

CURRICULUM VITAE

June 2009

Arya Ebrahimpour, Ph.D., P.E.

Department of Civil and Environmental Engineering

College of Engineering

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PERSONAL

United States citizen; married, three children

EDUCATION

Ph.D. Civil Engineering (Structures), University of Idaho, 1987. Additional studies at the University of Delaware (1999-2000).

M.S. Civil Engineering, University of Idaho, 1984.

B.S. Civil Engineering, University of Idaho, 1981.

ACADEMIC EXPERIENCE

2006-present: Professor, Civil and Environmental Engineering, College of Engineering, Idaho State University.

April 2005-March 2006: Chair, Civil Engineering Program, College of Engineering, Idaho State University.

2000-2006: Associate Prof., Civil Engineering (tenure 2003), College of Engineering, Idaho State University.

1990-2000: Associate Professor of Engineering (tenure and promotion 1994) and College of Engineering Representative, Pennsylvania State University, Brandywine Campus (formerly Delaware County Campus; in the Philadelphia area), Media, PA.

1988-1990: Visiting Assistant Professor, Department of Civil Engineering, University of Nevada, Reno. Taught undergraduate and graduate courses and research in structures and highway materials.

1987-1988: Visiting Assistant Professor, Mechanical and Civil Engineering Departments, Univ. of Idaho.

1984-1987: Research Assistant, Department of Civil Engineering; Instructor, Department of Engineering Science, University of Idaho.

VISITING RESEARCH POSITIONS

January-April 2009: Visiting Research Professor, Department of Civil and Environmental Engineering, University of Nevada, Reno. During the sabbatical leave from ISU, performed computer modeling of a quarter-scale, four-span, 110-foot reinforced concrete bridge. The bridge was tested in the laboratory under seismic loading on three shake tables.

December 1992; June 1993; June-July 1994: Visiting Research Assistant Professor, School of Civil Engineering and Environmental Science, University of Oklahoma. Conducted research on a joint NSF project with the University of Oklahoma (see section on Grant Applications and Awards). Member of University of Oklahoma Graduate Faculty (1993-2000).

June-July 1991; June-July 1992: Visiting Research Assistant Professor, Department of Civil Engineering, University of Nevada, Reno. Continued research on grants obtained while teaching at the University of Nevada (see section on Grant Applications and Awards).

TEACHING EXPERIENCE

Introduction to Civil Engineering; Introduction to Engineering Design; Statics; Dynamics; Construction Materials; Concrete and Asphalt Laboratory; Mechanics of Materials; Steel and Timber Laboratory; Probability and Statistics for Civil Engineers; Engineering Economy; Structural Analysis; Advanced Structural Analysis; Design of Steel Structures (ASD & LRFD); Design of Wood Structures; Pavement Design; Structural Engineering Laboratory; Advanced Structural Steel Design; Structures and Mechanics Laboratory; Advanced Mechanics of Solids; Mechanics of Composite Materials.

PROFESSIONAL ACTIVITIES

Registered Professional Engineer in Idaho (10329)

Member of the Editorial Board for the International Conference on Civil, Structural, and Environmental Engineering Computing (2005, 2007, 2009).

Reviewer for the National Science Foundation (2007, 2008)

Reviewer for the *International Journal of Computers and Structures*, the *ASCE Journal of Structural Engineering*, and the *Journal of Experimental Techniques*.

Member of the American Society of Civil Engineers (1982-present):

- Composite Construction Committee (2005-present)
- Dynamic Effects National Committee, Shock and Vibratory Effects (1992-1998).
- Structural Safety and Reliability National Committee, Fatigue and Fracture Reliability (1990-1996).

Member of Sigma Xi Scientific Research Society (1987-present)

Member, Organizing Committee, Workshop on Reform of Undergraduate Mechanics Education, Hosted by the Penn State Engineering Mechanics Faculty, University Park, PA, August 16-18, 1998.

Member of the Editorial Advisory Board of the *Journal of Structural Engineering Review* (1996)

Idaho State University (2000-present):

Promotion and Tenure Review Committee (August 2006-present; Chair, 2006-2008)

Chair, Search Committee for two Civil Engineering Faculty Positions (2006)

Chair, Civil Engineering Program (April 2005-March 2006)

Chair, Promotion and Tenure Review Committee for a CEE Faculty member (2005)

Faculty Advisor, American Society of Civil Engineers Student Chapter (2001-2006)

Faculty Advisor, Steel Bridge Team (2001-2004; 2006)

Member, Engineering Dean Search Committee (2005-2006)

Member, Planning and Assessment Committee (August 2005-present)

Member, Faculty Centennial Committee (2000-2002)

Member, Undergraduate Research Committee (2000-2004)

Member, Scholastic Appeals Committee (2002-2007)

Member, Graduate Faculty (2000-present)

Member, Graduate Program Committee (August 2002-present)

Member, M.S. Thesis Committees – as advisor and chair and several others as member and as Graduate Faculty Representative (2000-present)

Member, Ph.D. Advisory Committee for Ms. Janice Martell (2003-present)

Member, Shop Committee for the College of Engineering (2001-present)

Member, Search Committee for three Mechanical Engineering Positions (2001 & 2004), and one in Civil Engineering (2004)

Member, Promotion and Tenure Committee for a Faculty member in the College of Engineering (2000)

