholarly Teaching and Education Research. Where do you want to be, and how do you get there?", NMSU Teaching Academy 01/24/2017
- STEM Women's Book Club, 01/01/2016 – 12/31/2016
- "Teaching in NMSU's First Technology-Enhanced Active Learning (TEAL) Classroom" NMSU Teaching Academy, 10/06/2015 – 10/27/2015
- STEM Women's Book Club, 01/01/2015 – 12/31/2015
- "Mentoring in the professoriate: Experiences of a mentor and protégé", NMSU Teaching Academy 09/21/2015
- "Using Adobe Connect in Canvas" NMSU Teaching Academy 08/27/2015
- "Campus Climate for Underrepresented Faculty Members" NMSU Teaching Academy 03/20/2015
- "Working the Student Retention Puzzle" NMSU Teaching Academy 03/02/2015
- STEM Women's Book Club, NMSU Teaching Academy 01/01/2014 – 12/31/2014

Umakanta Jena

Education – degree, discipline, institution, year

- Ph.D., University of Georgia, Biological and Agricultural Engineering (2011)
- M. Tech., Agricultural Engineering, Indian Institute of Technology Kharagpur (2002)
- B. Tech., Agricultural Engineering, Orissa University of Agriculture and Technology (2001)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- New Mexico State University, Assistant Professor, August 2016-present, full time
- Lincoln University of Missouri, Assistant Professor, Jan 2016-July 2016, full time
- Desert Research Institute, Assistant Research Professor, Nov 2013-Jan 2016, full time
- Desert Research Institute, Postdoctoral Fellow, Oct 2012-Oct 2013, full time
- University of Georgia, Postdoctoral Research Associate, May 2011-Sept 2012, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Sardar Patel Renewable Energy Research Institute, Sept 2003-July 2006, full time
- The Energy Resources Institute, Research Intern, May 2002-Dec 2002, part time

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- American Institute of Chemical Engineers
- American Society of Biological and Agricultural Engineers
- Institute of Biological Engineering
- Indian Society of Agricultural Engineers

Honors and awards

- Nell J. Redfield Foundation Fellow in Renewable Energy in Nevada, 2012
- Grant H. Flint International Scholarship Award by the Solid Waste Association of North America, 2009
- Excellence in Sustainable Development Research and Study, Air & Waste Management Association, 2009

Service activities (within and outside of the institution)

