

CURRICULUM VITA

Robert B. Fleischman

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PERSONAL: Born Newark, NJ, April 11, 1963. U.S. citizen. Married (Jennifer Eufemi)

EDUCATION:

Lehigh University, Bethlehem, Pennsylvania

Ph.D. in Civil Engineering, January 1995

Dissertation: "Conception, Analysis, and Design of an Innovative Steel Beam-to-Column Connection", Advisor: Dr. Le- Wu Lu (deceased)

M.S. in Civil Engineering, January 1989.

Thesis: "Experimental and Theoretical Analysis of Component Behavior in Semi-Rigid Steel Building Connections", Advisor: Dr. George C. Driscoll (deceased)

Carnegie-Mellon University, Pittsburgh, Pennsylvania

B.S. in Civil Engineering, May 1985

Specialization in Structures

PROFESSIONAL EXPERIENCE:

Professor, *Department of Civil Engineering and Engineering Mechanics, University of Arizona, May 2015 - present.*

Associate Professor, *Department of Civil Engineering and Engineering Mechanics, University of Arizona, June 2006 – April 2015.*
Delbert R. Lewis Distinguished Professorship 2008-2011

Faculty-in-Residence Design Engineer, *Rutherford & Chekene Engineers, San Francisco, CA, August 2009- January 2010*

Performed seismic retrofit assessment of 3 building structures including 15-story steel moment frame medical laboratories at UCSF, precast roof structure at Oakland Airport, and post-tensioned 2-way waffle slab library at UC-Berkeley.

Assistant Professor, *Department of Civil Engineering and Engineering Mechanics, University of Arizona, August 2000 – May 2006.*

Developed Integrated Computational Experimental Laboratory (ICEL) for full-scale structural testing supported by nonlinear finite element analysis.

Assistant Professor, *Department of Civil Engineering and Geological Sciences, University of Notre Dame, January 1996 - July 2000.*

Instructor for course above (UA) and Reinforced Concrete Design.

Developed Large-Scale Structures Laboratory with state-of-the-art testing capabilities.

Design Engineer, *Thornton-Tomasetti/Cohen-Baretto-Marchertas (CBM) Engineers, Chicago, IL, August 1995- January 1996*

Assisted in design of foundations and shear walls for 25-story reinforced concrete apartment building: 1660 Chicago Ave., Evanston IL; Designed steel framing and roof truss-work for preliminary design of new Goodman Theatre, Chicago, IL.

Research Engineer, *Center for Advanced Technology for Large Structural Systems, Lehigh University, Bethlehem, PA, August 1994 - July 1995.*

Advisors: Dr. R. Sause, Dr. S. Pessiki

Part of national research effort to examine performance of precast concrete parking structures in the 1994 Northridge (CA) earthquake. Interaction with forensic experts and engineers of record. Modeled seismic response for multi-story structures. Recommendations for design code changes pertaining to detailing.

Visiting Professor, *Civil & Environmental Engineering Department, Syracuse University, Syracuse, NY; Aug. 1993-May 1994.*

Instructor for Structural Analysis, Mechanics of Materials (80 students) and Graduate Level LRFD Steel Design. Latter included a self-developed section on behavior, design and detailing of steel connections. Received 4.5 of 5.0 on teacher evaluation.

Assistant Engineer/Superintendent, *Turner Construction Company, New York, NY, May 1985 - August 1986*

Worked on construction of midtown steel-perimeter-moment-frame concrete-core high-rise: 53rd at Third. Responsible for construction of roofs, penthouse, parapets, setbacks, subway entrance loading dock, and four levels of tenant area. Handled changes to the contract, including estimating and coordinating over \$200,000 of new work.

GENERAL EXPERIENCE:

Graduate Research Scholar, *Center for Advanced Technology for Large Structural Systems, Lehigh University, Bethlehem, PA, January 1989 - August 1993.*

Graduate Research Assistant, *Center for Advanced Technology for Large Structural Systems, Lehigh University, Bethlehem, P A, August 1986 - December 1988*

Assistant Laboratory Technician, *Department of Civil Engineering, Carnegie-Mellon University, Pittsburgh, PA September 1984 - May 1985.*

Summer Intern, *Pennsylvania Department of Transportation, Pittsburgh, Pennsylvania, May 1984-August 1984)*

Instructor/Counselor, *NSF Summer Program in Actuarial Science, Lebanon Valley College, Annville, Pennsylvania, June - August, 1981 & 1982*

CURRENT AND RECENT RESEARCH AREAS:

- Steel Composite Deck Diaphragms
- Disproportionate Collapse of Precast Concrete Structures
- Innovative Seismic Inertial-Force Reducing Building Systems
- Seismic Design of Precast Floor Diaphragms
- Diaphragm Flexibility Effects on the Dynamic Response of Building Structures
- Seismic-Resistant Design of Precast Concrete Structures
- Sustainable and Resilient Precast Structural Systems
- Development of Cast Modular Components for Seismic-Resistant Steel Braced Frames, Seismic-Resistant Steel Moment Frames, and HSS Trusses
- Modular Construction including Automated Construction
- Development of Post-Tensioned Connecting Systems using new Materials
- Participated in collaborative research proposals for Low-Energy Non-Destructive Bridge Monitoring Systems, Sustainability and Infrastructure, Digital Libraries.
- Expertise in earthquake engineering, finite element solid modeling, full-scale experimentation, nonlinear dynamic structural analysis. **Computer Tools:** ANSYS, SAP2000, OpenSees, RISA, PERFORM-3D, ABAQUS, LS-DYNA, XTRACT, Drain-3DX, Matlab, Excel

SPONSORED RESEARCH PROJECTS

City of Tucson, Department of Water (via Peak Corrosion), **\$147,603**; “Scanning Electron Microscopy & Crush Testing of Asbestos Cement Pipe Samples”, Jan 1 2016 – Dec 2017, Principal Investigator

National Science Foundation, Network of Earthquake Engineering Simulation Research (NEESR), "NEESR: *Inertial Force-Limiting Self-Centering Floor Anchorages*", October 1, 2011 to Sept 30, 2014; Total Award: **\$1,232,599**; Multi-University Collaborative Project (Co-PIs at UCSD and Lehigh University, **\$1,198,000** base award; \$34,599 REU Supplements) Principal Investigator.

Precast/Prestressed Concrete Institute, "*Disproportionate Collapse of Precast Structures*", September 1, 2011 to May 2013; **\$18,000**; Principal Investigator

University of Arizona, Office of the Provost, "*Civil Engineering Upper Division Technical Elective Online Curriculum* ", Sept, 2011 to July 2012; **\$60,000**; Principal Investigator

University of Arizona, Office of the Provost, "*Civil Engineering Upper Division Online Core Course Development* ", Sept, 2010 to July 2011; **\$40,000**; Principal Investigator

University of Arizona, College of Engineering, "*Civil Engineering Lower Division Online Course Development*", Sept, 2009 to July 2010; **\$10,000**; Principal Investigator

Precast/Prestressed Concrete Institute, "2011 Christchurch Post-earthquake reconnaissance trip operations grant: Performance of Precast Concrete Structures and Elements", March 2011 to April 30 2012; **\$24,000**, Principal Investigator (Trip Leader)

National Science Foundation, "*RAPID: Post-Earthquake Investigation of Heavily Damaged Buildings with a Compromised Evacuation Route*", NSF RAPID Response Project, May 1 2011 to April 30 2012; **\$6,059** sub-award of \$54,526 total award; (*co-Principal Investigator*.)