Contributed to the ISU and the Idaho National Engineering and Environmental Laboratory (INEEL) Joint Projects:

- Assisted in Developing the Structural Dynamics Laboratory (2001-present)

- Assisted in the Planning and Construction of the Drop Test Pad for the INEEL National Spent Nuclear Fuel Program (2002)
- Assisted the INEEL Engineers on the Shake Table Projects (2001-present)

Penn State University, Brandywine (formerly Delaware County) Campus Selected Activities (1990-2000):

College of Engineering Dean's Representative (1992-2000)
Engineering Club Faculty Advisor (1991-2000)
College of Engineering Co-op Representative (1990-2000)
Recruiting Activities for the "Get To Know Us" Programs (1990-2000)
Faculty Senate Vice Chair (1998); Secretary (1995)
Member, Outstanding Teacher Award Committee (1997-1999)
Member, Search Committee for the Information Sciences and Technology Faculty Positions (1998-99)
Member, Technology Advisory Committee (August 1997-2000)
Member, Search Committee for the Director of Academic Affairs (August 1997)
Member, Research Opportunity for Undergraduates (ROU) Program (1992-2000)
Member, College of Engineering Curriculum Renovation Task Group (1995)
Chair, Search Committee for an Engineering Faculty Position (1993)
Member, Minority Mentoring Program (1991-2000)
Member, Ethnic and Gender Diversity Committee (1990-1991)

AWARDS

Master Teacher Award, Idaho State University (2004)
Provost's Award for Collaborative Instructional and Curricular Innovation on the GE-funded Project Entitled, "Enhancement of Math 140 and Math 141 Using Applied Engineering Projects" – A University Award, Pennsylvania State University (1998)
Penn State Engineering Society (PSES) Outstanding Advising Award – A University Award, Pennsylvania State University (1998)
Outstanding Teaching Award, Pennsylvania State University, Delaware County Campus – A Campus Award (1996)
Freshman Minority Mentoring Certificate of Appreciation, Pennsylvania State University, Delaware County Campus – A Campus Award (1993)
Recognized by high achieving students as an educator with positive influence, University of Nevada, Reno (1990)

CONSULTING

Structural analysis of floor system for supporting mobile storage systems, Office of Registration and Records, Museum Building, Idaho State University, Pocatello, Idaho (2006).
Failure analysis of fasteners, laboratory material testing of Poly-boards, and retrofit drawings for the Pocatello Skate Park, Rocky Mountain Engineering and Surveying, Pocatello, Idaho (2002).
Structural analysis, design, and retrofit of historical buildings and other structures, Ortega Consulting, Media, Pennsylvania (1995-1997). Work examples included:

- Computer modeling and retrofit of main force-resisting frames of a historical building in Philadelphia, PA
- Design of a three-story addition to a historical building in Princeton, NJ
- Structural analysis of a twenty-story building for increase in live loads in Harrisburg, PA
- Electronic monitoring, data acquisition, and statistical analyses of conditions of several state buildings in Pennsylvania
- Structural design of facilities for a golf club (clubhouse, dormitory, etc.) in Nantucket, MA
- Structural design of several residential buildings in Nantucket, MA

Analysis of two ski lift structures and foundations, Ferrari and Associates, Reno, Nevada (1989)
Remedial actions to prevent excessive office floor vibrations, Ferrari and Associates, Reno, Nevada (1989)
Laboratory testing of gabions and connections for Terra Aqua Gabions, Reno, Nevada (1990)