- Journal Peer Reviewer for Algal Research, Applied Energy, ASABE Transactions, Chemical Engineering Research and Design, Chemosphere, Bioresource Technology, Biofuels, Energy & Environmental Science, Energies, Bioenergy Research, and several others
- Proposal Review Panelist and Ad Hoc Reviewer for the National Science Foundation, U.S. Department of Energy, US. Department of Agriculture and, Portugal Science Foundation 2012-present
- Associate Editor, Frontiers in Energy Research journal 2017-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Jena, U., S.K. Hoekman (2017) Recent Advancements in Algae-to-Biofuels Research - Novel Growth Technologies and Conversion Methods, Edited by U. Jena and S.K. Hoekman, *Frontiers in Energy Research* 5:2
- Ekefre, D.E., A.K. Mahapatra, M. Latimore, Jr., D.D. Bellmer, U. Jena, G.J. Whitehead, A. L. Williams (2017). Evaluation of three varieties of sweet sorghums as feedstocks for bioethanol production, Heliyon 3:1-18
- Mahapatra, A.K., D. E. Ekefre, N. Pattanaik, U. Jena, M. Latimore, Jr., D.D. Bellmer (2017) Thermal Properties of Sweet Sorghum Bagasse as a Function of Moisture Content. Agricultural Engineering International: CIGR Journal, 19 (4): 108-113
- Leelah, S., A. Mudhoo, U. Jena, Schmidt, J. E. (2017) Insights into green biotechnology for sustainable bioethanol production from lignocellulosic biomass, International Conference on Energy, Environment and Climate, Mauritius, July 5-7, 2017
- Brewer, CE, K. Mallick, F. Cheng, Z. Cui, SMH Gedara, M. Karbakhshravari, TM Schaub, U.Jena, N. Nirmalakhandan (2017). Hydrothermal Liquefaction of Galdieria sulphuraria Grown on Municipal Wastewater. American Society of Agricultural and Biological Engineering Annual International Meeting, Spokane WA, July 16-19, 2017
- Soliz, N., C.E. Brewer, U. Jena, M. Audu, K. Garland, T. Le-Doux, L. Derry, C. M.Bejanaro. Hydrothermal Liquefaction of Filamentous Algae, NSF RENUWit Young Scholars Research Symposium, Las Cruces, NM, June 30, 2017.
- Jena, U. Bioenergy from Algal Biomass and Conversion Processing, Indo-US. WEF Nexus Workshop, Indian Institute of Science, Bangalore, India, April 11-14, 2017.
- Costanzo, W., R.N. Hilten, U. Jena, K.C. Das, J.R. Kastner (2016) Effect of low temperature hydrothermal liquefaction on catalytic hydrodenitrogenation of algae biocrude and model macromolecules, *Algal Research*, 13: 53-68
- Jena, U., A. McCurdy, Hailey Summers, S. Kent Hoekman, L. Seefeldt, J. Quinn, Co-solvent hydrothermal liquefaction of oleaginous yeast biomass. Oral presentation at the 2016 AIChE Annual Meeting, San Francisco, CA, November 12-18, 2016
- Mallick, K., U. Jena, F. Cheng, F., S.H., C.E. Brewer, N. Nirmalakhandan, Different Parameters Controlling the Biocrude Yield in Hydrothermal Liquefaction of Microalgae. 2016 AIChE Annual Meeting, San Francisco, CA, November 12-18, 2016

Briefly list the most recent professional development activities

- Scholarly Writing Retreat Summer, Teaching Academy, New Mexico State University, 2017
- Online Course Improvement Program-Summer Institute I, Teaching Academy, New Mexico State University, 2017
- Publish & Flourish: Become a Prolific Scholar, Teaching Academy, New Mexico State University, 2016
- Proposal Development Workshops, Office of Research Development, New Mexico State University, 2016-2017
- Team Mentoring for Faculty, NMSU Teaching Academy, 2016

Hongmei Luo

Education – degree, discipline, institution, year

- Ph. D., Chemical Engineering, Tulane University (2006)
- M.S., Materials Science and Engineering, University of Science and Technology of China (1995)
- B.S., Chemistry, Fuyang Normal University, China (1992)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Associate Professor, Department of Chemical and Materials Engineering, NMSU, 08/2014 – Present, full time
- Graduate program coordinator, Department of Chemical and Materials Engineering, NMSU, 02/2010 – Present, part time
- Assistant Professor, Department of Chemical Engineering, NMSU, 08/2009 – 08/2014, full time
- Postdoctoral Associate, Los Alamos National Laboratory, 06/2006 – 08/2009, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- n.a.

Certifications or professional registrations

- n.a.

Current membership in professional organizations

- International Association of Advanced Materials
- American Chemical Society
- Electrochemical Society
- Materials Research Society

Honors and awards

- 2016 Robert L. Westhafer Award for Excellence in Research and Creative Activity, NMSU
- 2016 Distinguished Career Award from University Research Council for Exceptional Achievements in Creative Scholarly Activity, NMSU
- 2016 Nanoscience Research Leader Award, Publishing Division of Cognizure
- 2015 Advisor for the Chinese Government Award for Outstanding Self-financed Students Abroad, China Scholarship Council, for Gen Chen's Ph.D study at NMSU
- 2015 Outstanding Reviewer for the Journal of Power Sources, Elsevier, Netherlands
- 2015 Bromilow Award for Research Excellence, NMSU College of Engineering

Service activities (within and outside of the institution)

- University Research Council member, NMSU (2014 – 2016)
- The Engineering Physics Committee member (2014 – present)