National Science Foundation, "*RAPID: Evaluation of Seismic Assessment Tools through Comparison to Observed Damage in the 2010 Haiti Earthquake* ", NSF RAPID Response Project, April 2010 to May 2012; **\$45,000**; Principal Investigator

Charles Pankow Foundation, "*Development of an Untopped Precast Diaphragm System for High Seismic Zones*", June 1, 2006 to Jan 30, 2009; Total Award: **\$410,615** (\$105,615 Base Grant, \$305,000 Supplement); Principal Investigator.

National Science Foundation, "*Development of Cast Modular Components for Steel Construction*", October 1, 2005 to September 30, 2010; Total Award: **\$419,483** (\$347,483 base award, \$72,000 Industry In-kind Contribution – AISC member fabricator partners, SFSA foundry partners); Principal Investigator.

National Science Foundation, Grant Opportunities for Academia Liaison with Industry (GOALI) and Network of Earthquake Engineering Simulation Research (NEESR) Programs, "*Development of a Seismic Design Methodology for Precast Concrete Diaphragms*", October 1, 2004 to September 30, 2008; Total Award: **\$567,406**; Principal Investigator.

Notes: base award includes \$184,260 subcontract to Lehigh University \$155,169 subcontract to UCSD, \$100,000 SGER awarded directly to UCSD (*RBF authored proposal*); In addition to funds above, \$230,000 in NEES O&M funds for experimental support.

Precast/Prestressed Concrete Institute, *Development of a Design Methodology for Precast Concrete Diaphragms*, October 1, 2003 to September 30, 2008; Total Award: **\$401,459** (\$220,000 base award, \$141,159 supplement, \$40,000 Industry partner contribution), Principal Investigator.

Notes: base award includes \$146,000 subcontract to Lehigh University \$22,000 subcontract to UCSD; In addition to funds above, \$260,000 in-kind support from PCI for meeting logistics/consulting/travel and \$268,000 in product donation for experiments.

National Science Foundation, Faculty Early Career Development (CAREER) Program, "Modular Joint Nodes for Steel Special Moment Resisting Frames", June 1, 1998 to May 31, 2003; Total Award: **\$444,900** (\$200,000 base award, \$114,400 Industry Matching, \$110,000 NSF Matching, \$20,500 REU Supplement); Principal Investigator

Precast/Prestressed Concrete Institute, "*Effect of Structural Configuration and Joint Detail on the Seismic Response of Precast Parking Structures*", September 1, 1997 to December 31, 1998; **\$16,500** (\$10,500 base award, \$5000 matching); Principal Investigator

Army Corps of Engineers, "*Feasibility of employing ATLSS Connections for Precast Lock Wall Construction in Waterways Applications*", September 1 1998 to December 31,1998, **\$13,500** (\$10,000 base award, \$3500 matching); Principal Investigator.

SPONSORED EQUIPMENT GRANTS

ConXTech, Laboratory Infrastructure, Nov 2000, **\$40,000** "*Cyclic Lateral Load Testing Fixture*" fabrication and erection for *Integrated Computational Experimental Laboratory (ICEL).*

Intel Corporation, Intel Computer Equipment Grant, awarded Sept. 25, 2000, **\$30,718**, for computer equipment for *Integrated Computational Experimental Laboratory (ICEL),* Principal Investigator

National Science Foundation, Engineering Research Grant Program, "Full-Scale Component Testing and Digital Control System Upgrade", awarded February 27, 1997, **\$73,323,** *Co-Principal Investigator*

1997 University of Notre Dame Equipment Renewal and Restoration, awarded January 9, 1998, **\$198,000,** Principal Investigator

COURSES TAUGHT:

Lower Division: Statics; Strength of Materials

Upper Division: Structural Analysis; Structural Steel Design; Reinforced Concrete Design

Graduate M.S. Courses: Prestressed Concrete; Design and Behavior of Structural Systems

Graduate Ph.D. Courses: Plastic Analysis & Design; Advanced Structural Stability

Teaching Rating: **RBF/ UA Confidence Interval**
LD: **4.41/ 3.93-4.17** (412 students)
UD: **4.35/ 4.00-4.24** (308 students)
GR: **4.65/ 4.33-4.56** (23 students)

GRADUATE STUDENTS DIRECTED

Ph.D. – Ulina Shakya Jan 2013-present; Zhi Zhang Sept 2012-present; Ismail Kuzucku Sept 2012-present; Anshul Argawal Sept 2012-present; Giovanni Federico, Jan 2009-Dec 2012; Kristen Ward, Jan 2009 – Dec 2012; D. Zhang, January 2006-May 2010; Jorge Rivera, Jan 2007-Jan 2009; Ali Sumer, Nov. 2002-August 2006; Yong Pan Aug. 2002-Aug. 2006, Ge Wan Aug. 2002-Dec. 2007.

M.S. – Daniel , Jan 2017-present, Luis Valdez, Aug 2016-present, Alex Walsh, Sept 2015-present; Dylan Arviso, Sept 2014-present; Scott Kuhlman, Sept 2013-May 2015; Yidan Chen, Sept 2013-Dec 2104; Austin Houk*, Sept 2013-Dec 2014; Jad Chahal*, Sept 2013-Dec 2014; Alireza Anvar Sept 2012-Dec 2014; Marcus Miller*, Sept 2012-Dec 2014; Andrew Weigand*, Sept 2012-Dec 2014; Kaylene Boroski Sept 2011-Dec 2012; Alicia Mullenbach Ware Sept 2009-May 2011, Michael Mielke, May 2009-May 2011, Cordell Yazzie, June 2009-Dec 2010, Willis Begay, January 2006-Dec 2012; Giovanni Federico, Jan 2006-Dec 2008, Kristen Ward,

Aug 2007-Dec 2008; John Woodson Aug 2005-Aug 2008; Nathan Palmer, Aug 2003-May 2005; Yong Pan Aug. 2002 – Aug. 2004, Ge Wan Aug. 2002- Aug. 2004; Ali Sumer, Aug 2000-Oct 2002; Xuejun Li, Aug. 2000-Aug 2002; Blake Hoskisson, Aug. 1998-July 2000; James K. Sims, June 1996-June 1999; Kenneth Farrow, Sept. 1996-June 1999

**Coursework only*

Visiting Scholars:

Haitham Ayyad, **Fulbright Scholar**, Palestine Polytechnic University, Palestine, September 2016-Present.

Maryam Poursharifi, **International Visiting Scholar**, Sahand University of Technology, Tabriz, Iran, February 2015-September 2015.

Ary Fabricio Paredes Rojas, **UA Latin American Visiting Scholar**, *Winter Research Program 2015 Graduate College*, January 2015-March 2015.