GRADUATE STUDENT SUPERVISION AND ASSISTANCE

Pothukutchi, Vishwanath, "Performance Evaluation of Chip Seals in Idaho", M.S. in Civil Engineering, Idaho State University, May 2009. Co-advisors: M. Zoghi and A. Ebrahimpour
Kishor Shrestha, "Finite Element Modeling of Vibrations in Wood Floors with Rotated Joists," M.S. in Civil Engineering, Idaho State University, May 2008. Advisor: A. Ebrahimpour
John Wolfe, "Development of Experimental Data Base for Finite Element Vibration Analysis of Floor Systems with Rotated Engineered Wood I-Joists," M.S. in Civil Engineering, Idaho State University, December 2007. Advisor: A. Ebrahimpour
David Porter, "Seismic Risk Assessment of Highway Bridges in Clark County, Nevada," M.S. in Civil Engineering, Idaho State University, October 2006. Advisor: A. Ebrahimpour
Jared Keller, "Seismic Vulnerability Assessment of Essential Structures in Clark County, Nevada," M.S. in Civil Engineering, Idaho State University, October 2005. Advisor: A. Ebrahimpour
Charles Winmill, "Bending and Torsional Vibrations of Floor Strips with Rotated Composite Wood I-Joists," M.S. in Engineering Structures and Mechanics, Idaho State University, August 2005. Advisor: A. Ebrahimpour.
Benjamin Wiegman, "Experimental Study of Steel-Concrete Floor Beams with Constrained Treatment," M.S. in Engineering Structures and Mechanics, Idaho State University, April 2005. Advisor: A. Ebrahimpour.
Ron Harwell, "Strain Energy-Based Finite Element Modeling of Damping in Floors with Constrained Viscoelastic Treatment," M.S. in Engineering Structures and Mechanics, Idaho State University, May 2003. Advisor: A. Ebrahimpour.
Janice Martell, "Experimental and Analytical Study on Mitigating Floor Vibrations using Advanced Materials," M.S. in Engineering Structures and Mechanics, Idaho State University, October 2002. Advisor: A. Ebrahimpour.
Adel Hamam, "Measuring and Modeling Dynamic Loads Imposed by Moving Crowds," Ph.D. Dissertation, University of Oklahoma, 1994. Advisor: R. L. Sack. I served on Adel's Ph.D. Committee and supervised him on both experimental and analytical aspects of his research. The work resulted in several conference articles and a journal article.
Kyle Hancock, "A Parametric Study of Pedestrian Motion," University of Oklahoma, 1994. Advisor: R. L. Sack. I assisted Kyle with his independent study submitted for M.S. degree.
Said Ismail, "Fatigue Reliability Model for Railway Riveted Steel Bridges," M.S. Thesis, University of Nevada, Reno, 1992. Advisor: E. A. Maragakis. Said worked on a grant from the Nevada Nuclear Waste Project Office. Maragakis and I jointly supervised his research and our work resulted in conference articles and a journal paper.
Daniel N. O'Connor, "Truss Fatigue: A Computer Method for Evaluating Fatigue Damage to Steel Truss Railway Bridges," University of Nevada, Reno, 1992. Advisor: A. Ebrahimpour. Dan worked on grants from the American Railway Engineering Association and the Nevada Nuclear Waste Project Office.
Jagadish Puttana, "Statistical Modeling of Bridge Traffic Loads - A Case Study," M.S. Thesis, University of Nevada, Reno, 1989. Advisor: A. Ebrahimpour.
Patrick D. VanKleek, "Measurement of Crowd-Induced Dynamic Loads," M.S. Thesis, University of Idaho, 1988. Advisor: R. L. Sack. Pat started his research while I was finishing my Ph.D. program. I was responsible for supervising and assisting him with his experimental set-up while at the University of Idaho.

GRADUATE STUDENT COMMITTEES:

At ISU, served on over 30 graduate students' thesis or project committees for Colleges of Engineering, Education, and Health Professions. I have served on these committees as a Graduate Faculty Representative (GFR) or a committee member.

UNDERGRADUATE RESEARCH ASSISTANTS

Supervised the following undergraduate students. Research assistance ranged from helping to write undergraduate research proposals to setting up and monitoring laboratory experiments, data analysis, and report writing.

Alex Crea (ISU, 2008)

Anisa Como (ISU, 2008)

Joshua Baird (ISU, 2005)

Benjamin Weigman (ISU, 2002)

Joshua Witt (ISU, 2001)

Jesse Schuerman (ISU, 2001)

John Slotwinski (Penn State, 1997)

Benjamin Craddock (Penn State, 1996)

Charles McCarthy (Penn State, 1993)

Allen Guiher (Penn State, 1992)

Laura Fitts (Penn State, 1991)

Daniel O'Connor (University of Nevada, Reno, 1989)

Brad Smallbridge (University of Idaho, 1987)

DeeAnn Arnholtz (University of Idaho, 1986)

PUBLICATIONS

Book Chapters:

Ebrahimpour, A., and Schoen, M. P., "Externally Bonded FRP Composite and Viscoelastic Materials for Mitigating Vibrations of Floor Systems." *The International Handbook of FRP Composites in Civil Engineering*, M. Zoghi, ed., CRC Press, submitted 2007.

Schoen, M. P., and Ebrahimpour, A., "Overview of Electro Active Polymers". *The International Handbook of FRP Composites in Civil Engineering*, M. Zoghi, ed., CRC Press, submitted 2007.

Ebrahimpour, A., and Schoen, M. P., "Smart Materials in Civil Structures". *Focus on Material Science Research*, D. V. Rosse, ed., Nova Science Publishers, Chapter 7, 2007, pp. 247-275, ISBN: 1-60021-399-5

Refereed Publications (journal papers and conference proceedings reviewed by full paper):

Ebrahimpour, A., Porter, D. B., and Sack, R. L., "A Seismic Risk Assessment Method for Highway Bridges," submitted for review to *Computers & Structures*, Elsevier Science.

Saiidi, M., Ebrahimpour, A., and Johnson, N., "Nonlinear Analysis of Earthquake Response of a 4-Span R/C Bridge Model," Fifth International Conference on Bridge Maintenance, Safety and Management", to be held in Philadelphia, June 11-15, 2010.

Wolfe, J.M., Shrestha K., and Ebrahimpour, A., "Experimental and Finite Element Vibration Analysis of Floor Systems with Rotated I-Joists," the Twelfth International Conference on Civil, Structural and Environmental Engineering Computing, to be held in Funchal, Madeira, Portugal, September 1-4, 2009.

Ebrahimpour, A., Porter, D.B., Sack, R.L., and Luke, B., "A Fragility-Based Seismic Risk Prioritization Method for Highway Bridges," the Eleventh International Conference on Civil, Structural, and Environmental Engineering Computing, St. Julians, Malta, September 18-21, 2007.

Leung, S.W., Ebrahimpour, A., Schoen, M.P., and Lai, J.C.K., "Self-Cleansing Flexible Stent for Prevention of Clogging of Blood Vessels," *Proceedings*, ASME International Mechanical Engineering Congress and Exposition, November 11-15, 2007, Seattle, Washington.

