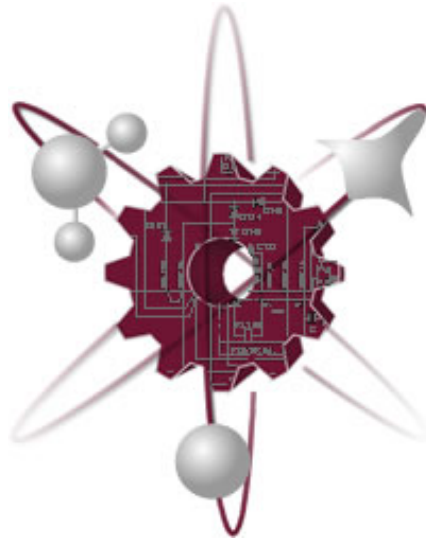


Appendix B: Faculty Vitae

Engineering Physics

Bachelor of Science in Engineering Physics



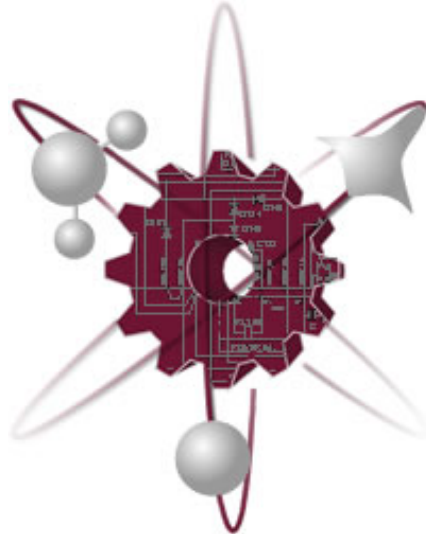
Self-Study Report

New Mexico State University



Department of Mechanical & Aerospace Engineering Faculty and Staff CVs

Department of Mechanical & Aerospace Engineering Faculty and Staff CVs



Name: Chunpei Cai

Education

Ph.D. in Aerospace Engineering, University of Michigan, Ann Arbor, Michigan, 2005

M.Sc. in Mechanical Engineering, Cornell University, Ithaca, New York , 1999

M.Sc. in Fluid Mechanics, Institute of Mechanics, Chinese Academy of Sciences, 1997

B.Eng. in Naval Architecture, Harbin Engineering University, Harbin, China, 1994

Academic Experience

New Mexico State University, Assistant Professor, Department of Mechanical & Aerospace Engineering, 2008-current, full time.

Non-Academic Experience

ZONA Technology, Scottsdale, Arizona, CFD Specialist, design and implement new gasketic CFD schemes, developing new proposals, supervising Project development: 2005-2008, Full time

Altair Engineering, Troy, Michigan, Software Engineer, developing new geometry and meshing technology for sheet metal forming process, 1999-2005, Full Time.

Professional Registrations: none

Current membership in professional organizations:

American Institute of Aeronautics and Astronautics, Senior Member

Thermophysics TC member

American Society of Mechanical Engineering

American Physical Society

American Vacuum Society

Honors and Awards:

Dean Appreciation Award, College of Engineering, NMSU, 2011

Sage Fellowship, Cornell University, 1997/1998

Service Activities

Served as ABET outcome committee member for the MAE Dept.

Participated the Pre-Freshman Engineering Program, NMSU;

Mentor URA participants, for the American Minority Participation (AMP) program in the College of Engineering

Paper Referee for 27 Journals

1. **Name:** Vincent K. Choo
2. **Degrees:**
B.Sc., ME (Honors), 1977, Nottingham University, U.K.
Ph.D., Composite Materials, 1982, Liverpool University, U.K.
3. **Academic Experience:**
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
4. **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
5. **Certifications or professional registrations:** none
6. **Service activities**
 - ME, NMSU, ABET/Undergraduate committee member
 - ME, NMSU, Faculty Peer Review committee member
 - Panel Review of Proposals:
 - Proposal review for New Mexico Space Grants Consortium 2011
 - NSF Instrumentation and Laboratory Improvement Program, 1993
 - Book Review: Analytic Dynamics, McGraw Hill, 1997
 - Book Review Basic Mechanical Design, by J.E. Shingley McGraw-Hill, September, 1993
7. **Papers:**
"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
8. **Professional Development**
 - Workshop hosted by the NMSU Teaching Academy: - Documenting Effective Teaching in a Scholarly Manner. *participant*
 - Seminar hosted by the NMSU Teaching Academy - How Good is Good Enough? Setting Assessment Benchmarks or Standards. *participant*

Name: AB Donaldson

Education:

ScD, Mechanical Engineering, New Mexico State University, 1969

Academic Experience:

College Professor, Department of Mechanical Engineering, New Mexico State University, Las Cruces, NM 88003, 1998-Present. (PT)

Visiting Professor of Engineering, New Mexico Highlands University, 1995-1998 (FT)

Visiting Professor and Chemical Engineering Dept. Head, Qatar University, 1990-1993 (FT)

Instructor of Continuing Education, Sandia National Laboratories, 1972-1975 (PT)

Adjunct Professor of Mechanical Engineering, University of New Mexico, 1969-1972 (PT)

Non-Academic Experience:

Enhanced Energy Systems, Inc. August 1981 - May 1989

Sandia National Laboratories June 1969 - August 1981, 2003 - Present (Part Time)

Certifications or Professional Organizations: Registered Professional Engineer in State of New Mexico (Mechanical and Chemical Engineering)

Current Membership in Professional Organizations: ASME

Honors and Awards: None

Service Activities: None

Significant Publications and Presentations Last Five Years:

"Measurements in Solid Propellant Plumes at Ambient Conditions", Proceedings of the ASME International Mechanical Engineering Congress and Exposition, November 11-17, 2011, Denver, CO, with Jonathan Height, Walter Gill and Christian Parigger

"Aluminum Response to Fire Heating: Focus on Deformation", presented at the 10th International Symposium on Fire Safety Science, University of Maryland, USA, 19-24 June 2011 with Justin Bowyer, Walter Gill and Anay Luketa

"Thermocouple Response in Fires, Part 1: Considerations in Flame Temperature Measurements by a Thermocouple," Journal of Fire Sciences, November 1, 2010, with A.L. Brundage, W. Gill, S. P. Kearney, V. F. Nicolette and N. Yilmaz

"Combustion of Waste Trap Grease Oil in Gas Turbine Generator", Fuel, v 89, n 3, p 549-553, March 2010. with M.A Al-Shudeifat,

"Examination of the Bi-Directional Velocity Probe used in Flames," ASME Fluids Engineering Division Summer Meeting, Paper No. FEDSM2009-78560, August 2-6, 2009, Vail, Colorado, USA. With B. Hogan, H. Bocanegra, R. C. Alarcon, N. Yilmaz, and W. Gill,