Hernan Dario Andres Santos Guzman, **UA Latin American Visiting Scholar**, *Winter Research Program 2015 Graduate College*, January 2015-March 2015.

AWARDS, ACCOMPLISHMENTS

2016 Charles Pankow Award, American Society of Civil Engineering (ASCE) for Innovation.

2014 NEES Outstanding Contributor Award, National Science Foundation (NSF) George E. Brown Network for Earthquake Engineering Simulation (NEES), for most influential NEESR research project in the area of structural engineering.

2014 Leslie D. Martin Award of Merit, Precast/Prestressed Concrete Institute for “that technical committee report which provides the greatest contribution to the advancement of precast/prestressed concrete in the area of design.”

Reference appearing in *AISC Seismic Design Manual, 2nd Edition*, American Institute of Steel Construction, Chicago 2012

Principal Investigator of one of 10 NEESR structures projects included in *2014 NEES 10-year Retrospective* at culmination of this program.

Proposal for new design provisions based in part on research project approved for inclusion in *ASCE 7-14 Minimum Design Loads for Buildings and Other Structures* and Part 3 of the National Earthquake Hazards Reduction Program **2014 NEHRP Recommended Provisions for Seismic Design for New Buildings**.

Daniel P. Jenny Research Award, 2011 *PCI* Daniel P. Jenny Research Award Winner Nominated, *2012 ASCE T.Y. Lin Award*, for paper published in the ASCE Journal of Structural Engineering, Oct 2011, by the ASCE Structural Engineering Institute (SEI), citing “very original and important results for the design of precast structures” and “research work was comprehensive and performed with splendid rigor”.

2009 Martin P. Korn Award, *Precast/Prestressed Concrete Institute* for “that paper which offers the greatest contribution to the advancement of precast or prestressed concrete in the areas of design and research.”

2008 Delbert R. Lewis Distinguished Professorship, Department of Civil Engineering and Engineering Mechanics, *University of Arizona*

2006 Charles C. Zollman Award, *Precast/Prestressed Concrete Institute (PCI)* for “that paper which advances the general understanding and knowledge of the state-of-the art of precast, prestressed concrete by bringing together all available knowledge of a specific topic.”

2004 Martin P. Korn Award, *Precast/Prestressed Concrete Institute* for “that paper which offers the greatest contribution to the advancement of precast or prestressed concrete in the areas of design and research.”

2004 George D. Nasser Award, *Precast/Prestressed Concrete Institute* (most outstanding paper from an author 40 yrs or younger on design or research contributing to the advancement of the precast, prestressed concrete industry)

Nominated, *2005 T.Y.Lin Award, American Society of Civil Engineers (ASCE)*, by the PCI Journal, recognizing the outstanding publication in the area of prestressed concrete. Earthquake Research and Reconnaissance Efforts mentioned on UA Homepage News 1/2011, Arizona Daily Star Front Page 2/2011

Faculty Fellow, Education, College of Engineering, 2011-2013

2016 Undergraduate Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by all CEEM undergraduate students)

2015 Honorable Mention, *Undergraduate Teaching Award*, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by CEEM undergraduate students)

2014 Undergraduate Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by all CEEM undergraduate students)

2011 Society of Civil Engineers “Senior’s Choice” Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by CEEM seniors)

2010 Undergraduate Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by all CEEM undergraduate students)

2008 Undergraduate Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by all CEEM undergraduate students)

2007 Society of Civil Engineers “Senior’s Choice” Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by CEEM seniors)

2006 Undergraduate Teaching Award, Department of Civil Engineering and Engineering Mechanics, *University of Arizona* (as voted by all CEEM undergraduate students)

Served as research advisor to Dichuan Zhang (UA) and project PI to Matt Schoettler (UCSD), co-awardees of the 2009 George D. Nasser Award (for the most important research to the precast concrete industry performed by researchers under 40 years of age) from the Precast/Prestressed Concrete Institute

Authored “Seismic Design Methodology for Precast Concrete Floor Diaphragms”, Part 3 of the 2009 *National Earthquake Hazards Reduction Program (NEHRP) Recommended Provisions for Seismic Design for New Buildings*.

2007 UA College of Engineering “Excellence at the Student Interface” Awardee.

2007 UA CEEM Department Society of Civil Engineers (SCE) Chapter “Exemplary Member for Overall Dedication” Awardee.

Reference in *NEHRP Seismic Design Provisions for New Construction*, 2000

Reference in *FEMA-273: NEHRP Guidelines for the Seismic Rehabilitation of Buildings*

Daniel P. Jenny Research Award, 1996 *PCI* Daniel P. Jenny Research Award Winner

Co-Inventor of *United States Patent 5,244,300* & International Patent

NSF CAREER Award, *National Science Foundation* Faculty Early CAREER Award, 1996

Articles on Ph.D. work appeared in ENR (cover), Civil Engineering, Modern Steel Construction

Nominated, *NOVA Construction Innovation Award*, 1994

Member, *Chi Epsilon* National Civil Engineering Honor Society

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers (ASCE)
Earthquake Engineering Research Institute (EERI)
Board Member, Midwest Chapter (1999-2000)
Precast/Prestressed Concrete Institute (PCI)
American Concrete Institute (ACI) (1995-1997, 2010, 2014)

COMMITTEE MEMBERSHIPS

Building Seismic Safety Council (BSSC) Provisions Update Committee (PUC)
Issue Team 6: Diaphragms
Precast/Prestressed Concrete Institute (PCI)
Seismic Design Committee, 1998-2002; 2007-Present.

Committee Co-Chair, 2008-Present.

Research and Development (R&D) Committee, 2003-present
ACI 550 Committee Precast Concrete, SubTask Group on Diaphragms
International Federation for Structural Concrete (FIB)
Member, Committee 7: Seismic Design; Working Group 3/4 (2001-2003)
Lead Author, Chapter 6: Floor Diaphragms, State-of-the-art Report on Earthquake Resistance
of Prefabricated and Prestressed Concrete Structures
Seismic Effects Committee, Structural Engineering Institute (SEI) of ASCE (1997-2001)
Member, Task Committee on Supplemental Damping Systems for Seismic Applications
Former Board Member, Midwest Chapter, Earthquake Engineering Research Institute (EERI)
Parking Structure Committee, Council on Tall Buildings and Urban Habitat (CTBUH) (2000)
Educators Committee, American Institute of Steel Construction (AISC) (1996-2000)