- Journal Peer Reviewer for Environmental Science & Technology, Advanced Materials, Angew Chemie, JACS, ACS Nano, ACS Applied Materials & Interfaces, J. Power Sources, Nanoscale, Adv. Functional Mater.; Nano Energy and several others, 2006 – present
- Editorial Board Member, Applied Materials Today, The Scientific Pages of Nanotechnology, Chemical Engineering
- Guest Editor, J. Nanomaterials, J. Nanotechnology, 2011 – 2017

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Gen Chen, Litao Yan, Hongmei Luo, Shaojun Guo, Nanoscale Engineering of Heterostructured Anode Materials for Boosting Lithium Ion Storage, Adv. Mater. 28, 7580-7602 (2016)
- G. Chen, S. Wang, R. Yi, L. Tan, H. Li, M. Zhou, L. Yan, Y. Jiang, S. Tan, D. Wang, S. Deng, X. Meng, H. M. Luo, Facile synthesis of hierarchical MoS2-carbon microspheres as robust anode for lithium ion battery, J. Mater. Chem. A 4, 9653-9660 (2016)
- L. Yan, G. Chen, S. Sarker, S. Richins, H. Wang, W. Xu, X. Rui, H. M. Luo, Ultrafine Nb2O5 Nanocrystal Coating on Reduced Graphene Oxide as Anode Material for High Performance Sodium Ion Battery, ACS Appl. Mater. Interfaces 8, 22213-22219 (2016)
- Litao Yan, Xianhong Rui, Gen Chen, Weichuan Xu, Guifu Zou, Hongmei Luo, Recent advances in nanostructured Nb-based oxides for energy storage, Nanoscale 8, 8443-8465 (2016)
- L. Yan, G. Chen, S. Tan, M. Zhou, G. Zou, S. Deng, S. Smirnov, H. M. Luo, Titanium Oxynitride Nanoparticles Anchored on Carbon Nanotubes as Energy Storage Materials, ACS Appl. Mater. Interfaces 7, 24212-24217 (2015).
- Q. Lin, N. S. Makarov, W-k. Koh, K. A. Velizhanin, C. M. Cirloganu, H. M. Luo, V. I. Klimov, J. M. Pietryga, The design and synthesis of heterostructured quantum dots with dual emission in the visible and infrared, ACS Nano 9 (1), 539-547 (2015).
- G. Chen, M. Zhou, J. Catanach, T. Liaw, L. Fei, S. Deng, H. M. Luo, Solvothermal route based in situ carbonization to Fe3O4@C as anode material for lithium ion battery, Nano Energy 8, 126-132 (2014).
- C. M. Cirloganu, L. A. Padilha, Q. Lin, N. Makarov, K. Velizhanin, H. M. Luo, I. Robel, J. M. Pietryga, V. I. Klimov, Enhanced carrier multiplication in engineered quasi-type-II quantum dots, Nature Commun. 5, 4148 (2014).
- G. Chen, F. Chen, X. H. Liu, W. Ma, H. M. Luo, J. Li, R. Z. Ma, G. Z. Qiu, Hollow spherical rare-earth-doped yttrium oxysulfate: a novel structure for upconversion, Nano Research, 7, 1093 (2014).

Briefly list the most recent professional development activities

- Pathway toward Degree Completion, monthly, NMSU graduate school (2014 – present)
- Promotion to Full Professor Spring Workshop, Teaching Academy, 2017
- The Quiz tool in Canvas, Teaching Academy, 2016
- Writing to Learn Mini-Grant Recipients: A Panel, Teaching Academy, 2016
- 10 Ways to Manager Your Time, Teaching Academy, 2015
- WordPress for Administrators, 2014

Thomas A. Manz

Education – degree, discipline, institution, year

- Ph.D., Chemical Engineering, Purdue University (2009)
- M.S., Chemical Engineering, Purdue University (1998)
- B.S., Chemical Engineering, The University of Toledo (1994)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor, Chemical & Materials Engineering, New Mexico State University, Las Cruces, NM, Aug 2012 – present (full time)
- Temporary research scientist (post-doc), Chemical Engineering, Georgia Institute of Technology, Atlanta, GA, Sept 2008 – July 2012 (full time)