Flow Characterization of Diffusion Flame Oscillations Using Particle Image Velocimetry," Experiments in Fluids, Vo. 46, No. 4, pp. 737-746, 2009, with N. Yilmaz, R. E. Lucero and W. Gill

"Imaging of Flame Behavior in a Flickering Methane/Air Diffusion Flame," Journal of Visualization, Vol. 12, No. 1, pp. 47-55, 2009, with N. Yilmaz and R. E. Lucero

"Examination of the Bi-Directional Velocity Probe used in Flames," ASME Fluids Engineering Division Summer Meeting, Paper No. FEDSM2009-78560, August 2-6, 2009, Vail, Colorado, USA. With B. Hogan, H. Bocanegra, R. C. Alarcon, N. Yilmaz, and W. Gill,

"Flow Characterization of Diffusion Flame Oscillations Using Particle Image Velocimetry," Experiments in Fluids, Vo. 46, No. 4, pp. 737-746, 2009, with N. Yilmaz, R. E. Lucero and W. Gill

"Spatial Distribution of Aluminum Particles in Rocket Propellant Plumes at Atmospheric Pressure", 55th JANNAF Propulsion Meeting, May 12-16, 2008 at Boston Marriott, Newton and Hanscom AFB, Newton, Massachusetts, with Brian Hogan and W. Gill.

"Testing Trap-grease Oil in 150kW Gas Turbine", AAAS 83rd Annual Multidisciplinary Meeting, Albuquerque, NM, April 9-12, 2008, with Mohammad Ameen Al-Shudeifat

"CFD Supported Examination of Scaling Issues for Open Wind Tunnel Model Testing" International Journal of Dynamics of Fluids (IJDF) Vol.4 No.1, pp. 1-12, 2008, with Nadir Yilmaz.

"Evidence of PAH Production under Lean Combustion Conditions," Fuel, Vol. 86, pp. 2377-2382, 2007, with Nadir Yilmaz.

"Diffusion Flame Oscillations: Measurements and Correlations," International Journal of Energy Conversion and Management, Vol. 49, No. 11, pp. 3287-3291, 2008, with Nadir Yilmaz, R. E. Lucero.

"Modeling of Chemical Processes in a Diesel Engine with Alcohol Fuels," ASME Journal of Energy Resources Technology, Vol. 129, pp. 355, 2007, with Nadir Yilmaz.

Recent professional development activities

Paper reviewer for ASME meeting presentations, Journal of Fire Science and Fuels

Session chair for two recent ASME meetings

Served on Navy review panel for all university energy research programs

Name: Gabe V. Garcia

Education

Doctor of Philosophy, Civil Engineering, Summer 1996, Texas A&M University.
Master of Science, Mechanical Engineering, Summer 1991, New Mexico State University.
Bachelor of Science, Mechanical Engineering, May 1988, New Mexico State University.

Academic experience

2002 - present	New Mexico State University	Associate Professor
2003- 2005	New Mexico State University	Graduate Program Director
1996 –2002	New Mexico State University	Assistant Professor

Non-academic experience

Summer 2012 Space and Naval Warfare Systems Center – Pacific (SPAWAR)
Summer Faculty Research Program
Conducted research

Summer 2011 Space and Naval Warfare Systems Center – Pacific (SPAWAR)
Summer Faculty Research Program
Conducted research related to the fabrication of large (>50µm in diameter) single crystal silicon (Si) microspheres using lasers.

Summer 1997 University of Texas at El Paso, FAST Center
Visiting Professor

Certifications or professional registrations

None

Current membership in professional organizations

American Society of Mechanical Engineering
American Society for Engineering Education

Honors and awards

2012	Mechanical & Aerospace Engineering Academy Professor of the Year Award
200-2004	NSF Career Award Recipient

Service activities

University Committees: Diversity Council, Athletics Council

College Committees: Curriculum, Effective Teaching and Learning Team

Department Committees: Member of Undergraduate Committee, Member of ABET Committee

Advisor Activities: ME Undergraduate Advisor, Lunabotics Advisor (NASA design competition),
Pi Tau Sigma Advisor

Publications and presentations

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.

Professional development activities

Instructor for Dynamics portion of the FE Review (2006-present)

SPIE Smart Structures/NDE – Conference – Attendee (2011)

Faculty-only training for MD Adams, MSC Software, Santa Ana, CA (2010)

ASME Design Engineering Technical Conferences (2009)

Attend MSC Software Webcasts that involve Adams software

Name: Joseph Genin

Education

Ph.D. Engineering Mechanics, University of Minnesota, 1963

M.S. Structural Engineering, University of Arizona

B.S. Civil Engineering, The City College of New York

Academic experience

Professor, Mechanical Engineering Department, New Mexico State University, 1981-present

Professor, Mechanical Engineering Department, Director of the Optics and Material Sciences Laboratory, 1985-1994

Professor, Mechanical Engineering Department, Dean of the College of Engineering , 1981-1985

Purdue University, Head of Engineering Mechanics Division, Professor, Mechanical Engineering Department, 1971-1985

Professor of Aeronautics, Astronautics, and Engineering Sciences, 1968-1973

Associate Professor of Aeronautics, Astronautics, and Engineering Sciences, 1964-1967

University of Minnesota, Instructor of Aeronautics and Engineering Mechanics, 1959-1963

University of Arizona, Instructor of Civil Engineering, 1956-1958

Non-academic experience

Director of Advanced Transportation Center, 1971-1976

General Dynamics Corporation, Fort Worth, Texas, Senior Structures Engineer, 1963-1964

Joseph Genin, Consulting Engineers, Structural design and analysis, 1956-1960

U.S. Army Corps of Engineers (while in the U.S. Army), Miscellaneous design and field projects related to military structures, 1954-1956

Ammann and Whitney, New York, New York, Structural Engineer, 1954

Certifications or professional registrations

Minnesota PE

Current membership in professional organizations

American Society for Engineering Education

American Society of Mechanical Engineers

National Society of Professional Engineers (1981-1986)

American Institute of Aeronautics and Astronautics (1964-1967)

Honors and awards

2001 Mechanical Engineering Academy Professor of the Year
2000 Who's Who Among America's Teachers
1998 Who's Who Among America's Teachers
1990 Elected to grade of "Fellow" by the American Society of Engineers
1985 Honored as 'Colonel, Aide-de-Camp" by Governor of New Mexico
1969 "Best Teacher" by Purdue Chapter of Sigma Gamma Tau
1968 "One of Ten Best Purdue Engineering Teachers"
1967 "One of Ten Best Purdue Engineering Teachers"

Service activities

None

Name: Nathanael J. Greene

Education

Mechanical Engineering /Composite Materials, PhD. in progress

Mechanical Engineering /Combustion Science, MS, December 2004

Mechanical Engineering, BS, May 2002, Iowa State University, Ames, IA, USA

Academic experience

New Mexico State University, Las Cruces, NM

Adjunct Professor August 2011 – Current, part time

NASA White Sands Test Facility, Las Cruces, NM, Instructor January 2007 – Current, part time