UNIVERSITY SERVICE

- CAPLA (College of Architecture, Planning and Landscape Architecture) 2nd Year Studio
Project Reviewer, Structural Engineering Expert
- CEEM Architecture Engineering Program Development Committee (2015 – Present)
- Faculty Representative, 2016 Centennial Lecture Committee, Alumni Industry Council
- College of Engineering (COE) Faculty Status Committee (FSC), (2015-Present)
- University Graduate Council (2016-Present)
- University Cyberinfrastructure Committee (2015)
- Engineering Innovation Building Executive Committee, COE (2012- Present)
- Faculty Fellows Curriculum Improvement Meetings, College of Engineering (2012-2015)
- COE Engineering Fellowship Committee 2012
- Graduate Studies Committee (2007-Present): Committee Chair (2008 –2009; 2013-14).
- Participated in Faculty Online Learning Community Forums, Spring 2011
- Assisted in review/preparation of department P&T statements, 2011
- COE GLHN Scholarship Committee 2009
- Department Ad hoc committee on reviewing APE process, 2009
- Member of College of Engineering (COE) Search Committee for School of Sustainability
(SSES) Director, Spring 2009
- College Search Committee: CEEM Department Head, Spring 2008
- Laboratory Committee (2008-Present): Committee Chair (2008-Present)
- Undergraduate/Graduate Scholarship Committee (2003-Present): Chair (2007 –Present).
- Undergraduate Curriculum Studies Committee (2003-2007).
- CEEM Search Committee: Hydrology Candidate, 2006
- Faculty Advisor, Univ. of Arizona CEEM Department Local Student Honor Society,
Probationary Chapter of Chi Epsilon Civil Engineering Honor Society, 2006-2009
- Worked with Univ. of Arizona Engineers Without Borders (EWB) student chapter in
preliminary planning for potential service project in Haiti (Fall 2010-2012).
- Advised and supervised the design and construction of a shade structure for the non-profit
World Care as part of the 2012 Cats in the Community volunteer day.
- Review Lecturer, College of Engineering Tau Beta Pi Fundamentals of
Engineering/Engineering in Training (FE/EIT):
 - o Statics and Dynamics: F06, S07, S08, F08, S09, S12, S14, S16
- Review Lecturer, Civil Engineering Department SCE Fundamentals of
Engineering/Engineering in Training (FE/EIT):
 - o Structures, Steel and Concrete Design: Fall 2004, Fall 2006, Fall 2008
- Assisted Competition Teams for the University of Arizona Student Chapter of the Society of
Civil Engineers (SCE) Pacific Region Conference Competitions:
 - o Steel Bridge Competition: Fall 2008, Spring 2009, Fall 2010, Spring 2011, Spring
2012, Spring 2014, Spring 2015, Spring 2016
 - o Seismic Building Competition: Spring 2007

PROFESSIONAL SERVICE

- Serving on 3-person review team, ATC-133 Review of Technical Brief No. 13, Seismic
Design of Precast Concrete Diaphragms, Nov 2016-present

- Assisted in Coordinating Precast/Prestressed Concrete Institute (PCI) Technical Activities Committee (TAC), Tucson AZ, Feb 2017
- Served on NSF CMMI 2017 Proposal Review Panel for the Structural and Architectural Engineering and Materials (SAEM), December 7, 2016
- Successfully proposed and moderated session: *Emerging Concepts for Damage-Limiting Seismic Concrete Building Systems* (110), for ASCE Structural Engineering Institute (SEI) 2015 Structures Congress, Portland, OR., April 23-25, 2015
- As part of leading one of two teams in the \$62M NEES2 Ops Competition in 2013, coordinated a team of over a dozen participating institutions and 50 key participants for proposing a community based science plan, strategic plan, operations, key assets, cyberinfrastructure and education and community outreach plans for the Phase 2 (2015-2019) Operations of the George E. Brown Network for Earthquake Engineering Simulation.
- Organized, jointly with the Pacific Earthquake Engineering Research (PEER) Center, and led national workshop on “Needs for the Earthquake Engineering Community 2015-2019” as part of UA NEES2 Operations Proposal Planning: PEER Center, UC-Berkeley, Richmond CA April 19, 2013.
- Webinars to the Practicing Engineering Community:
 - o Co-participation (with S.K. Ghosh) in Webinar to SEAOC Joint Committee Meeting of the Report Evaluation and Seismology Committees, “Codification Developments for Precast Diaphragms” led by S.K. Ghosh and Associates, Skokie IL, March 2013.
 - o Led participation (with S.K. Ghosh and Ned Cleland) in NEES/EERI Reserch to Practice Webinar “Development of a Design Methodology for Precast Concrete Diaphragms ”.
 - o Co-participation (with S.K. Ghosh and Ned Cleland) in PCI Webinar, “Precast Concrete: Lessons Learned in Recent Earthquaks: Chile, New Zealand and Japan Earthquakes”, April 2012.
- Served as Design Competition Judge, 2013 ASCE SEI Student Structural Design Competition
- Served as consultant for seismic assessment of Earthquake-Damaged Hotel in Christchurch New Zealand (2011-12).
- Co-coordinated Joint New Zealand/USA Presentation for Special Session “Performance of Precast Concrete Structures in the 2011 Christchurch and Japan Earthquakes”, PCI National Convention, Salt Lake City UT.
- Led Post-Earthquake Reconnaissance Teams:
 - o Christchurch, New Zealand March 2011 (at the request of PCI)
 - o Port-Au Prince, Haiti May 2010 (NSF Rapid Response Award)
- Served on NSF CMMI 2010 NEESR Proposal Review Panel for the NSF George E. Brown Network for Earthquake Engineering Simulation (NEES), June 2010
- Served on NEES Operational Review Site Visit Team for the NEES@CU (University of Colorado-Boulder) equipment site for the NSF George E. Brown Network for Earthquake Engineering Simulation (NEES), October 2008.
- Served on NSF Site Visit Team for the Year 10 Site Visit to the NSF Pacific Earthquake Engineering Center (PEER) at the University of California Berkeley, June 13, 2007.
- Served on NSF Site Visit Team for the NEES@CU equipment site (University of Colorado-Boulder) for the NSF George E. Brown Network for Earthquake Engineering Simulation (NEES), May 2007.
- Served on panels (8), site visits (9), independent reviews (3) and workshops (4) for NSF George E. Brown Network for Earthquake Engineering Simulation (NEES), Seismic Hazard Reduction (CMS) and Earthquake Research Centers (ERCs) since August 2000.