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Wal-Mart Stores, photo lab manager, West Lafayette, IN, 2000 – 2002 (full time)
- Photonics, clean room and quality control worker for plasma display manufacturing, Toledo, OH, 1992 – 1993 (part time)

Certifications or professional registrations

- None

Current membership in professional organizations

- American Institute of Chemical Engineers
- Materials Research Society
- American Chemical Society
- American Association for the Advancement of Science
- American Physical Society

Honors and awards

- NSF CAREER Award (2016 – 2021)
- University Research Council, Early Career Faculty Award, NMSU, 2016

Service activities (within and outside of the institution)

- University Research Council member, NMSU (2017 – present)
- Reviewer for computational chemistry and catalysis journals, proposals, and conference presentations

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- N. Gabaldon Limas and T. A. Manz, "Introducing DDEC6 atomic population analysis: part 4. Efficient parallel computation of net atomic charges, atomic spin moments, bond orders, and more," RSC Advances, 8 (2018) 2678-2707.
- T. A. Manz, "Introducing DDEC6 atomic population analysis: part 3. Comprehensive method to compute bond orders," RSC Advances, 7 (2017) 45552-45581.

- Yang and T. A. Manz, "Computationally designed tandem direct selective oxidation using molecular oxygen as oxidant without coreductant,"*RSC Advances*, 6 (2016) 88189-88215.
- Gabaldon Limas and T. A. Manz, "Introducing DDEC6 atomic population analysis: part 2. Computed results for a wide range of periodic and nonperiodic materials,"*RSC Advances*, 6 (2016) 45727-45747.
- A. Manz and N. Gabaldon Limas, "Introducing DDEC6 atomic population analysis: part 1. Charge partitioning theory and methodology," *RSC Advances*, 6 (2016) 47771-47801.
- Yang and T. A. Manz, "Computationally Designed Zirconium Organometallic Catalyst for Direct Epoxidation of Alkenes without Allylic H Atoms: Aromatic Linkage Eliminates Formation of Inert Octahedral Complexes,"*Theoretical Chemistry Accounts*, 135 (2016) 21:1-19.
- P. Lee, N. Gabaldon Limas, D. J. Cole, M. C. Payne, C.-K. Skylaris, and T. A. Manz, "Expanding the Scope of Density Derived Electrostatic and Chemical Charge Partitioning to Thousands of Atoms," *Journal of Chemical Theory and Computation*, 10(2014) 5377-5390.
- Erucar, T. A. Manz, and S. Keskin, "Effects of Electrostatic Interactions on Gas Adsorption and Permeability of MOF Membranes," *Molecular Simulations*, 40(2014) 557-570.
-

Briefly list the most recent professional development activities

- ASEE Summer School for Chemical Engineering Faculty, North Carolina State University, Raleigh, North Carolina, July 29 to August 3, 2017
- Teaching with the Stars, NMSU Teaching Academy, 04/05/2017
- Establishing and Maintaining the 'Write' Habit, NMSU Teaching Academy, 06/22/2017
- Teaching is Acting (Parts 1 & 2), NMSU Teaching Academy, 02/17/2017 & 3/10/2017
- Critical Pedagogy as a Teaching Approach, NMSU Teaching Academy, 03/09/2016
- Unintended Consequences: Formative Assessment as a Tool for Student Learning, NMSU Teaching Academy, 03/08/2016
- WordPress for Administrators, NMSU Teaching Academy, 05/14/2014
- Publish & Flourish, NMSU Teaching Academy, 04/04/2013
- Team Mentoring for Faculty, NMSU Teaching Academy, 12/03/2012