American Institute of Aeronautics and Astronautics, Denver, CO, Instructor 2009, part time

Iowa State University, Ames, IA, Teaching Assistant January 2004 – May 2004

Non-academic experience

NASA-White Sands Test Facility, Las Cruces, NM, NASA Project Manager and Aerospace Engineer January 2005 – Current

NASA-Johnson Space Center, Houston, TX, Cooperative Engineer May 2004 – August 2004

NASA-ISU Research Group, Ames, IA, Research Assistant May 2002 – 2005

NASA-White Sands Test Facility, Las Cruces, NM, Cooperative Engineer August 2003 – January 2004

Keith Cooper & Sons, Ames, IA, Project Manager/Chief Estimator and Salesman 1999 – 2005

Equistar Chemicals, Clinton, IA, Engineering Pump Reliability Co-op 1999

Certifications or professional registrations

None

Current membership in professional organizations

None

Honors and awards

NASA White Sands Test Facility COOP and Intern Mentor 2005-Current

NASA Individual Award, 2011, 2010, 2009, 2008

NASA Power of One Award, 2010

NASA Honor Award, 2010

Knowledge Based Risk Award, 2009

WSTF Composite Pressure Vessels and Structure Chair.

NASA JSC International Space Station 6-Person Crew Award 2009

NASA Safety and Mission Assurance Certificate of Appreciation, 2009

International Association for the Advancement of Space Safety Composite Overwrapped Pressure Vessel Safety and Integrity Workshop Chair, 2008

NASA Space Flight Awareness Team Award, 2008

Service activities

MAE Academy

Publications and presentations

N. Greene, R. Saulsberry, M. Leifeste, T. Yoder, C. Keddy, S. Forth, R. Russell. Composite Overwrapped Pressure Vessel (COPV) Stress Rupture Testing. Proceedings of the 4th International Association for the Advancement of Space Safety May 21, 2010.

N. Greene. Composite Overwrapped Pressure Vessels. Chapter 17.5 in Safety Design for Space Systems (Eds. G. Musgrave, A. Larsen, T. Sgobba), Elsevier Publications 2009.

N. Greene, R. Saulsberry, M. Stevens, B. Webb, P. Taddie. Considerations for the Safe Use of Composites for Pressure and Structural Applications in Cryogenic and Ambient Conditions. Proceedings of the 3rd International Association for the Advancement of Space Safety October 22, 2008.

N. Greene, T. Yoder, R. Saulsberry, B. Forsyth, S. Thorton, R. Wincheski. Progressive Failure Indicators in Composite Overwrapped Pressure Vessels (COPVs). Proceedings of the 54th Joint Army-Navy-NASA-Air Force Propulsion Meeting. May 14-18, 2007.

N. Greene, H. Beeson, R. Saulsberry, T. Yoder, B. Forsyth, M. Carrillo, J. Thesken, D. Revilock, K. Cameron. NASA Space Shuttle and International Space Station Composite Overwrapped Pressure Vessels Accelerated Stress Rupture and Burst Testing to Evaluate Remaining Life. Proceedings of the 54th Joint Army-Navy-NASA-Air Force Propulsion Meeting. May 14-18, 2007.

N. Greene, R. Saulsberry, T. Yoder, B. Forsyth, J. Thesken, S. L. Phoenix. Testing of Full Scale Flight Qualified Kevlar Composite Overwrapped Pressure Vessels. Proceedings of the 48th AIAA ASME ASCHE AHS Structures Conference. Honolulu, HI. April 23-36, 2007.

N. Greene, T. Yoder, R. Saulsberry, L. Grimes-Ledsema, J. Thesken, S. L. Phoenix. Stress Rupture Testing and Analysis of the NASA WSTF-JPL Carbon Overwrapped Pressure Vessels. Proceedings of the 48th AIAA ASME ASCHE AHS Structures Conference. Honolulu, HI. April 23-36, 2007.

N. Greene, D. Ray. The Synergy of Composite Overwrapped Pressure Vessels (COPVs) With Cryogenic Fluid Storage and Propellant Densification. Proceedings of the 10th Aging Aircraft Conference. Palm Springs, CA. April 16-19, 2007.

N. Greene, D. Cone, R. Saulsberry, S. Forth, G. Ecord. Failure Modes for Composite Overwrapped Pressure Vessels (COPVs). Proceedings of the 10th Aging Aircraft Conference. Palm Springs, CA. April 16-19, 2007.

R. Saulsberry, N. Greene, K. Cameron, E. Madaras, L. Grimes-Ledsema, J. Thesken, S. L. Phoenix, P. Murthy, D. Revilock. Nondestructive Methods and Special Test Instrumentation Supporting

NASA Composite Overwrapped Pressure Vessel Assessments. Proceedings of the 48th AIAA ASME ASCHE AHS Structures Conference. Honolulu, HI. April 23-36, 2007.

Professional development activities

None

Name: Harry C. Hardee (Jr), PE, PhD

Education:

BSME University of Texas (Austin) 1959

MSME University of Texas (Austin) 1961

Post Graduate in Nuclear Engineering MIT (1961)

PhD in ME University of Texas (Austin) (1966)

Academic Experience:

Instructor (part time) University of Texas (Austin) 1960-61

Assistant Professor in ME department, NMSU 1966-1967

Professor in ME department, NMSU 1991 – present

Non-academic experience:

Staff Member – Sandia National Labs, 1962-1964

Staff Member – Sandia National Labs, 1967- 1974

Supervisor Heat Transfer Division – Sandia, 1974-1979

Supervisor Geothermal Research Division – Sandia, 1979-1982

Supervisor Geophysics Division – Sandia, 1982-1991

Certifications and Registrations:

Registered Professional Engineer – Texas – (Regis. No. 64579)

Registered Professional Engineer – New Mexico (Regis. No. 4393)

Certification in New Mexico for Mechanical and Geological Engineering

Current Membership in Professional Organizations: None

Honors and Awards:

1961 USAEC Special Fellowship in Nuclear Science and Engineering

1964 R. C. Baker Fellowship

1965 Alcoa Fellowship

1991 NEDO Specialist Invitation Award by Japanese Government

1991 Sandia National Lab “Award for Excellence” for scientific research

2002 ME Academy Professor Award

Service Activities:

2009-2012 Representative on NMSU Faculty Senate

2010-2012 Representative on NMSU President's Budget Committee

Publications and Presentation in past 5 years: None

Recent Professional Development Activities:

Developed New Courses for ME department in Nuclear Systems and Automotive Systems

Name: Young S. Lee

Education

Ph.D., Mechanical Engineering, University of Illinois at Urbana-Champaign (UIUC), 2006

M.Eng., Mechanical Engineering, Inha University, South Korea, 1995

B.Eng. ., Mechanical Engineering, Inha University, South Korea, 1993

Academic Experience

Assistant Professor (100%), Department of Mechanical & Aerospace Engineering, New Mexico State University (NMSU), 2008-present