- Reviewed approximately **35** total papers during period including: Journal of Steel Constructional Research (12), ASCE Journal of Structural Engineering (11), Elsevier Engineering Structures (5), PCI Journal (3), Earthquake Spectra (2), etc.
- Reviewed approximately 50 papers 2000-2012: Activity 2000-2008: 14 papers for ASCE Journal of Structural Engineering (2000 (2), 2001, 2002, 2004, 2005 (3), 2006 (3), 2007(2), 2008); 6 papers for Elsevier Engineering Structures (2002, 2005, 2006(2), 2008 (2)); 14 papers for PCI journal (2000, 2002 (2), 2003 (6), 2005 (2), 2006 (2), 2008), 3 papers for Journal of Constructional Steel Research (2007, 2008(2)).
- Successfully performed building code seismic qualification testing at UA high-bay laboratory for ConXtech Space Frame residential steel system for use in city of San Jose, CA, Oct 2003.
- Invited Participation in the following national/ international workshops:
 - COMPOSITE CONSTRUCTION VIII, Virginia Tech Conference, July 29 – August 2, 2017, Spring Creek Ranch, Jackson Hole, Wyoming (USA) (*invited speaker*)
 - NHERI Lehigh Researchers Workshop “Advanced Simulation for Natural Hazards Mitigation”, NSF Natural Hazards Engineering Research Infrastructure (NHERI) Program, Lehigh University, Bethlehem PA, Dec. 5,6, 2016 (*invited speaker*)
 - AISC International Workshop on Connections in Steel Structures, CONNECTIONS VIII, May 24-26, 2016, Hilton Boston Back Bay Hotel, Boston, MA (*invited speaker*)
 - NHERI@UCSD Users Training Workshop, “Total Project Planning: Case Study 1: PCI Building”, NSF Natural Hazards Engineering Research Infrastructure (NHERI) Program, UC San Diego, La Jolla CA, Dec. 14-15 2015 (*invited speaker*)
 - 2nd Sino-U.S. Workshop on the Challenges Ahead: Sustainability Issues, Sept 8-9, 2014, sponsored by the National Science Foundation, Pasadena CA (*invited speaker*)
 - Workshop on Future Directions for the UC San Diego Large Outdoor Shake Table, UC San Diego, La Jolla CA, Sept. 5 2014 (*invited speaker*)
 - U.S.-Iran Symposium on Resilient Cities, sponsored by the Richard Lounsbery Foundation, U.S. State Department, and National Academies of Science and Engineering, June 16-18 2014, Irvine CA (*invited presentation and paper*)
 - ATC-95 Workshop on Collapse Simulation, Jan. 17-18 2013, San Francisco CA
 - EU/SAFECAST Project Completion Workshop , Rome March 2012
 - 7th International Workshop on Structural Concrete in the Americas and Beyond, American Concrete Institute, Dallas TX, Mar 2012
 - Haiti Rapid Response Awardees International Workshop on Research Needs, National Science Foundation, Washington DC, Oct 1-2, 2010. (*Member – steering Committee*)
 - NEES@UCB Hybrid Simulation Workshop, Richmond Field Station Aug. 2009.
 - Sixth International Workshop on Connections in Steel Structures, American Institute of Steel Construction (AISC) Chicago IL, June 23-25, 2008.
 - NEES Workshop: Issues & Research Needs in Simulation Development, Sept 2007, Chicago
 - NEES/UCSD Workshop on Analytical Modeling of Reinforced Concrete Walls for Earthquake Resistance, La Jolla CA, December 16 2006.
 - International Workshops on NEES/E-defense U.S.- Japan Collaborations, Hosted by AISC and NSF: San Francisco CA, February 10,11, 2005; October 12, 13, 2004; June 18 2004
 - International Workshop on the use of Castings in Steel Construction, hosted by AISC, Kansas City MO, July 9, 2004.
- Served as external committee member/dissertation reviewer for: Georgios Tsampris (2015), Adv.: Dr. Richard Sause; doctoral candidate at Lehigh Univ; Ruirui Ren (2009) and Liling Cao (2007), doctoral candidates at Lehigh Univ., Adv.: Dr. Clay Naito; Jeffrey Matthews (2004), doctoral candidate at the Univ. of Canterbury, Christchurch, NZ, Adv.: Dr. John Mander.

- Developed Research/Internship program for undergraduates at the University of Notre Dame; Developed senior Structural Steel Design Laboratory: students visit a job site and the designers office - design that building as a semester-long project, University of Notre Dame.
- Provide lectures to local professionals to prepare for PE exam.
- Participation in Southwest ANSYS Users (SWAU) group (2002-present)

SHORT COURSES/CURRICULUM DEVELOPMENT

- Taught Short Courses for Masters Program in Evaluation Control and Reduction of Environmental Seismic Risk, EU-NICE, La Sapienza Rome IT, June 2012:
Seismic Design and Behavior of Diaphragms
Precast Concrete Seismic Systems
- Co-coordinated Online Content, Technology and Access Effort for Civil Engineering and Engineering Mechanics at the University of Arizona 2010-2012 (w. K Lansey)
- Developed and delivered online courses for Civil Engineering and Engineering Mechanics at the University of Arizona:
CE 214: Statics, Developed Fall 2010
CE 333: Structural Analysis, Developed Fall 2011
CE 334: Structural Steel Design, Developed Fall 2012
- "Seismic Rehabilitation of Concrete Buildings" 1998-99 Short Course, Emerging Developments in Structural Design & Construction: Earthquake Engineering, Center for Continuing Engineering Education.
Feb 10,11 2000: Tampa, FL Oct 4,5 1999: Minneapolis, MN June 28,29 1999:
Chattanooga, TN March 4,5 1999: Reno, NV Dec 10,11 1998: Orlando FL Oct 15,16
1998: Chicago IL
- 1997 Annual Steel Seminar Series, Designing Steel for Serviceability, AISC.
Jan 22, 1998 Cleveland OH; Oct 23, 1997 Indianapolis IN

OUTREACH

- Presentation "Earthquake Engineering" at the CHET-SE Youth Seminar 2014 Career Day for home-schooled high school level students, Tucson
- Presentations, demonstrations, interactive stations and competitions at schools with student body majorities from federally-recognized underrepresented Groups: Utterback Middle School (2010-2013) Prince Elementary School (2008-2013)
- Eight undergraduates have served as NSF REUs on my projects (2011-15).
- Five undergraduates have served as undergraduate researchers for credit on my projects (2008-13).
- Supervised incoming graduate student for SRI (Summer Research Institute), University of Arizona Graduate College Diversity Programs (2009)
- Participating as Guest Lecturer/Demonstrator at Prince Elementary School, Tucson AZ (3rd and 4th graders) for the Youth Science Education Foundation (YSEF), Guest Demonstrators and Field Trip Program, 2008-9 School Year.
- Served as co-advisor to Eli Medvescek, freshman at Canyon Del Oro High School in Tucson, Arizona in his preparation of a technical study of suspension bridges for competition in the Southern Arizona Regional Science and Engineering Fair, Fall 2007.
- Conducted tour and delivered presentation of Integrated Computational and Experimental Laboratory (ICEL) for groups of prospective high school students through UA Engineering Ambassador, Spring 2007, Spring 2006.

- Provided engineering assistance to Leah Rosenbloom, high school sophomore at LM high school, for balsa wood bridge competition Spring 2007, and egg drop contest, Fall 2007.
- Created and delivered Engineering Ambassador’s Presentation, “The History of the Skyscraper” for high school seniors from Tucson Unified School District, February 2002.
- Participated in Tucson Unified School District Professional Internship Program by providing a research experience for two local high school seniors (Fall 2001-Spring 2002). One of these students became a Flynn Scholar in the CEEM Department.