- Lai, J.C.K., Schoen, M.P., Ebrahimpour, A., Bhushan, A., Daniels, K.D., and Leung, S.W., "Fast-Response Smart Self-Assembling Biosensors For Biomarker Detection," *Proceedings*, ASME International Mechanical Engineering Congress and Exposition, November 11-15, 2007, Seattle, Washington.
- Luke, B.A., Ebrahimpour, A., Sack, R.L., "Site Amplification Hazard Mapping for Las Vegas, Nevada (USA)," 4th International Conference on Earthquake Geotechnical Engineering, Aristotle University of Thessaloniki, Greece, June 25-28, 2007.
- Ebrahimpour, A., Porter, D.B., Sack, R.L., and Luke, B., "Seismic Risk Assessment of Highway Bridges in Clark County, Nevada," Proc., Symposium on the Application of Geophysics to Engineering and Environmental Problems, April 1-5, 2007, Denver, CO.
- Sack, R.L., Luke, B.A., Ebrahimpour, A., and Keller, J.R., "Seismic Risk Assessment of Essential Buildings in Clark County, Nevada." Proc., 8th U.S. National Conference on Earthquake Engineering, April 18-22, 2006, San Francisco, CA.
- Keller, J.R., Ebrahimpour, A., Sack, R.L., and Luke, B.A., "The Seismic Vulnerability of Critical Public Buildings in Clark County, Nevada." Proc., Symposium on the Application of Geophysics to Engineering and Environmental Problems, April 2-6, 2006, Seattle, WA.
- Ebrahimpour, A., Sack, R. L., "A Review of Vibration Serviceability Criteria for Floor Structures," *Computers & Structures*, Elsevier Science, 83(28-30), November 2005, pp. 2488-2494.
- Martell, J.L., Ebrahimpour, A., and Schoen, M.P., "Intelligent Approach to Floor Vibration Control," *Proceedings*, ASME International Mechanical Engineering Congress and Exposition, November 5-11, 2005, Orlando, Florida.
- Ebrahimpour, A., C.W. Winmill, H. Sadid, and R. L. Sack, "Simulating Occupant-Induced Vibrations of Wood Floors with Rotated Joists", *Proceedings of the Tenth International Conference on Civil, Structural, and Environmental Engineering Computing*, Rome, Italy, Aug. 30-Sept. 2, 2005.
- Sack, R.L., Ebrahimpour, A. and Piechota T.A., "Unifying Ground Snow Loads for the Western U.S.," *Snow Engineering V*, Ed. P. Bartelt, E. Adams, M. Christen, R. Sack & A. Sato, Belkema, London, 2004.
- Ebrahimpour, A., Sack, R. L., "A Survey of Vibration Serviceability Criteria for Structures," *Proceedings*, The Ninth International Conference on Civil and Structural Engineering Computing, Egmond-aan-Zee, The Netherlands, 2-4 September 2003.
- Horwitz, A., and Ebrahimpour, A., "Engineering Applications in Differential and Integral Calculus," *International Journal of Engineering Education*, 18(1), Tempus Press, Great Britain, January 2002, pp. 78-88.
- Ebrahimpour, A., Vinson, J. R., and Thomsen, O. T., "Experimental and Analytical Study on the Behavior of Foam Core Sandwich Composite Plates Subjected to In-Plane Shear Stress," *Proceedings*, 42nd AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, 16-19 April 2001, Seattle, Washington, Paper No. 2001-1220.
- Ebrahimpour, A., A. Hamam, R. L. Sack, and W. N. Patten, "Measuring and Modeling Dynamic Loads Imposed by Moving Crowds," *Journal of Structural Engineering*, ASCE, 122(12), December 1996, pp. 1468-1474. Closure, 124(9), September 1998, pp. 1088-1090.
- Ebrahimpour, A., and L. L. Fitts, "Measuring Coherency of Human-Induced Rhythmic Loads Using Force Plates," *Journal of Structural Engineering*, ASCE, 122(7), July 1996, pp. 829-831.
- Ebrahimpour, A, E. A. Maragakis, and S. Ismail, "Probabilistic Fatigue Evaluation of Railway Bridges," *Structural Engineering Review*, Pergamon Press, 5(1), February 1993, pp. 23-30.
- Ebrahimpour, A., W. N. Patten, R. L. Sack, A. Hamam, and H. J. Shui, "Semiactive Control of Floor Systems," *Proceedings*, The Fifth International Conference on Civil and Structural Engineering Computing, Civil-Comp Press, Edinburgh, U.K., August 17-19, 1993, pp. 329-337.
- Patten, W. N., H. C. Wu, W. Yen, C. Mo, R. L. Sack, and A. Ebrahimpour, "Mitigating Structural Vibrations With Semiactive Control," *Proceedings*, The Second European Conference on Structural Dynamics: EURO DYN '93, Trondheim, Norway, June 21-23, 1993, pp. 861-868.
- Ebrahimpour, A., W. N. Patten, R. L. Sack, K. Hancock, and A. Hamam, "Defining Occupant Loads and Mitigating Associated Vibrations," *Proceedings*, International Colloquium on Structural Serviceability of Buildings, Goteborg, Sweden, June 9-11, 1993, pp. 157-164.