Visiting Scholar (0%), Department of Aerospace Engineering, UIUC, 2011-present

Postdoctoral Research Associate (100%), Department of Aerospace Engineering, UIUC, 2007-2008

Visiting Assistant Professor (100%), Departments of Mechanical Science and Engineering, and Aerospace Engineering, UIUC, 2006-2007

Research / Teaching Assistant (50%), Department of Mechanical Science and Engineering, UIUC, 2002-2006

Lecturer (50%), Halla University, South Korea, 2001-2002

Non-academic Experience

Researcher (100%), Choongwae Medical Co., South Korea, 1999-2001

Researcher (100%), Kumho Institute of Construction Co., South Korea, 1995-1998

Certifications / Professional Registrations: none

Current Membership in Professional Organizations

American Society of Mechanical Engineers (ASME)

American Institute of Aeronautics and Astronautics (AIAA)

Society for Experimental Mechanics (SEM)

American Society for Engineering Education (ASEE)

Honors and Awards

2008 Professional Engineering (PE) Publishing Award

Mavis Memorial Fund Fellowship, College of Engineering, UIUC, 2005–2006

Service Activities

(within the Institution)

Mechanical Engineering Faculty Search Committee, 2011–2012

Aerospace Engineering Faculty Search Committee, 2009–2010

Consulting Members for Aerospace Program ABET and Graduate Course Committees, 2008–2011

Graduate Program Committee, 2010-present

(outside the Institution)

Conference Co-organizer / Session Chairs, ASME 2012 International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE)

Conference Session Chairs, 2011 European Mechanics Society (EUROMECH) European Nonlinear Oscillations Conference (ENOC), and ASME 2011 International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE)

Journal Referee Activities (Physica D, ASME Journal of Applied Mechanics, Journal of Fluids and Structures, AIAA Journal, Journal of Sound and Vibration, ASME Journal of Vibration and Acoustics, Journal of the Acoustical Society of America)

Selected Publications / Presentations in the Past 5 Years

Lee, Y.S., Tsakirtzis, S., Vakakis, A.F., McFarland, D.M., and Bergman, L.A., 'A time-domain nonlinear system identification method based on multiscale dynamic partitions,' *Meccanica*, 46, 625–649, 2011

Lee, Y.S., Vakakis, A.F., McFarland, D.M. and Bergman, L.A., 'A global-local approach to system identification: A review,' *Structural Control and Health Monitoring, Special Issue dedicated to Professor G.W. Housner*, 17(7), 742–760, 2010.

Tsakirtzis, S., Lee, Y.S., Vakakis, A.F., Bergman, L.A., and McFarland, D.M., Modeling of nonlinear modal interactions in the transient dynamics of an elastic rod with an essentially nonlinear attachment, *Communications in Nonlinear Science and Numerical Simulations*, 15 (9), 2617–2633, 2010.

Lee, Y.S., Vakakis, A.F., McFarland, D.M., and Bergman, L.A., 'Nonlinear system identification of the dynamics of aeroelastic instability suppression based on targeted energy transfers,' *The Aeronautical Journal* 114 (1152), 61–82, 2010.

Lee, Y.S., Tsakirtzis, S., Vakakis, A.F., Bergman, L.A., and McFarland, D.M., 'Physics-based foundation for empirical mode decomposition,' *AIAA Journal* 47 (12), 2938–2963, 2009

Lee, Y.S., Nucera, F., Vakakis, A.F., McFarland, D.M., and Bergman, L.A., 'Periodic orbits and damped transitions of vibro-impact dynamics,' *Physica D* 238 (18), 1868–1896, 2009.

Lee, Y.S., Vakakis, A.F., Bergman, L.A., McFarland, D.M., Kerschen, G., Nucera, F., Tsakirtzis, S., and Panagopoulos, P.N., 'Passive nonlinear targeted energy transfer (TET) and its applications to vibration absorption: A review,' *Proceedings of the Institution of Mechanical Engineers, Part K, Journal of Multi-Body Dynamics* 222 (2), 77–134, 2008.

Vakakis, A.F., Gendelman, O., Bergman, L.A., McFarland, D.M., Kerschen, G., and Lee, Y.S., *Passive Nonlinear Targeted Energy Transfers in Mechanical and Structural Systems Parts I and II*, Springer-Verlag, 2009.

Professional Development Activities

Participation in NMSU Teaching Academy Seminars, 2008-2009

Participation in NMSGC GRASP (Gaining Retention and Achievement for Students Program), 2008

Name: Ian Leslie

Education

Ph.D. Mechanical Engineering, Stanford University, 1984

M.S. Mechanical Engineering, University of Michigan, 1977

B.S. Mechanical Engineering, University of California at Berkley, 1976

Academic experience

1984-2010 Associate/Assistant Professor, Mechanical Engineering Department, New Mexico State University

2011-2012 Associate/Interim Department Head, Mechanical Engineering Department, New Mexico State University

Non-academic experience

Consulting for Livingston Associates and Star Labs

Certifications or professional registrations

None

Current membership in professional organizations

American Society of Mechanical Engineers

Honors and awards

Teaching and service award from Mechanical Engineering Advisory Committee, Feb 2009

Service activities

Interim Department Head (Aug 2011 – present)

Associate Department Head (Jan 2011 – July 2011)

Member of ABET Outcomes and Assessment Committee (2006-2012)

Search chair for CFD position in Mechanical Engineering (2005-2006)

Paper review for ASEE, Mar 2009.

Paper reviews for ASEE, Feb 2008.

Publications and presentations

Final report to Sandia National Laboratories, Hurricane Mitigation, June 2010

Curved Nozzle Technology for Removal of Suspended Materials from Water, Progress report to ONR, December 2008.

Improving Fire Behavior Modeling Using Prescribed Burns In The Southwest, Final Report for Joint Venture Agreement with US Forest Service, 03-JV-11221615-094, October 2007.

Professional development activities

Attended Effective Teaching workshop Jan 12-13, 2012

Attended How to Evaluate Teaching workshop Jan 13, 2012

Name: Ou Ma

Education

Ph.D., 1991, Mechanical Engineering and Center of Intelligent Machines (CIM), McGill University, Montreal, Canada

M.Eng, 1987, Mechanical Engineering and Center of Intelligent Machines (CIM), McGill University, Montreal, Canada

B.Sc., 1982, Mechanical Engineering, Zhejiang University, Hangzhou, China.