INVITED LECTURES AND PRESENTATIONS

- Seismic Collectors in Composite Steel Deck Diaphragms, COMPOSITE CONSTRUCTION VIII, July 29, 2017, Jackson Hole WY, **Invited Presentation**
- *An Innovative Floor Anchorage System for Low-Damage Seismic Resistant Buildings*, Structural Engineers Association of Arizona, SEAoA Southern Branch Monthly Meeting:, April 2017, **Invited Presentation**
- Characterization of Load Paths in Composite Steel Deck Diaphragms and Collectors, AISC CONNECTIONS VIII, May 26, 2016, Boston, MA, **Invited Presentation**
- *Total Project Planning: Case Study 1: PCI Building*, NHERI@UCSD Users Training Workshop, Dec. 14 2015 UC San Diego, La Jolla CA, **Invited Presentation**
- *Sustainability Issues related to Precast Concrete Construction*, 2nd Sino-U.S. Workshop on the Challenges Ahead, Sept 9, 2014, Pasadena CA, **Invited Presentation**
- *Large-scale shake table testing at UCSD: Precast Structures and Floor Diaphragms*, Workshop on Future Directions for the UC San Diego Large Outdoor Shake Table, UC San Diego, La Jolla CA, Sept. 5 2014, **Invited Presentation**
- *The Argument for Low Damage and Damage Free Building Structures in the 21st Century*, U.S.-Iran Symposium on Resilient Cities, June 17 2014, Irvine CA, **Invited Presentation**
- *Performance of Precast Concrete Buildings during the New Zealand Earthquakes*, 4th Simposio Estructuras Prefabricadas di concreto, Queretaro MX, Sept. 7 2012, **Invited Presentation**
- *U.S. Research Efforts toward the Development of a Seismic Design Methodology for Precast Concrete Diaphragms*, EU/SAFECAST Project Completion Workshop , Rome March 2012, **Invited Presentation**.
- *Performance of Precast Buildings during the New Zealand Earthquakes*, 7th International Workshop on Structural Concrete in the Americas and Beyond, American Concrete Institute Dallas TX Mar 2012, **Invited Presentation**
- *Earthquake Reconnaissance on the Feb 2011 New Zealand Earthquake*, Structural Engineers Association of Arizona, SEAoA Annual Student Night, , Nov 2011, **Invited Presentation**
- *The Jan 2010 Haiti Earthquake*, Structural Engineers Association of Arizona, SEAoA Southern Branch Monthly Meeting:, April 2011, **Invited Presentation**
- INTERNATIONAL SYMPOSIUM ON PRECAST SLAB SYSTEMS IN SEISMIC ZONES AND THEIR CONNECTIONS, ANIVIP: 4/8/11, VeraCruz Mexico, **Invited Presentation**
- “Mobilizing Industry Partners in Research”, EERI Annual Meeting 2011, February 9-12, 2011 La Jolla, San Diego, California, **Invited Presentation**
- “Codification Efforts for Precast Concrete Diaphragms, International Federation of Structural Concrete (*fib*) Annual Convention, June 2-4 2010, Washington DC
- “U.S. Practice on Precast Concrete Diaphragms”, Dipartimento di Ingegneria Strutturale e

- Geotecnica, University of Roma/La Sapienza, April 2010. **Invited Presentation**
- “Development of a Seismic Design Methodology for Precast Concrete Diaphragms”, Department of Civil and Environmental Engineering Seminar Series, University of California/Berkeley, September 2009. **Invited Presentation**
 - Rutherford and Chekene Lunch Seminars, San Francisco CA (**Invited Presentations**):
 - “Structural Stability”, Dec 2009
 - “Cast Modular Nodes for SCBFs”, Nov 2009
 - “New Seismic Design Developments for Precast Concrete Diaphragms”, Aug 2009
 - “NEESR Success Stories: Integrating Experimental and Analytical Research”, NEES 7th Annual Meeting, Honolulu HI July 2009. **Invited Presentation**
 - “NEES Research Project on Precast Concrete Diaphragms”, 10th Annual UIUC Structural Engineering Conference, University of Illinois at Urbana-Champaign, April, 2009. Invited Presentation (*presented by co-author*)
 - “PCI Major Research Initiative in Diaphragm Design”, 58th Annual Minnesota Concrete Conference, Dec 4, 2008 Minneapolis, MN. **Invited Presentation** .
 - “Recent Developments in Precast/Prestressed Concrete Seismic Research: Diaphragms”, Special Symposium on the Retirement of Nigel Prestley, August 1-4, 2008 Lake Tahoe, CA. **Invited Presentation** (*presented by co-author*).
 - “NEESR/GOALI Multi-University Research: DSDM Project”, 2008 NEES Annual Meeting, Portland OR, June 21 2008.
 - “U.S. Efforts to Develop a New Seismic Design Methodology for Precast Floor Diaphragms”, 2008 *fib* International Symposium, May 19-22, 2008 Amsterdam, The Netherlands.
 - “Overview of PCI Major Research Initiative”, NEES@UCSD DSDM Shake Table Site Visit and Media Event, San Diego CA, May 7, 2008.
 - “Developments in Modular Steel Cast Connections”, Virginia Tech University Feb 6, 2008. **Invited Presentation**
 - “Challenges in Large DOF FE Modeling for Hybrid Testing”, NEES IT/Simulation Workshop: Chicago IL , Sept 12 07, **Invited Presentation**
 - “A New Seismic Design Methodology for Precast Concrete Diaphragms”, Northeastern University, May 26, 2007. **Invited Presentation**
 - “Half-Scale Precast Concrete Structure Shake Table Test”, Precaster Association of California (PCMAC) Board Meeting, Oakland CA May 5, 2007. **Invited Presentation**
 - “Modeling and Seismic Analysis of Precast Concrete Floor Diaphragms”, NEES/UCSD Workshop on Analytical Modeling of Reinforced Concrete Walls for Earthquake Resistance, December 16 2006. **Invited Presentation**
 - “Experimental/Analytical Investigation of Precast Floor Diaphragms”, Charles Pankow Foundation Board Meeting, Camelback Resort, Phoenix AZ December 14 2006. **Invited Presentation**
 - “Cast Steel Seismic Resistant Building Connections”, Quarterly Meeting, Pacific Metal Casting Society, Oakland, May 2006. **Invited Presentation**