- Ebrahimpour, A., R. L. Sack, and A. Hamam, "Loads Imposed by Crowds," *Proceedings*, International Conference on Engineering for Crowd Safety, London, United Kingdom, Elsevier Science Publishers, March 17-18, 1993.
- Ebrahimpour, A., and R. L. Sack, "Design Live Loads for Coherent Crowd Harmonic Movements," *Journal of Structural Engineering*, ASCE, 118(4), April 1992, pp. 1121-1136.
- Ebrahimpour A., R. L. Sack, and P. D. VanKleek, "Computing Crowd Loads Using a Nonlinear Equation of Motion," *Computers and Structures*, Pergamon Press, 41(6), December 1991, pp. 1525-1531.
- Ebrahimpour, A., E. A. Maragakis, and D. N. O'Connor, "A Modified Computer Code for Rating Truss Railroad Bridges", *Journal of Computing in Civil Engineering*, ASCE, 4(4), Oct. 1990, pp. 313-326.
- Ebrahimpour, A., E. A. Maragakis, and D. N. O'Connor, "On Fatigue Evaluation of Riveted Connections in Railway Truss Bridges", *Proceedings*, Forth Rail Bridge Centenary Conference, Vol. 1, Heriot-Watt University, Edinburgh, U.K., Aug. 1990, pp. 366-378.
- Ebrahimpour, A., and R. L. Sack, "Modeling Dynamic Occupant Loads," *Journal of Structural Engineering*, ASCE, 115(6), June 1989, pp. 1476-1496.
- Sack, R. L., and A. Ebrahimpour, "Simulating Dynamic Spectator Loads," *Structural Engineering Review*, Chapman and Hall, 1(1), 1988, pp. 41-48.
- Ebrahimpour, A., and R. L. Sack, "Crowd-Induced Dynamic Loads," *Proceedings*, Symposium/Workshop on Serviceability of Buildings, University of Ottawa, Ottawa, Canada, May 1988, pp. 451-464.
- Ebrahimpour, A., and R. L. Sack, "Simulating Dynamic Spectator Loads," *Proceedings*, Third Intl. Conf. on Civil and Structural Engineering Computing, Vol. 1, Civil-Comp Press, Edinburgh, 1987, pp. 215-222.

Conference Proceedings Refereed by Abstract and Posters:

- Como, A., and Ebrahimpour, A., "Pushover Analysis of Representative Highway Bridges in Idaho," poster presented at the Idaho State University Undergraduate Symposium, April 10, 2008.
- Wiegman, B., and Ebrahimpour, A., "Shake Table Study of Steel-Concrete Floor Beams with Constrained Treatment," *Proceedings*, 46th Idaho Academy of Science Meeting, March 25-27, 2004.
- Martell, J. L., and Ebrahimpour, A., "Enhancing Damping and Stiffness Properties of Floors with Viscoelastic and Composite Materials," the Architectural Engineering Conference 2003, ASCE, Austin, Texas, September 17-20, 2003.
- Ebrahimpour, A., and Martell, J. L., "Retrofitting Floors with Advanced Materials to Mitigate Occupant-induced Vibrations," *Proceedings*, Structures Congress 2003, ASCE, Seattle Washington, May 29-June 1, 2003.
- Ebrahimpour, A., Horwitz, A., and Azemi, A., "Engineering Projects in Differential and Integral Calculus," paper presented at the ASEE Annual Conference, Charlotte, N.C., June 20-23, 1999.
- Ebrahimpour, A., "Design of a Railway Bridge in Mechanics of Materials", *Proceedings*, Workshop on Reform of Undergraduate Mechanics Education, State College, PA, August 16-18, 1998.
- Ebrahimpour, A., "Simulation Team Projects in Dynamics", *Proceedings*, Workshop on Reform of Undergraduate Mechanics Education, State College, PA, August 16-18, 1998.
- Ebrahimpour, A. and R. L. Sack, "Live Loads for Crowds in Motion," *Proceedings*, Structures Congress '96, ASCE, Chicago, Illinois, April 1996, pp. 420-427.
- Ebrahimpour, A., R. L. Sack, W. N. Patten, and A. Hamam, "Experimental Measurements of Dynamic Loads Imposed by Moving Crowds," *Proceedings*, Structures Congress '94, ASCE, Atlanta, Georgia, April 1994, pp. 1385-1390.
- Kuo, C. C., H. Wu, L. Liu, R. L. Sack, A. Ebrahimpour, and W. N. Patten, "Semiactive Structural Control: A Low Cost Fix For An Infrastructure at Risk," *Proceedings*, Structures Congress '94, ASCE, Atlanta, Georgia, April 1994, pp. 387-392.
- Ebrahimpour, A., E. A. Maragakis, and S. Ismail, "A Fatigue Reliability Model for Railway Bridges," *Proceedings*, ASCE Specialty Conf. on Probabilistic Mechanics and Structural Engineering and Geotechnical Reliability, Denver, Colorado, July 1992, pp. 320-323.
- Ebrahimpour, A., and E. A. Maragakis, "Rating of Steel Railway Bridges," *Proceedings*, Second Workshop on Bridge Engineering Research in Progress, Reno, Nevada, October 29-30, 1990, pp. 63-66.