Academic experience

August 2008, Professor (tenured), Department of Mechanical & Aerospace Engineering, New Mexico State University 1040 S. Horseshoe St., Jett Hall 111, Las Cruces, NM 88003, USA

January 2010 – July 2010, Senior Visiting Scientist, German Space Operations Center (GSOC), German Aerospace Center (DLR) Wessling, 81241, Germany

August 2002 – July 2008, Associate Professor, Department of Mechanical & Aerospace Engineering, New Mexico State University 1040 S. Horseshoe St., Jett Hall 111, Las Cruces, NM 88003, USA

June 2004 – July 2004, Visiting Professor, Spacecraft Technologies Branch, Canadian Space Agency 6767, Route de l'Aéroport, Longueuil (St-Hubert), QC, Canada, J3Y 8Y9

Non-academic experience

July 1991 - July 2002, Senior R&D technical leader and project engineer, MDA Space Missions 9445 Airport Rd., Brampton, Ontario, Canada L6S 4J3

July 1991 - June 1997, Senior engineer, Control and Analysis Department, MDA Space Missions (used to called “Spar Aerospace Ltd.” and “MD Robotics Ltd”) 9445 Airport Rd., Brampton, Ontario, Canada L6S 4J3

Certifications or professional registrations

Registered Professional Engineer (PEO), Ontario, Canada

Current membership in professional organizations

American Society of Mechanical Engineers (ASME)

Institute of Electrical and Electronics Engineers (IEEE)

American Institute of Aeronautics and Astronautics (AIAA)

Honors and awards

DAAD (German Academic Exchange Fellowship) award for senior visiting scientist, 2010.

Outstanding professor, Mechanical Engineering Academy, NMSU, 2008.

NRC (National Research Council) Summer Faculty Fellowship award, 2005.

Technical Innovation Award: Contact Dynamics Toolkit (CDT), MDA Space Missions, 2000.
Technical Innovation Award: Contact Dynamics Modeling and Simulation, MD Robotics, 1996.
FCAR Graduate Fellowship, Quebec, Canada, 1987-1990 (during Ph.D. study at McGill).
David Stewart Memorial Fellowship award, McGill University, 1985-1986.

Service activities

Member of the University's Academic Review Board (2012 –)
Member of the University's Graduate Council (2010 – 2013)
Member of the College of Engineering's Distinguished Professors Selection Panel (2012)
Member of the Aerospace Engineering Program Committee (2003 –)
Faculty mentor for the NMSU Advance Program (2008 –)

Publications and presentations

"STVF – A Canadian Version of EPOS", an invited presentation at the German Aerospace Center (DLR), Wessling, Germany, May 7, 2010.
"New Gravity-Offloading Technology for Simulating Human Activities on the Moon or Mars", a presentation to a NASA JSC delegation to NMSU, September 24, 2009.
"Ground based Verification of Contact Tasks of Space Robots", an invited presentation at Beijing Post and Telecommunication University, Beijing, July 28, 2009.
"Passive Reduced-G Mechanism for Simulating Walking on the Moon/Mars", an invited presentation at the Johnson Space Center, NASA, Houston, Feb. 19, 2009.
"On-Orbit Identification of Inertia Properties of Spacecraft Using Robotics Technology", an invited seminar at Ryerson University, Toronto, November 27, 2008.
"Cable Driven Robotic Systems for Space and Healthcare Applications", an invited seminar at the Nanjin University of Aeronautics and Astronautics, Nanjing, China, June 27, 2008.
"Cable-Robot based Reduced-Gravity Simulation for EVA Training", an invited presentation at the Johnson Space Center, NASA, Houston, Jan. 25, 2008.
"Contact Dynamics Model Parameters Identification and Model Order Reduction", an invited presentation at the Johnson Space Center, NASA, Houston, Jan. 24, 2008.
"Hardware-in-the-Loop Simulation Technology for Space Applications", an invited presentation at Tsinghua University, Beijing, Jan. 8, 2008.
"Cable Driven Robotic Systems for Healthcare Applications", an invited presentation at Shenzhen Institute of Advanced Technology, Chinese Academy of Science, Shenzhen, China, Jan. 4, 2008.
"Hardware-in-the-Loop Microgravity Contact Dynamics Simulation using A 6-DOF Cable Robot", an invited seminar at the Institute of Artificial Intelligent Machines, Chinese Academy of Science, Hefei, China, Dec.27, 2007.
"Techniques for Significantly Speeding up Contact Dynamics Simulation of a Multibody System", an invited presentation at the Army Research Laboratory, ARL/APG, Aberdeen, MD, May 15, 2007.

Name: Young Ho Park

Education

Ph.D. Mechanical Engineering, University of Iowa, 1994

M.S. Mechanical Design & Production Engineering, Seoul National University, 1988

B.S. Mechanical Engineering, Seoul National University, 1986

Academic experience

2000-present, Assistant Professor, New Mexico State University

1999-2000, Adjunct Assistant Professor, University of Iowa

1996-2000, Research Scientist, Center for Computer-Aided Design, University of Iowa

1991-1994, Research Scientist, Center for Computer-Aided Design, University of Iowa

Non-academic experience

1994-1996, Research Engineer, Ford Motor Company

Certifications or professional registrations

None

Current membership in professional organizations

American Society of Mechanical Engineers

American Institute of Aeronautics and Astronautics

Korean-American Scientist and Engineers Association

Association of Korean-American Professionals in Automotive Industries

Honors and awards

2004 Mechanical Engineering Academy Professor of the Year

2003 Outstanding Teacher, NMSU ASME/Pi Tau Sigma Student chapters

2003 Mechanical Engineering Innovative Teaching Award, NMSU

2002 Who's Who in Engineering Education

2001 Cited in Strathmore's Who's Who

2001 Outstanding Teacher, NMSU ASME/Pi Tau Sigma Student chapter

Publications

Young Ho Park and Jun Tang, "Optimal Replacement Decision of Mechanical Components for Fatigue Failure," *International Journal of Fatigue*, 2005 (submitted).

Young H. Park, "Rigid Plastic Meshfree Analysis for Metal Forming Simulation." *Journal of Computers and Structures*, 2004 (under review)

Young Ho Park and Jun Tang, "An Efficient Methodology for Fatigue Reliability Analysis for Mechanical Components," *ASME Journal of Pressure Vessel Technology*, 2004 (under review).

Byeng D. Youn, Kyung K. Choi, and Young H. Park, "Hybrid Analysis Method For Reliability-Based Design Optimization," *ASME Journal of Mechanical Design*, 125, 221-232, 2003.

Chen, G., Rahman, S., and Y. H. Park, "Shape Sensitivity Analysis of Linear-Elastic Cracked Structures," *Journal of Pressure Vessel Technology – Transactions of the ASME*, Vol. 124, No. 5, 2002. pp. 476-482.

N.H. Kim, Y.H. Park, and K.K. Choi, "An Optimization of Hyper-Elastic Structure with Multibody Contact Using Continuum-Based Shape Design Sensitivity Analysis," *Structural Optimization*, Vol. 21, No.3, 2001, pp. 196-208.

Guofeng Chen, Sharif Rahman, and Young Ho Park, "Shape Sensitivity and Reliability Analyses of Linear-Elastic Cracked Structures," *International Journal of Fracture*, Vol. 112, 2001, pp. 223-246.