Martha C. Mitchell

Education – degree, discipline, institution, year

- Ph.D., Chemical Engineering, University of Minnesota-Minneapolis (1996)
- B.S., Chemical Engineering, University of Wisconsin-Madison (1989)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Professor, Department of Chemical and Materials Engineering; New Mexico State University, Las Cruces, NM. Fall 2007 – present (full-time)
- Diversity Director, NSF Engineering Research Center for Bio-Mediated and Bio-Inspired Geotechnics, August 1, 2015-Dec. 31, 2016 (part-time)
- Associate Dean for Research, College of Engineering; New Mexico State University, Las Cruces, NM February 2012 – August 2015 (full-time)
- Academic Department Head, Department of Chemical Engineering; New Mexico State University, Las Cruces, NM May 2005 – January 2012 (full-time)
- Interim Academic Department Head, Department of Chemical Engineering; New Mexico State University, Las Cruces, NM August 2004 – April 2005 (full-time)
- Associate Professor, Department of Chemical Engineering; New Mexico State University, Las Cruces, NM. Fall 2002 – Fall 2007 (full-time)
- Assistant Professor, Department of Chemical Engineering; New Mexico State University, Las Cruces, NM. Fall 1996 – Fall 2002 (full-time)
- Lecturer, Department of Chemical Engineering and Materials Science; University of Minnesota-Minneapolis, Minneapolis, MN, 1/95—3/96 (part-time)

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Visiting Summer Faculty, Sandia National Laboratories, Albuquerque, NM. Summer 2001 (full-time)
- Visiting Professional, Exxon Research and Engineering, Annandale, NJ. Summer 1997 (part-time)

Certifications or professional registrations

- Professional Engineer, NM#15571

Current membership in professional organizations

- American Association of University Women
- American Institute of Chemical Engineers
- American Society for Engineering Education
- Society of Women Engineers

Honors and awards

- Outstanding Mentor Award, New Mexico State University Teaching Academy
- Robert Davis Professorship

Service activities (within and outside of the institution)

- National Science Foundation, Division of Industrial Innovation and Partnerships (IIP) Committee of Visitors (2013 and 2016)
- Engineering Research Council Board of Directors, American Society of Engineering Educators (2014-2015)
- National Society of Professional Engineers, Professional Engineers in Higher Education Interest Group Executive Board, Southwestern Region Representative, (2012-2015)
- New Mexico Society of Professional Engineers Board of Directors, Education Director (2012-2015)
- American Institute of Chemical Engineers Education and Accreditation Committee (2015-present)
- Chair, Advancing Leaders Committee, NMSU Teaching Academy (2014-present)
- Compliance Committee, NMSU, (2014-2015)
- National Alliance for Broader Impacts (NABI) summit planning committee member (2015)
- Intellectual Property Advisory Committee, NMSU (2012-present)
- New Mexico Consortium Board member (2012-2016)
- Council of Deans of Research (CADRe), NMSU (2012-2016)
- Building the Vision Strategic Planning Committee, NMSU (2012-2013)
- National Academy of Sciences workshop participant, "Key Challenges in the Implementation of Convergence," 2013.
- Advisor for the NMSU local section of the Society for Women in Engineering. 2010-present

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Flores, L. Y., Navarro, R. L., Lee, H. S., Addae, D. A., Gonzalez, R., Luna, L. L., Jacquez, R., Cooper, S., & Mitchell, M., "Academic satisfaction among Latino/a and White men and women engineering students," (2014) Journal of Counseling Psychology , 61(1), doi: 10.1037/a0034577.
- Mitchell, M.C. (2015) "Funding Opportunities from Federal Agencies," American Society for Engineering Education Annual Meeting, Seattle, WA, June 14-17.
- Mitchell, M.C., and Jacquez, R. (2015) "New Mexico State University Broadening Participation Activities," National Alliance for Broader Impacts Summit, Madison, WI, May 30-June 1.