- Ebrahimpour, A., E. A. Maragakis, and D. N. O'Connor, "Safety Evaluation of Steel Truss Railway Bridges", *Proceedings*, 6th U.S.-Japan Bridge Engineering Workshop: Analysis, Design, Performance and Strengthening, Lake Tahoe, Nevada, May 7-8, 1990, pp. 301-314.
- Ebrahimpour, A., and R. L. Sack, "Experimental Measurements of Occupant Dynamic Loads," *Proceedings*, ASCE Engineering Mechanics Division Specialty Conference, Blacksburg, Virginia, May 1988, p. 170.
- Ebrahimpour, A., and R. L. Sack, "Statistical Analysis of Occupant Dynamic Loads," *Proceedings*, ASCE Specialty Conference on Probabilistic Mechanics and Structural and Geotechnical Safety, Blacksburg, Virginia, May 1988, pp. 364-367.
- Sack, R. L., W. E. Saul, A. Ebrahimpour, and G. L. Thinnies, "A Microcomputer-Based System for Measuring Dynamic Occupant Loads," *Proceedings*, ASCE Ninth Conference on Electronic Computation, Birmingham, AL, Feb. 1986, pp. 328-338.
- Burke, G. G., A. Ebrahimpour, J. S. Haldeman, J. J. Pinkard, R. L. Sack, W. E. Saul, and G. L. Thinnies, "Automated Data Acquisition: CAE for the Experimentalist," *Proceedings*, UPCAEDM '85, July 1985, pp. 116-120.
- Ebrahimpour, A. and R. L. Sack, "Wind Load Factors for Structures in Idaho," *Proceedings*, Fifth U.S. National Conference on Wind Engineering, Lubbock, TX, Nov. 1985, pp. B17-B24.

Reports:

- Ebrahimpour, A., and Schoen, M.P., "Vibrational Characteristics of Engineered Wood Floor Joists," Final Report Submitted to the Boise Cascade Corporation, September 2008.
- Como, A., and Ebrahimpour, A., "Pushover Analysis of Representative Highway Bridges in Idaho," Final Report Submitted to the Undergraduate Research Committee, Idaho State University, Pocatello, Idaho, February 2008.
- Ebrahimpour, A., and Schuerman, J., "Strengthening Wood Joists with Glued-in Fiber Reinforced Polymer Rods," Final Report Submitted to the Undergraduate Research Committee, Idaho State University, Pocatello, Idaho, June 2004.
- Wiegman, B., and Ebrahimpour, A., "Shake Table Study of Steel-Concrete Floor Beams With Constrained Treatment," Final Report Submitted to the Undergraduate Research Committee, Idaho State University, Pocatello, Idaho, December 2003.
- Ebrahimpour, A., "Feasibility of Retrofitting Floor Systems with Advanced Composite Materials for Mitigating Structural Vibrations," Final Report Submitted to the Faculty Research Committee, Idaho State University, Pocatello, Idaho, August 2002.
- Ebrahimpour, A., "A Pilot Study for Determining Mechanical Behavior of Foam Core Sandwich Construction of Composite Materials by Testing Beam and Plate Specimens," A Report to the Department of Mechanical Engineering, University of Delaware, Newark, DE, July 2000.
- Ebrahimpour, A., Horwitz, A., and Azemi, A., "Enhancement of Math 140 and Math 141 Using Applied Engineering Projects", 1998-1999 Progress Report submitted to the GE Project, September 1998. (Also in Pathway to Effective Learning in Engineering using Information Technology, GE Progress Report, with Dhushy Sathianathan, et al., Penn State College of Engineering, September 1998).
- Azemi, A., Ebrahimpour, A., and Horwitz, A., "Enhancement of Math 140 and Math 141 Using Applied Engineering Projects", 1997-1998 Progress Report submitted to the GE Project, September 1997. (Also in Pathway to Effective Learning in Engineering using Information Technology, GE Progress Report, with Dhushy Sathianathan, et al., Penn State College of Engineering, September 1997).
- Sack, R. L., Patten, W. N., and Ebrahimpour, A., "Structural Control for Phase-Related Inputs," Final Project Report, NSF Award 9202731, Structures, Geomechanics, and Building Systems Program, Directorate for Engineering, April 1996.
- Maragakis E. A., A. Ebrahimpour, and S. Ismail, "Experimental Fatigue of a Double-angle Connection in a Plate Girder Railway Bridge," Center for Infrastructure Studies, Report No. CIS-92-2, University of Nevada, Reno, July 1992.

- Ebrahimpour, A., and Jon A. Epps, "Statistical Comparison of Cement Kiln Dust and Lime as Antistripping Additives in Asphalt Concrete Mixtures", Report to Dolo-Chem Lime Company, Hollister, CA, May 1990.
- Ebrahimpour, A., R. L. Sack, and W. E. Saul, "Dynamic Loads Produced by Occupants of Public Assembly Structures," NSF Final Project Report, Grant MSM-8614962, Directorate for Engineering, Jan. 1990.
- Ebrahimpour, A., and Puttana, J., "Statistical Modeling of Bridge Traffic Loads - A Case Study", Civil Engineering Department, Report No. CCEER-89-3, University of Nevada, Reno, Dec. 1989.
- Ebrahimpour, A., E. A., Maragakis, and D. N. O'Connor, "Survey and Evaluation of Nevada's Transportation Infrastructure, Task 7.4: Railway Bridges," Report for the State of Nevada Nuclear Waste Project Office, Carson City, NV, Aug. 1989.
- Ebrahimpour, A. "Strength of Gabion Hog Rings Individually and when Connecting Two Panels," Report to Terra Aqua Gabions, Reno, Nevada, June 1989.
- Sack, R. L., W. E. Saul, and A. Ebrahimpour, "Loads Due to Human Movements on Assembly Structures," Final Project Report, Grant CEE-8213966, Directorate for Engineering, NSF Report No. NSF/ENG-86032, Jan. 1986, NTIS No. PB87-160529/A05.