Kyung K. Choi, Jian Tu, and Young H. Park, "Extension of Design Potential Concept for Reliability-Based Design Optimization to Non-Smooth and Extreme Cases," *Structural and Multidisciplinary Optimization*, Vol. 22, No. 5, pp. 335-350, 2001.

Guofeng Chen, Sharif Rahman, and Young Ho Park, "Shape Sensitivity Analysis in Mixed-Mode Fracture Mechanics," *Computational Mechanics*, Vol. 27, 2001, pp. 282-291.

Jian Tu, Kyung K. Choi, and Young H. Park, "Design Potential Method for Robust System Parameter Design," *AIAA Journal*, 2001, Vol. 39, No.4, pp.667-677.

Name: Bashar Qawasmeh

Education

Doctor of philosophy in Mechanical Engineering, New Mexico State University(NMSU), Las Cruces, New Mexico (May 2012)

Master of science in Mechanical Engineering, New Mexico State University(NMSU), Las Cruces, New Mexico (August 2008)

Master of science in Mechanical Engineering, Jordan University of Science and Technology(JUST), Irbid, Jordan (June 2005)

Bachelor of science in Mechanical Engineering (Mechatronics), Jordan University of Science and Technology(JUST), Irbid, Jordan (August 2002)

Academic experience

Assistant college professor, Department of Mechanical & Aerospace Engineering, (NMSU), Fall 2012

Instructor, ME338 "Fluid Mechanics", and AE447 "Aero-fluids lab" (NMSU), Spring 2010-present

Research Assistant, (NMSU) , Fall 2007-present

Teaching Assistant, ME345 "Experimental Methods I", (NMSU) , Spring 2007

Instructor (Thermal-Power stream), Al-Quds College, Amman, Jordan, Fall 2005-2006

Research Assistant/ Teaching Assistant, (JUST) , Spring 2003-2006

Non-academic experience

None

Certifications or professional registrations

None

Current membership in professional organizations

None

Honors and awards

None

Service activities

None

Publications and presentations

B. R. Qawasmeh, and M. Wei, Low-dimensional model and its sensitivity study for compressible temporal shear layers, to be submitted, 2012

M. Wei, B. R. Qawasmeh, M. Barone, B. G. van Bloemen Waanders, and L. Zhou, Low-dimensional model of spatial shear layers, *Physics of Fluids*, Vol. 24, No. 014108, doi: 10.1063/1.3678016, 2012

M. Wei, B. R. Qawasmeh, M. Barone, and B. G. van Bloemen Waanders, Low-dimensional modeling for spatially developing free shear layers, *AIAA paper 2009-363*, Orlando, FL, 2009

B. R. Qawasmeh, and M. Wei, A least order model for temporally-developing compressible shear layers, *Bulletin of the American Physical Society*, Vol. 55, No. 16, Long Beach, CA, 2010

B. R. Qawasmeh, and M. Wei, Projection of spatial shear layers in a symmetry-reduced space, *Bulletin of the American Physical Society*, Vol. 53, No. 15, San Antonio, TX, 2008

Professional development activities

None

Name: Amit K. Sanyal

Education

Ph.D. 2004 – Aerospace Engineering, University of Michigan

M.S. 2004 - Mathematics, University of Michigan

M.S. 2001 - Aerospace Engineering, Texas A&M University

B.Tech. 1999 - Aerospace Engineering, I.I.T. Kanpur

Academic experience

Assistant Professor, Mechanical & Aerospace Engineering, New Mexico State University, 2010-Present

Assistant Professor, Mechanical Engineering, University of Hawaii, 2007-2010

Post-doctoral Research Associate, Arizona State University, 2004-2006

Non-academic experience

Consultant for Pukoa LLC, Hawaii, on autonomous navigation for UAVs

Certifications or professional registrations

None

Current membership in professional organizations

American Institute of Aeronautics and Astronautics (AIAA)

Institute of Electrical and Electronics Engineers (IEEE)

Society for Industrial and Applied Mathematics (SIAM)

Association for Unmanned Vehicle Systems International (AUVSI)

Honors and awards

Distinguished Graduate Student Masters Research Award, Texas A&M University

Engineering Academic Scholar Certificate, University of Michigan

Service activities

Member of ABET committee for Aerospace Engineering (NMSU).

Technical committee memberships: AIAA Guidance, Navigation and Control Technical Committee (2008 to 2011), IEEE Technical Committee on Aerospace Control (since 2009).

Conference Activities: Chairs of general and invited sessions at American Control Conference; AIAA Guidance, Navigation and Control Conference; IEEE Conference on Decision and Control.

Technical program committee member for 2010 AIAA GN&C conference and 2010 IEEE Conference on Decision and Control.

Reviewer for: AIAA J. of Guidance, Control and Dynamics; IEEE Trans. On Auto. Control; IEEE Trans. On Cont. Sys. Tech.; Automatica; Systems and Control Letters; SIAM J. on Cont. and Optimization; ASME J. of Dyn. Systems, Meas. And Control; AIAA GN&C conference; Amer. Cont. Conference; IEEE Conf. Decision and Control.

Publications and presentations

K. Sanyal and N. Nordkvist, "Attitude State Estimation with Multi-Rate Measurement for Almost Global Attitude Feedback Tracking", AIAA J. Guidance, Control and Dynamics, 35(3), pp. 868-880, 2012.

A.K. Sanyal, N. Nordkvist and M. Chyba, "An Almost Global Tracking Control Scheme for Maneuverable Autonomous Vehicles and its Discretization," IEEE Trans. on Auto. Control, 56(2), pp. 457-462, 2011.

K. Sanyal, A. Fosbury, N. A. Chaturvedi, and D. S. Bernstein, "Inertia-Free Spacecraft Attitude Tracking with Disturbance Rejection and Almost Global Stabilization," AIAA J. of Guidance, Control and Dynamics, 32(4), pp. 1167-1178, 2009.

M. Bloch, I. I. Hussein, M. Leok, and A. K. Sanyal, "Geometric structure-preserving Optimal Control of the Rigid Body," J. of Dynamical and Control Systems, 15(3), pp. 307-330, 2009.

K. Sanyal, A. M. Bloch, P. E. Crouch, and J. E. Marsden, "Optimal Control and Geodesics on Quadratic Matrix Lie Groups," Foundations of Computational Mathematics, 8(4), pp. 469-500, 2008.

K. Sanyal, T. Lee, M. Leok, and N. H. McClamroch, "Global Optimal Attitude Estimation using Uncertainty Ellipsoids," Systems and Control Letters, 57(3), pp. 236-245, 2008.