Briefly list the most recent professional development activities

- Just Teaching, Scholarly Teaching and Education Research. Where do you want to be, and how do you get there? (2017)
- Department Heads as Advocates for Women, LGBT Faculty and Faculty of Color at NMSU (2016)
- How Learning Works: Translating learning research to teaching practice (2016)
- The Flipped Classroom: Successful Practices and Common Pitfalls (2016)
- Reflections from the Student Success Navigators: What Faculty and Administrators Need to Know (2016)
- Using Adobe Connect in Canvas (2016)
- The Quiz Tool in Canvas (2016)

David A. Rockstraw

Education – degree, discipline, institution, year

- Ph.D., Chemical Engineering, Oklahoma University (1989)
- B.S., Chemical Engineering, Purdue University (1986)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Robert Davis Distinguished Professor, Sept 2013 – Present
- Academic Department Head Chemical & Materials Engineering, July 2012 – Present
- Distinguished Achievement Professor Chemical & Materials Engineering, Aug 2012 – Present
- Professor, Chemical & Materials Engineering, Aug 2004 – Aug 2012
- Associate Professor, Chemical Engineering, May 1998 – Aug 2004
- Assistant Professor, Chemical Engineering, Aug 1995 – May 1998

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- E. .I. DuPont de Nemours Co., Inc. / Conoco, Inc., Ponca City, OK; Research Engineer – Corporate Process Development, full time Aug 1990 – July 1995
- Ethyl Corporation, Orangeburg, SC; Sr. R&D Engineer, Research & Development, full time Sept 1989 – July 1990
- Kraft, Inc., Glenview, IL; Engineer I, R & D Division, full time May 1986 – Aug 1986

Certifications or professional registrations

- Professional Engineer, NM license 14253

Current membership in professional organizations

- American Institute of Chemical Engineers

Honors and awards

- Frank Bromilow Award for Teaching Excellence, 2016
- NMSU Roush Teaching Award, 2014
- NMSU Environmental Health & Safety "Friend of Safety" Award, 2014
- Robert Davis Distinguished Professorship, 2013
- NMSU Distinguished Achievement Professor Award, 2012
- Ed and Harold Foreman Engineering Education Excellence Award, 2012
- National Society of Professional Engineers, Professional Engineers in Higher Education
- Engineering Education Excellence Award, 2009
- E-Council Outstanding Engineering Professor Award, 2008
- AspenTech® Educational Innovation Award, 2004
- Outstanding Faculty Member, voted by the 2001 CH E graduating class
- Research Grand Prize, American Academy Environmental Engineers, 1998
- Level II DuPont Safety Sentinel Award, 1995.
- DuPont Partnering Recognition for Suva® HFC development: 1992, 1991

Service activities (within and outside of the institution)

- American Institute of Chemical Engineers' Fellows Council, 2016-present
- Biomedical Engineering Society,• Faculty advisor, 2014-2015
- Mesilla Valley Preservation, Inc. (mvpres.org)
  - Board of Directors, 2010 – present
  - Treasurer; 2010 – 2013
- Town of Mesilla, Planning, Zoning, & Historical Appropriateness Commission; 2009 – 2011 •
- Las Cruces Inline Hockey Association; Founder and Director; 2000 – 2007

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- Corrected rate law for sulfite oxidation mechanism with ethanol-inhibition, D. A. Rockstraw, *Industrial & Engineering Chemistry Research*, **51**(35), p. 11587 (2012).
- Panel: What You Need to Know about Being an Expert Witness (invited panelist), Chemical Engineering & the Law Forum, American Institute of Chemical Engineers National Meeting, November 14, 2016, San Francisco, CA.
- Generating Perchlorate and N-Nitrosodimethylamine Isotherms Using Pecan Shell Activated Carbons; J. Freeh, J. Rodriguez, D. A. Rockstraw, C. E. Brewer, American Institute of Chemical Engineers National Meeting, Salt Lake City, UT, November, 11, 2015.
- Remediating Salt Attack in Adobe and Earthen Structures; E. Liefeld, D. A. Rockstraw, G. Henry, Earth USA 2015 Conference, Santa Fe, NM Oct. 2-4, 2015.