- “DSDM Project: A Seismic Design Methodology for Precast Concrete Diaphragms”; Structural Engineers Association of California (SEAOC) Seismology Committee Meeting, Oakland, CA May 6 2005. **Invited Presentation**
- “Development of Design Methodology for Precast Concrete Diaphragms”, 6th Annual UIUC Structural Engineering Conference, University of Illinois at Urbana-Champaign, April 7, 2005. **Invited Presentation (one of 12 featured speakers)**
- One of fifteen NEESR Research Presentations, NEESR GRANTEES MEETING, La Jolla, California January 20, 2005. **Invited Presentation**
- “Connections for Modular Construction”, AISC/NIST Automated Steel Construction Review Meeting, National Institute of Standards and Technology, Gaithersburg MD October 1, 2003. **Invited Presentation**
- “Cast Connections for Building Construction”, Lunchtime Seminar, Thornton-Tomasetti Engineers, Chicago IL, Aug 2003. **Invited Presentation**
- “Steel Castings for Seismic Resistant Steel Construction”, *Steel Founders Society of America (SFSA) Southwest Region Annual Meetings*, Phoenix, October 2002. **Invited Presentation**
- Technical Presentation on Advances in Precast Concrete Diaphragm Design, at Fédération internationale du béton (International Federation for Structural Concrete) fib Annual International Symposium (**Invited Presentations**):
June 2-4 2010, Washington DC.
May 19-22, 2008 Amsterdam, The Netherlands.
- Technical Presentations on Advances in Precast Concrete Diaphragm Design, American Concrete Institute (ACI) National Conventions, ACI-550 Session: Precast Concrete. **Invited Presentations (presented by co-author)**
ACI Spring Convention, San Antonio, TX, March 2009
ACI Spring Convention, Los Angeles, CA, April 2008
ACI Fall Convention, San Juan PR, October 2007
ACI Fall Convention, San Francisco CA, October 2004
- Research Presentations on Progressive Collapse at Prestressed/Precast Concrete Institute (PCI) National Convention. **Invited Presentations**
Washington DC Sept 2014 (*presented by co-author*); Nashville TN Oct 2012
- Research Presentations on Diaphragm Research Program at Prestressed/Precast Concrete Institute (PCI) National Convention. **Invited Presentations**
Dallas TX Sept 2013, Nashville TN Oct 2012, Salt Lake City Oct 2011, Washington DC (fib) June 2010; San Antonio TX, Sept. 2009, Orlando FL, Oct 2008; Phoenix AZ, Oct 2007; Dallas TX, Oct 2006; Palms Spring CA, Oct. 2005 (*presented by co-author*); Atlanta GA, Oct. 2004; Orlando FL, Oct 2003; Nashville TN, Oct. 2002; Reno NV, Oct 2001; Orlando FL, Oct. 2000 (*presented by co-author*); New Orleans LA, Oct. 1997.
- Technical Lecture, "Innovative Steel Building Connections for Automated Construction". Mobil Oil Corporation, Offshore Division, Dallas TX January 1994

PUBLICATIONS

Refereed Journals –

Tsampras, G., Sause, R. Fleischman, R. and Restrepo, J., “Experimental study of deformable connection consisting of friction device and rubber bearings to connect floor system to lateral force resisting system”; submitted to Earthquake Engineering and Structural Dynamics, March 2017

Kurama, Y, Restrepo, J., Sritharan, S., Fleischman, R., Ghosh, S.K., Henry, R., Cleland, N, Bonelli, P., “Seismic Behavior, Analysis, and Design of Precast Concrete Structures: State of the Art”, submitted to Special Anniversary Issue of ASCE Structures Journal, September 2016.

Tsampras, G., Sause, R. Fleischman, R. and Restrepo, J., “Experimental study of deformable connection consisting of buckling restrained brace and rubber bearings to connect floor system to lateral force resisting system”, *Earthquake Engineering and Structural Dynamics*, December 2016.

Saunders, J. K., Goldberg, D.E., Haase, J. S., Offield D. G., Bock, Y., Melgar, D., Restrepo J., Fleischman, R. B., Nema, A., Geng, J., Walls, C., Mann, D., Mattioli, G., “Seismogeodesy using GNSS and low-cost MEMS accelerometers: perspectives for earthquake early warning and rapid response”, *Bulletin of the Seismological Society of America*, September 2016.

Fleischman, R.B. and Seeber, K. “The Argument for Sustainable Low Damage Precast/Prestressed Concrete Building Structures in the 21st Century”, REF # 30.809.151227, *Scientia Iranica*, Special Issue on Resilient Cities, June 2016.

Zhang, D., Fleischman, R.B. and Zhang, Z. (2016) “Analytical Investigation of Seismic Behavior of Building Structures with an Inertial Force-Limiting Floor Anchorage System”, *International Journal of Engineering and Technology*, **Vol. 8**, No. 4: 234-240. DOI: 10.7763/IJET.2016.V8.891

Tsampras, G., Sause, R., Zhang, D., Fleischman, R.B., Restrepo, J.I., Mar, D., Maffei, J. (2016) “Development of deformable connection for earthquake-resistant buildings to reduce floor accelerations and force responses”, *Earthquake Engineering & Structural Dynamics*, Vol **45**, Issue 9, DOI: 10.1002/eqe.2718, July 2016

Zhang, D., Fleischman R., Naito, C J., and Zhang, Z., (2016) “Development of diaphragm connector elements for three-dimensional nonlinear dynamic analysis of precast concrete structures”, *Advances in Structural Engineering* **19**(2):187-202, February 2016

Zhang, D., Fleischman, R., and Shon, C. (2016) “Preliminary analytical study on seismic ductility demand of wood diaphragms”, *Advances in Structural Engineering* **19**(1):104-115 · January 2016

Scodreggio, A., Quaranta, G., Marano, G.C., Monti, G., Fleischman, R.B. (2016) “Optimization of force-limiting seismic devices connecting structural subsystems”, *Computers & Structures*, **162**:16-27 · January 2016

Zhang, D., and Fleischman, R. (2016) “Establishment of performance-based seismic design factors for precast concrete floor diaphragms”, *Earthquake Engineering & Structural Dynamics*, **45**(5):675-698.

Wan, G., Zhang, D., Fleischman, R., Naito, N.C. (2015) “A coupled connector element for nonlinear static pushover analysis of precast concrete diaphragms”, *Engineering Structures*, **86**:58-71.

Robert B. Fleischman, Jose I. Restrepo, Stefano Pampanin, Joseph R. Maffei, Kim Seeber, and Franz A. Zahn (2014) “Damage Evaluations of Precast Concrete Structures in the 2010–2011 Canterbury Earthquake Sequence.” *Earthquake Spectra* (EERI): February 2014, **Vol. 30**, No. 1, pp. 277-306.

Belleri, A., Schoettler, M. J., Restrepo, J. I., Fleischman R. B. (2014), “Dynamic Behavior of Rocking and Hybrid Cantilever Walls in a Precast Concrete Building”, *ACI Structural Journal*, **111**, (3), May, pp. 661-672.

Fleischman, R.B., Restrepo, J.I, Naito, C.J., Sause, R., Zhang, D., and Schoettler, M., Integrated Analytical and Experimental Research to Develop a New Seismic Design Methodology for Precast Concrete Diaphragms, *ASCE Journal of Structural Engineering* Special Issue: NEES Advances in Earthquake Engineering 2013, **V139** (7), pp. 1192–1204.

Ward, K, Fleischman, R and Federico, G. “A Cast Modular Bracing System for Steel Special Concentrically Braced Frames” *Engineering Structures*, Volume **45**, December, 2012.

Fleischman, R.B., Restrepo, J. I. , Maffei, J. R. and Seeber, K., Preview of PCI’s New Zealand earthquake reconnaissance team report, *PCI Journal*, Vol. **57**, n6, Winter 2012, p. 42-46.

Wan, G., Fleischman, R.B., and Zhang, D. (2012). “Effect of Spandrel Beam to Double Tee Connection Characteristic on Flexure-controlled Precast Diaphragms” *ASCE Journal of Structural Engineering*, April, 2012.

G. Federico, R.B. Fleischman, K.M. Ward, "Buckling control of cast modular ductile bracing system for seismic-resistant steel frames", *Journal of Constructional Steel Research*, **71**, April 2012: 74-82.

Zhang, D., Fleischman, R.B., Naito, C., Ren, R. (2011). “Experimental Evaluation of Pretopped Precast Diaphragm Critical Flexure Joint under Seismic Demands” *ASCE Journal of Structural Engineering* **137** (10): 1063-74.