Professional development activities

Reviewer for National Science Foundation

Name: Ma'en Sari

Education

Ph.D. Mechanical Engineering, New Mexico State University, May 2011

M.Sc. Mechanical Engineering, Jordan University of Science and Technology, May 2005

B.Sc. Mechanical Engineering, Jordan University of Science and Technology, August 2002

Academic experience

College assistant professor, New Mexico State University, 2010-Present

Graduate research assistant, New Mexico State University, August 2006-Present

Graduate teaching assistant, New Mexico State University

Non-academic experience

None

Certifications or professional registrations

None

Current membership in professional organizations

None

Honors and awards

None

Service activities

None

Publications and presentations

Butcher, E.A., Sari, M., Bueler, E., Carlson, T.: Magnus' Expansion for Time Periodic Systems: The 12th conference on Nonlinear Vibrations, Dynamics, and Multibody Systems, Blacksburg, VA, June 1-5, 2008.

Butcher, E.A., Sevostianov, I., Sari, M., Al-Shudeifat, M.: Use of Nonlinear Vibration Frequencies and Electrical Conductivity Measurements in the Separation of Internal and Boundary Damage in Structures, Proceedings of IMECE2008 ASME International Mechanical Engineering Congress and Exposition, Boston, MA, Oct. 31-Nov. 6, 2008.

Sari, M. and Butcher, E.A.: Natural Frequencies and Critical Loads of Beams and Columns with Damaged Boundaries Using Chebyshev Polynomials: 9th Annual Raytheon Company

Mechanical, Materials and Structural Technology Network Symposium (MMSTN09)
University

Session, Tucson, AZ, October 22nd, 2009.

Butcher, E.A. and Sari, M.: Free Vibration Analysis of Kirchoff Plates with Damaged Boundaries by the Chebyshev Collocation Method, Symposium on Mechanics of Slender Structures (MOSS 2010), Donostia – San Sebastian, Spain, July 21-23, 2010.

Sari, M. Nazari, M., and Butcher, E.A., Free Vibration Analysis of Kirchoff Plates with Damaged Boundaries by the Chebyshev Collocation and Perturbation Methods, ASME Conference on Smart Materials, Adaptive Structures, and Intelligent Systems, Philadelphia, PA, Sep. 28-Oct. 1, 2010.

Sari, M.S. and Butcher, E.A.: Three Dimensional Vibration Analysis of Rectangular Plates with Undamaged and Damaged Boundaries by the Spectral Collocation Method, ASME 2011 International Design Engineering Technical Conference (CIE), Washington, DC, August 28-31, 2011.

Professional development activities

Teaching Academy

Name: Fangjun Shu

Education

PhD, Dec. 2005, Mechanical Engineering (Experimental Fluid Mechanics)

M.S. Purdue University, West Lafayette, IN, USA Jun. 2000, Mechanics and Mechanical Engineering (Optical Metrology)

B.S. University of Science and Technology of China, Hefei, Anhui, P.R. China Jun. 2000
Theoretical and Applied Mechanics (Fluid Mechanics)

Academic Experience

Assistant Professor, Mechanical & Aerospace Engineering, New Mexico State University, 2010-Present, full-time

Research Scientist, Mechanical & Aerospace Engineering, The George Washington University, Washington, DC, March 2009-July 2010

Postdoctoral Research Fellow, Biomedical Engineering, Carnegie Mellon University / Bioengineering, University of Pittsburgh, Pittsburgh, Pennsylvania, January 2006-February 2009

Non-academic experience

None

Certifications or professional registrations

None

Current membership in professional organizations

Member of American Physical Society

Life time member of American Institute of Aeronautics and Astronautics

Honors and awards

Nominated for Helmut Reul Young Investigator Award, Oct. 2008.

Frederick A. Environmental Award, Purdue University, August 2004

Service activities

In charge of one low-speed wind tunnel and one water channel.

Publications

A.L. Glenn, K.V. Bulusu, F. Shu and M.W. Plesniak, "Secondary Flow Structures Under Stent-Induced Perturbations for Cardiovascular Flow in a Curved Artery Model", accepted by *International Journal of Heat and Fluid Flow*, 2011

- S. Vandenberghe, F. Shu, D.K. Arnold, J.F. Antaki, "A simple, Economical, and Effective Portable Pediatric Mock Circulatory System" *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, vol. 225, 7: pp. 648-656, July 2011
- F. Shu, S. Vandenberghe and J. F. Antaki, "The Importance Of dQ/dt On The Flow Field In A Turbodynamic Pump With Pulsatile Flow", *Artificial Organs*, vol. 33, No. 9, pp 757-762, September 2009
- R.K. Gottlieb, F. Shu, Z. Wu, M.V. Kameneva, J.F. Antaki, Z.J. Wu and G.W. Burgreen "Liquid Crystal Shear Stress Sensor for Blood and Other Opaque Viscous Fluids", *Journal of flow visualization and image processing*, vol. 16, issue 1, pp 51-71, 2009
- F. Shu, R. Parks, J. Maholtz, S. Ash, and J. F. Antaki, "Multi-modal Flow Visualization and Optimization of Pneumatic Blood Pump for Sorbent Hemodialysis System", *Artificial Organs*, vol 33, No. 4, pp 334-345, April 2009
- R. Zhao , J.N. Marhefka, F. Shu, M.V. Kameneva and J.F. Antaki, "Micro-flow Visualization of Red Blood Cell Enhanced Platelet Concentration at Sudden Expansion," *Annals of Biomedical Engineering*, vol. 36 No. 7, pp.1130-1141, July 2008
- J. F. Antaki, C. Diao, F. Shu, J. Wu, R. Zhao and M. V. Kameneva, "Micro-hemodynamics within Blade Tip Clearance of a Centrifugal Turbodynamic Blood Pump," *Proceedings of the Institution of Mechanical Engineers, Part H, Journal of Engineering in Medicine*, vol. 222, No. H4, pp.573-581, May 2008
- F. Shu, M. W. Plesniak and P. E. Sojka, "Experimental Investigation of Flow Physics in Indeterminate Origin Nozzle Jet," *Journal of Experimental Mechanics (China)*, vol. 22, No. Z1, 2007

Name: Mark E Stevens

Education

BS Mechanical Engineering, NMSU 1990

Academic experience

NMSU Instructor – ME 102 Introduction to Engineering, 2011 - 2012, part time

Non-academic experience

9/06 to Present Staff Engineer Laboratories Department NASA/MEI, NASA White Sands Test Facility

12/04 to 9/2006 Lead Components Services Engineer NASA/Honeywell, NASA White Sands Test Fac.

6/01 to 12/2004 Contamination Control Manager-NASA/Honeywell NASA White Sands Test Facility

1/90 to 6/2001 Senior Site Component Engineer–AlliedSignal, NASA White Sands Test Facility

1/89 to 6/90 Project Assistant - ME Department, New Mexico State University

6/88 to 12/88 Engineering Assistant - FMC, San Jose, California

1/83 to 5/85 Mobile Equipment Maintenance Supervisor-Steamboat Ski Corporation, Colorado.