Briefly list the most recent professional development activities

- Improve Your Students' Learning by Teaching Them Effective Learning Strategies, NMSU Teaching Academy, 10/18/2016
- Active Learning: what is it, how do you implement it and why would you want to? NMSU Teaching Academy, 08/29/2016
- Department Head Summer Forum: Leading During Budget Cuts and Organizational Change, NMSU Teaching Academy, 07/26/2016
- WordPress: Using GravityForms, NMSU Training Central, 06/16/2014
- Managing Narcissists, Blamers, Drama Queens and more…, NMSU Teaching Academy, 03/13/2014
- WordPress for Administrators, NMSU Training Central, 02/04/2014
- Flipping the Classroom with Just-in-Time Teaching, NMSU Teaching Academy, 01/31/2014
- ADVANCE Advancing Leaders Program – Cohort Member, NMSU Teaching Academy, 2013

Meng Zhou

Education – degree, discipline, institution, year

- Ph.D., Chemical Engineering, New Mexico State University (2016)
- MS ., Physics, Tulane University (2006)
- BS., Material Chemistry, University of Science and Technology of China (1994)

Academic experience – institution, rank, title (chair, coordinator, etc. if appropriate), when (ex. 2002-2007), full time or part time

- Assistant Professor & Lab Manager, Department of Chemical and Materials Engineering, NMSU, 2017 – present, full time
- Research staff, Los Alamos National laboratory, 2009 – 2011, full time

Non-academic experience – company or entity, title, brief description of position, when (ex. 2008-2012), full time or part time

- Lab Manager, Department of Chemical and Materials Engineering, NMSU, 2011 – present, full time\
- Engineer, Carbon Nanotube Technology Inc., Los Alamos 2006 – 2008

Certifications or professional registrations

- None

Current membership in professional organizations

- None

Honors and awards

- Synergy Staff Leadership Award, College of Engineering, NMSU, 2017
- Honorable graduate student, NMSU, 2016

Service activities (within and outside of the institution)

- Editor of Scientific Journal “Chemical Engineering”
- Journal Peer Reveiwer for J. of Materials Chemistry A, Materials Science and Engineering B, J. of Power Source, International J. of Environmental Pollution

Briefly list the most important publications and presentations from the past five years – title, co-authors if any, where published and/or presented, date of publication or presentation

- M. Zhou, J. Gomez, B. Li, Y.-B. Jiang, S. Deng, Oil tea shell derived porous carbon with an extremely large specific surface area and modification with MnO2 for high-performance supercapacitor electrodes, Appl. Mater. Today, 7, 47-54 (2017).
- M. Zhou, J. Catanach, J. Gomez, S. Richins, S. Deng, Effects of nanoporous carbon derived from microalgae and its CoO composite on capacitance, ACS Appl. Mater. Interfaces, 9(5), 4362-4373 (2017).
- M. Zhou, Y. Li, Il. Jeon, Q. Yi, X. Zhu, X. Tang, H. Wang, L. Fei, S. Deng, Y. Sun, Y. Matsuo, H. M. Luo, G. Zou, Magnetoresistance in self-assembled epitaxial composite La0.67Ca0.33MnO3:NiO and La0.67Ca0.33MnO3:Co3O4films via polymer-assisted deposition, Scientific Reports 6, 26390 (2016).

- M. Zhou, L. Fei, S. Deng, G. Zou, H. M. Luo, Superconducting nitride films prepared by polymer-assisted deposition, Science Advances Today, (Invited Featured Article), 1, 25222 (2015).
- G. Chen, M. Zhou, J. Catanach, T. Liaw, L. Fei, S. Deng, H. M. Luo, Solvothermal route based in situ carbonization to Fe3O4@C as anode materials for lithium ion battery, Nano Energy 8, 126 (2014).

Briefly list the most recent professional development activities

- The Online Course Improvement Program (OCIP): Quality Matters, NMSU Teaching Academy (2017)