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Fleischman, R.B., and Wan, G., "Appropriate Overstrength of Shear Reinforcement in Precast Concrete Diaphragms", *Journal of Structural Engineering, ASCE*, Special Issue, Precast-Prestressed Concrete Structures under Natural and Man-Made Hazards Vol. **133**, No. 11, November 2007, pp. 1616-1626.

Fleischman, R. B., Li, X., Pan, Y., and Sumer, A. "Cast Modular Panel Zone Node for Steel Special Moment Frames. 1: Analytical Development", *Journal of Structural Engineering, ASCE*, Vol. **133**, No. 10 October 2007, pp. 1393-1403.

Fleischman, R. B., Palmer, N.J., Wan, G., and Li, X., "Cast Modular Panel Zone Node for Steel Special Moment Frames. 2: Experimental Verification and System Evaluation", *Journal of Structural Engineering, ASCE*, Vol. **133**, No. 10 October 2007, pp. 1404-1414.

Sumer, A., Fleischman, R.B., and Hoskisson, B.E., "Development of a Cast Modular Connector for Seismic-Resistant Steel Frames. Part 1: Prototype Development", *AISC Engineering Journal*, Vol. **44**, 3rd. Quarter 2007.

Sumer, A., Fleischman, R.B., and Palmer, N.J., "Development of a Cast Modular Connector for Seismic-Resistant Steel Frames. Part 2: Experimental Verification", *AISC Engineering Journal*, Vol. **44**, 3rd. Quarter 2007.

Fleischman, R. B., and Sumer, A. "Optimum Arm Geometry for Ductile Modular Connectors", *Journal of Structural Engineering, ASCE*, Vol. **132**, Issue 5, n6, pp. 705-716, May 2006.

Fleischman, R.B., Naito, C.J., Restrepo, J., Sause, R., and Ghosh, S.K., "Precast Diaphragm Seismic Design Methodology (DSDM) Project, PART 1: Design Philosophy and Research Approach", *Precast/Prestressed Concrete Journal*, Vol. **50**, n5, Sept./Oct. 2005.

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Fleischman, Robert B., Chasten, Cameron P., Lu, Le-Wu, and Driscoll, George C., "Top-and-Seat-Angle Connections and End-Plate Connections: Snug vs. Fully Pretensioned Bolts," *American Institute of Steel Construction, Engineering Journal*, Vol. **28**, No.1, pp. 18-28, 1991.

Chapters in Books and Monographs

Chapter "Diaphragms", state of the art report "Earthquake Resistance of Prefabricated and Prestressed Concrete Structures", International Federation for Structural Concrete (fib) commission 7, R. Park ed. , p163-190, August 2003.

Conference Proceedings

R. B. Fleischman, A. Agarwal, H. Ayyad, R. Sause, C-M. Uang, J. Ricles, "Seismic Collectors in Composite Steel Deck Diaphragms", COMPOSITE CONSTRUCTION VIII, July 29-Aug 2, 2017, Jackson Hole WY

Arviso, D, Fleischman, R., Anvar, R. , Boroski K., Analytical Evaluation of Precast Concrete Structures Resistance to Disproportionate Collapse: Methodology Development, ASCE Structures Congress, April 5 2017, Denver CO.

Tsampras, G., Sause, R., Fleischman, R., Restrepo, J.I., Experimental Evaluation of a Deformable connection for earthquake-resistant building systems, ASCE Structures Congress, April 5 2017, Denver CO.

Robert B. Fleischman, Anshul Agarwal, Alexander T. Walsh, Luis F. Valdez, CHARACTERIZATION OF LOAD PATHS IN COMPOSITE STEEL DECK DIAPHRAGMS AND COLLECTORS, AISC Workshop, International Workshop on Connections in Steel Structures 2016, CONNECTIONS VIII, May 24-26, 2016, Hilton Boston Back Bay Hotel, Boston, Massachusetts, USA

Tsampras, G., Sause R., Fleischman, R.B., Restrepo, J.I., Zhang D. (2015) "Deformable connection for earthquake-resistant building systems" · 2015 JAEE International Symposium on Earthquake Engineering, Tokyo, Japan, November 19–20, 2015.

Tsampras, G., Sause, R., Fleischman, R., Restrepo, J.I. (2015) "An earthquake-resistant building system to reduce floor accelerations" 2015 NZSEE Conference, Rotorua, New Zealand, pp. 445-453.

Fleischman, R., Restrepo, J., Nema, A., Zhang, D., Shakya, U., Zhang, Z., Sause, R., Tsampras, G., and Monti, G., "Inertial Force-Limiting Anchorage System for Seismic Resistant Building Structures" (1005), 2015 Structures Congress, Portland, OR., April 23-25, 2015.

Tsampras, G., Sause, R., Fleischman, R., Restrepo, J., Maffei, J., and Mar D., Experimental validation of an earthquake resistant building system to control floor accelerations (1144), 2015 Structures Congress, Portland, OR., April 23-25, 2015.

Zhang, D. Fleischman, R. Restrepo, J. Sause, R. Maffei, J. Mar, D. Monti G., "Development of a Floor Inertia Force Limiting Anchorage System under Earthquake Loading", 10th U.S. National Conference on Earthquake Engineering (10NCEE) / NEES Quake Summit, Anchorage AK, Jul 2014.

Fleischman, R. B. Restrepo, J.I. Pampanin, S., Maffei, J. Seeber K., Zahn, F., "New Construction for Resilient Cities: The Argument for Low Damage and Damage Free Building Structures in the 21st Century", U.S.-Iran Symposium on Resilient Cities, June 2014 Irvine CA.

SCODEGGIO, A. QUARANTA, G. MARANO, G.C. FLEISCHMAN, R. MONTI, G, Swarm - intelligence - based optimum design of force- - limiting self-centering anchorage systems, OpenSees Days Roma, 24 - 25 maggio 2012

Zhang D., Federico G., Telleen K., Schellenberg A., Fleischman, R, and Maffei J. (2011). "Structural Analyses to Replicate the Observed Damage to Engineered Buildings from the January 2010 Haiti Earthquake", ASCE 2011 Structures Congress Proceedings.

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Wan, G, Zhang, D. and Fleischman, R., "Analytical Modeling of Untopped Precast Concrete Floor Diaphragms", NEES/UCSD Workshop on Analytical Modeling of Reinforced Concrete Walls for Earthquake Resistance, December 2006.

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Wan, G., Fleischman, R.B., Naito, C.J., Restrepo, J., Sause, R., Cao, L., Schoettler, M., Ghosh, S.K.. "Integrated Analytical and Experimental Research Program to Develop a Seismic Design Methodology for Precast Diaphragms", *Proceedings of SEAOC Convention*, Monterey, CA, Aug. 2004

A Sumer, Y Pan, G Wan, R Fleischman, "Development of Modular Connections for Steel Special Moment Frames", *Proceedings of 13th World Conference on Earthquake Engineering*, Vancouver, B.C., Canada, Aug. 2004

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Conference Posters

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