MILITARY

10/76 to 8/79 Naval Reserve Kirtland Air Force base

9/74 to 10/76 Aviation Anti-submarine Warfare Technician - United States Navy, Norfolk, Va

Certifications or professional registrations

6 sigma green belt

FAA Designated Manufacturing Inspection Representative

NASA Pressure system engineer

NASA Designer

NASA inspection Verifier

Current membership in professional organizations

None

Honors and awards

Bronze Bravo award for Propulsion 401 support – 12/16/2005

Silver Bravo award for Masoneilan design – 9/14/2005

ORCA project team recognition award – 7/25/2005
Elected member NMSU Mechanical Engineer Academy 2/2005
6 sigma green belt award 2005
Quality achiever award 2001
Quest for Excellence - Honeywell 5/18/2001
Silver Snoopy Award - NASA 1996
Sailor of the Month, July, 1976
Plane Captain of the Quarter, July, 1976
Citation for U.S. Service Ribbon, 1975
Eagle with Palm and Vigil Honor, 1974

Service Activities

Involved with Church and help people regularly

Publications and presentations

None

Professional development activities

FAA Designated Manufacturing Inspection Representative

1. **Name:** James F. Vennes

2. Education

- B.S. (Surveying Engineering), New Mexico State University, 1997
- B.S. (Engineering Technology – Electronics & Computers), New Mexico State University, 2001

3. Academic Experience

- New Mexico State University, Mechanical & Aerospace Engineering, Las Cruces, NM (September 2002 – present) Senior Systems Analyst, Web Developer, & Instructor. Teaching 3D parametric modeling (ME 159 – Graphical Communications & Design).
- New Mexico State University, Las Cruces, NM (1997-2001) College Professor – College of Engineering; -- Instruction included basic and intermediate computer skills (Word, Excel, Powerpoint, and HTML), CAD for Civil/Surveying Engineers, Linux Administration, and basic electronics.

4. Non-Academic Experience

- IBM Server Group, Austin, TX (July 2001 – Aug 2002) Software Engineer, Programming, systems administration, and internal customer support with Design Systems Environment team serving over 500 design engineers and 2500+ computers in the world's largest batch submission computing environment.
- IBM Microelectronics Division, Burlington, VT (Summer 2000) Engineering intern, developed algorithms for spatial density analysis of metal levels on integrated circuits.
- National Science Foundation (NSF), Washington DC (Summer 1999) Engineering intern, Geographical Information Systems research and professional web development.

5. Certifications or Professional Registrations

None

6. Professional Organizations

- New Mexico Professional Surveyors (NMPS)
- American Congress on Surveying and Mapping (ACSM),
- Regional Alliance of Science, Engineering, and Mathematics for Students with Disabilities (RASEM)

7. Honors and Awards

- Ed and Harold Foreman Staff Excellence Award, 2012

8. Service Activities

- Programming Mentor, 2011

9. Publications

None

10. Professional Development

- Microsoft Virtual Academy – Virtual Machine Management, 2012
- TrainSignal VMware vSphere 5 Training, 2011
- CBT Windows Server 2008 R2 Administration training course, 2010
- CBT Powershell for Administrators training course, 2009
- Symantec Disaster Recovery Strategies training course, 2006
- Lynda.com PERL Programming for Administrators, 2004

Name: Mingjun Wei

Education

Ph.D. Theor. and Applied Mechanics, University of Illinois at Urbana-Champaign, 2004

M.S. Mechanical Engineering, University of California, Los Angeles, 2001

M.Engr. Modern Mechanics, University of Science and Technology of China, 1998

B.S. Modern Mechanics, University of Science and Technology of China, 1996

Academic experience

Assistant Professor, Mechanical & Aerospace Engineering, New Mexico State University, 2006-present

Invited Researcher, 2nd European Forum on Flow Control, Poitiers, France, April-June, 2006

Postdoctoral Research Associate (Supervisor: Clarence W. Rowley), Mechanical & Aerospace Engineering Department, Princeton University, 2005-2006

Non-academic experience

None

Certifications or professional registrations

None

Current membership in professional organizations

American Institute of Aeronautics and Astronautics (AIAA) senior member

American Physical Society (APS) member

Honors and awards

None

Service activities

AIAA Aeroacoustics Technical Committee member: 2007-present

Conference session chair for AIAA Aerospace Sciences Meeting, AIAA Southwest Regional Technology Symposium, 61st APS-DFD annual meeting, AIAA Aerospace Sciences meeting and Exhibit.

Paper referee: Physics of Fluids, Journal of Computational Physics, AIAA Journal, International Journal for Numerical Methods in Engineering, Aeronautical Journal, Chinese Physics Letters, Papers for various academic conferences (AIAA, ASME)

Publications and presentations

A.V.G. Cavalieri, P. Jordan, Y. Gervais, M. Wei, and J.B. Freund, "Intermittent sound generation and its control in a free-shear flow", *Physics of Fluids*, Vol. 22, No. 15113, 2010.

T. Yang, M. Wei, and H. Zhao, "Numerical study of flexible flapping wing propulsion", *AIAA Journal*, Vol. 48, No. 12, pp. 2909-5912, 2010.

L. Zhou, Z. Wan, D. Sun, and M. Wei, The effects of initial perturbation to mixing-layer noise, *Theoretical and Applied Mechanics Letters* (in press), 2012

L. Zhou, M. Wei, and D. J. Sun, A simple model for mechanism study of sound generation in mixing layers, *International Journal of Aeroacoustics* (in press), 2012

M. Schlegel, B. R. Noack, P. Jordan, A. Dillmann, E. Gröschel, W. Schröder, M. Wei, J. B. Freund, O. Lehmann, and G. Tadmor, On least-order flow representations for aerodynamics and aeroacoustics, *J. Fluid Mech.*, Vol. 697, pp. 367--398, 2012

M. Wei, B. R. Qawasmeh, M. Barone, B. G. van Bloemen Waanders, and L. Zhou, Low-dimensional model of spatial shear layers, *Physics of Fluids*, Vol. 24, No. 014108, 2012

B. N. Shashikanth, A. Sheshmani, S. Kelly, and M. Wei, Hamiltonian structure and dynamics of a neutrally buoyant rigid sphere interacting with thin vortex rings, *Journal of Mathematical Fluid Mechanics*, Vol. 12, pp. 335--353, 2010

C. Cai, K. R. Khasawneh, H. Liu, and M. Wei, Collisionless gas flows over a cylindrical or a spherical object, *Journal of Spacecraft and Rockets*, Vol. 46, No. 6, Nov.-Dec., 2009

J. D. Hooser, M. Wei, B. E. Newton, and G. J. A. Chiffolleau, An approach to understanding flow friction ignition: a computational fluid dynamics (CFD) study on temperature development of high-pressure oxygen flow inside micron-scale seal cracks, *Journal of ASTM International*, Vol. 6, No. 10, Nov. 2009

M. Wei, and C. W. Rowley, Low-dimensional models of a temporally evolving free shear layer, *J. Fluid Mech.*, Vol. 618, pp. 113--134, 2009

Professional development activities

None