Book Review:

- Ebrahimpour, A., Proceedings of the International Conference on the Design and Construction of Non-Conventional Structures '87, Vols. 1 and 2, *Structural Engineering Review*, Vol. 1, No. 3, Sept. 1988, pp. 181-182.

GRANT APPLICATIONS AND AWARDS

Funded Grants and Contracts:

- Idaho Transportation Department \$67,848, "Improvement of the Idaho Chip Seal Surface Treatments," January 2008 – August 2009 (PI: Zoghi, Co-PI: Ebrahimpour).
- Idaho Transportation Department \$81,888, "Lime-Fly Ash Stabilization of Pavement Subgrade Soils, Base, and Recycled Asphalt," January 2008 – August 2009 (PI: Zoghi, Co-PI: Ebrahimpour).
- Boise Cascade, \$19,600, "Boise Cascade – Idaho State University Floor Vibrations Studies," February 2008-September 2008, (PI: Ebrahimpour, Co-PI: Schoen).
- Department of Energy and UNLV, \$73,901 (\$888,000 total; ISU's share: \$73,901), "Earthquake Hazards and Risks in Southern Nevada," March 2006 – June 2007 (Subcontract PI: Ebrahimpour). This project involved seismic analysis of highway bridges in Clark County, Nevada.
- Department of Energy and UNLV, \$57,562 (\$834,000 total; ISU's share: \$57,562), "Structural Seismic Risk Assessment in Southern Nevada," September 2004 - December 2005 (Subcontract PI: Ebrahimpour). This project involved seismic analysis of essential buildings (hospitals, schools, and fire and police stations) in Clark County, Nevada.
- National Science Foundation, Major Research Instrumentation Grant, \$211,917 (the amount includes \$36,905 ISU matching fund), "Acquisition of a Broad Based Structural Dynamics Laboratory," August 2002 - July 2005 (PI: Ebrahimpour; Co-PIs: Blotter and Sadid).
- Idaho National Engineering and Environmental Laboratory Spent Nuclear Fuel Program, \$21,000, "Drop Test and Vibration Test Services," July 2002 – June 2003, (PI: Kunze; Co-PIs: Sadid and Ebrahimpour).
- Idaho State University, Faculty Research Committee, \$4,000, "Feasibility of Retrofitting Floor Systems with Advanced Composite Materials for Mitigating Structural Vibrations," May 2001 – August 2002. (PI: Ebrahimpour).
- National Science Foundation, \$216,372, "Structural Control for Phase-Related Inputs," August 1992 - January 1996 (PI: Sack; Co-PIs: Ebrahimpour and Patten).
- Pennsylvania State University, College of Engineering Enhancement Funding, \$26,000, "Applications of Engineering in Mathematics," 1997-98 (PI: Azemi, Co-PIs: Ebrahimpour, and Horwitz).

Pennsylvania State University, Engineering Equipment, \$10,000, "Laboratory Equipment for Engineering Design," 1997 (Submitted by: Ebrahimpour).

Pennsylvania State University, Empower Project, \$2,000, "An Interactive Multimedia Tool in Engineering Mechanics," 1996 (PI: Ebrahimpour).

Pennsylvania State University, Matching Program for Engineering Equipment, \$27,000, "Laboratory Equipment for Engineering Mechanics," (Submitted by: Ebrahimpour) 1994.

Pennsylvania State University Funds for Undergraduate Research, \$5,000, 1993. This funding was distributed among five faculty members to partially support their ongoing research projects.

Pennsylvania State University Research Development Grant, \$1,550, "Experimental Measurements of Occupant Dynamic Loads", August 1992 - July 1993 (PI: Ebrahimpour).

Pennsylvania Department of Commerce/Ben Franklin Partnership Office, \$15,000, "Data Acquisition System for Measuring Structural Dynamic Forces", August 1991 (PI: Ebrahimpour).

Pennsylvania State University Research Development Grant, \$1,000, "Computer Evaluation of Fatigue in Riveted Steel Railway Bridges", Jan. 1991 - Dec. 1991 (PI: Ebrahimpour).

Nevada Nuclear Waste Project Office, \$30,495, "A Study on Fatigue Analysis of Steel Railway Bridges," May 1990 - Sept. 1991 (PI: Maragakis; Co-PI: Ebrahimpour).

Nevada Nuclear Waste Project Office, \$8,740, "Continuation of Task 7.4: Evaluation of Railway Bridges," May 1990 - Aug. 1990 (PI: Ebrahimpour; Co-PI: Maragakis).

NOVOPHALT, Inc., \$298,621, "Physical Properties of Novophalt Asphalt Concrete and Pavement Performance," April 1990 - April 1993 (PI: Epps; Co-PIs: Ebrahimpour, Siddharthan, and Stroup-Gardiner).

CHEMSTAR, Inc., \$36,602, "Comparison of Aging in Untreated and Lime-treated Asphalt Concrete Mixtures," Oct. 1989 - Jan. 1993 (Co-PIs: Ebrahimpour and Epps).

Dolo-Chem Company, \$4,921, "Comparison of Cement Kiln Dust and Lime as Antistripping Additives in Asphalt Concrete Mixtures," Oct. 1989 - Jan. 1990 (PI: Ebrahimpour).

American Railway Engineering Association, \$4,000, "A Computer Method for Fatigue Evaluation of Connections in Riveted Railway Truss Bridges," Jan. 1990 - July 1990 (PI: Ebrahimpour).

Nevada Nuclear Waste Project Office, \$28,000, "Survey and Evaluation of Nevada's Transportation Infrastructure - Task 7.4: Structural Capacity of Railway Bridges," Feb. 1989 - Aug. 1989, (PI: Ebrahimpour, Co-PI: Maragakis).

University of Nevada Advisory Board, \$7,000, "Statistical Modeling of Bridge Traffic Loads - A Case Study," Sept. 1988 - Dec. 1989 (PI: Ebrahimpour).

Assistance with Student Research Funding:

Idaho State University, Undergraduate Research Committee, \$1,500, "Mitigating Structural Vibrations Using Carbon Nanotube Reinforced Materials," with Alex Crea (undergraduate student), May 2007-November 30, 2007.

Idaho State University, Undergraduate Research Committee, \$1,600, "Pushover Analysis of Representative Highway Bridges in Idaho," with Anisa Como (undergraduate student), May 2007-November 30, 2007.

Idaho State University, Undergraduate Research Committee, \$1,998, "Shake Table Study of Steel-Concrete Floor Beams with Constrained Treatment," with Benjamin Wiegman (undergraduate student), January 2003-December 2003.

Idaho State University, Undergraduate Research Committee, \$1,857, "Strengthening Wood Joists with Glued-in Fiber Reinforced Polymer Rods," with Jesse Schuerman (undergraduate student), January 2002 - August 2002.

Selected Other Recent Proposals Submitted/Pending:

- Boise Cascade Corporation, \$24,785, “Measurements of Engineered Wood Floors with Various Attached Framing Components” (PI: Ebrahimpour; Co-PIs: Schoen), 2008.
- Green day Global, \$76,036, “Phase I: Engineering Properties of the GDG Earth Blocks (PI: Mahar; Co-PIs: Ebrahimpour and Zoghi), 2008.
- Green day Global, \$138,124, “Phase II: Static In-Plane Strength Testing of GDG Earth Block Wall Sections,” Green day Global (PI: Ebrahimpour; Co-PIs: Mahar and Zoghi), 2008.
- Idaho Transportation Department, \$36,707 (not funded), “Seismic Risk Assessment and Retrofit Measures for Bridges in Southeast Idaho,” (PI: Ebrahimpour, A.; Co-PI: Zoghi), 2008.
- NSF Idaho EPSCoR , about \$2.5M per year for three years (not funded; full proposal submitted to the EPSCoR Committee on 8-7-07), “Life Sciences - Nanoscience Innovations,” (Project Leaders: Aston, Punnoose, Lai, Daniels, and Wingett; Ebrahimpour was one of the core participants).
- NASA Idaho EPSCoR, \$608,953 (not funded; all ISU; Ebrahimpour’s proposed share: \$138,650) “Electroactive Polymers and Nanomaterials for Space Applications,” Requested for August 2007 – July 2010 (PI Schoen; CoPIs: Ebrahimpour, Leung, Perez, Williams, Lai, Bhushan).
- FY08 Line-Item Appropriation Request Proposal, \$1,000,000 (not funded; all ISU; Ebrahimpour’s proposed share: \$200,000), “Center for Nanotoxicity and Applied Nanotechnology,” (PI: Lai; CoPIs: Bhushan, Leung, Ebrahimpour, and Schoen)
- National Science Foundation, \$395,581 (not funded), “Intelligent Piezoelectric System for Mitigating Occupant-Induced Structural Vibrations,” Requested for May 2007 – April 2010 (PI: Ebrahimpour; Co-PI: Schoen).
- Washington State University, \$234,067 (not funded), “Unifying Ground Snow Loads for the Western U.S.,” October 2005 (Subcontract PI: Ebrahimpour).
- Washington State University, \$244,067 (not funded), “Seismic Risk Assessment of the Las Vegas Infrastructure,” October 2005 (Subcontract PI: Ebrahimpour).
- Idaho National Laboratory, \$178,259 (not funded), “Structural Response of Containers with Granular Contents During Accidental Drop Events,” (LDRD Proposal),” July 2005, (PI: Ebrahimpour).
- National Science Foundation, \$416,164 (not funded), “Model-based Simulation of Vibrations in Engineered Wood Floor I-Joists,” December 2004 (PI: Ebrahimpour; Co-PI: Sack, UNLV).
- National Science Foundation, \$590,553 (not funded), “Passive Control of Floor Vibrations Using Advanced Materials,” October 2002 (PI: Ebrahimpour; Co-PIs: Sadid; Gibson, Wayne State; and Sack, UNLV).
- National Science Foundation, \$298,586 (not funded), “Retrofitting Floor Systems with Advanced Composite and Viscoelastic Materials to Mitigate Occupant-Induced Vibrations,” October 2001 (PI: Ebrahimpour, Co-PIs: Sadid; and Gibson, Wayne State University).