# CURRICULUM VITAE


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| Name: | Andrew Stuart Whittaker |
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| Email: | awhittak@buffalo.edu |


**Bio sketch**

Andrew Whittaker is a SUNY Distinguished Professor in the Department of Civil, Structural and Environmental Engineering at the University at Buffalo. He is a registered civil and structural engineer in the State of California. Whittaker made significant contributions to the first generation of tools for performance-based earthquake engineering (FEMA 273/274, 1992-1997) and led the structural engineering team that developed the second generation of these tools (FEMA P58, 2000-2013). He serves on numerous national committees including American Society of Civil Engineers (ASCE) 4 and ASCE 43, ASCE Structural Engineering Institute Advisory Committee, American Concrete Institute (ACI) 349, American Nuclear Society (ANS) Rapid Response Taskforce, and the Nuclear Energy Institute (NEI) Advanced Reactor Codes and Standards Committee. He served as Chair of the ASCE Nuclear Standards Committee from 2015 to 2025, and is the co-Chair of the ASCE 92 Committee. Whittaker's contributions have been recognized through the 2016 ASCE Stephen D. Bechtel Jnr. Energy Award, the 2017 ASCE Walter P. Moore Jnr. Award, the 2023 ASCE Nathan M. Newmark Medal, the 2023 American Nuclear Society (ANS) Untermyer & Cisler Reactor Technology Medal, and the 2026 Ernest E. Howard Award. He is a Distinguished Member of ASCE, a Fellow of SEI and ACI, and a Member of the US National Academy of Engineering. The University of Melbourne awarded him the honorary degree of Doctor of Engineering in 2025. His research interests are broad and include earthquake, blast and impact engineering of nuclear structures, buildings, long-span bridges, and mission-critical facilities. The US National Science Foundation, US Department of Energy, US Nuclear Regulatory Commission, US Federal Highway Administration, US Department of Transportation and Canadian Nuclear Safety Commission fund his research. Whittaker consults to federal agencies, regulators, consultancies, contractors, and power utilities in the United States, Canada, Central America, United Kingdom, Europe, Asia and Australia.

**Education**

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| Degree: | Ph.D., University of California, Berkeley, CA, 1988 |
| Major: | Structural Engineering |
| Thesis: | Seismic behavior of dual steel framing systems |
| Degree: | M.S., Civil Engineering, University of California, Berkeley, CA, 1985 |
| Degree: | B.E., Civil Engineering, University of Melbourne, Victoria, Australia, 1977 |

**Professional Registration**

Civil Engineer, California, No. C045013, 07/14/1989 to 03/31/2028

Structural Engineer, California, No. S03618, 12/20/1991 to 03/31/2028

**Employment History**

University at Buffalo, Director, Institute of Sustainable Transportation and Logistics, 2022-2026; co-Director, 2026-present

Idaho National Laboratory, Faculty Joint Appointment, 2018-present

University at Buffalo, SUNY Distinguished Professor, 2018-present

University at Buffalo, Director, SEESL, 2016-2018

University at Buffalo, Director, Institute of Bridge Engineering, 2014-2026

University at Buffalo, Deputy Director, SEESL, 2014-2016, 2018-2019

University at Buffalo, Director, MCEER, 2011-2019

Lawrence Berkeley National Laboratory, Faculty Affiliate, 2011-2017

University at Buffalo, Chair, Department of Civil, Structural and Environmental Engineering, 2010-2016

University at Buffalo, Director, NEES@Buffalo, 2009-2011

University at Buffalo, Deputy Director, NEES@Buffalo, 2005-2007, 2008-2009, 2011-2012

University at Buffalo, Buffalo, New York, Professor, 2004-2018

University at Buffalo, Buffalo, New York, Associate Professor, 2001-2004

University of California, Berkeley, California, Associate Director, PEER, 1998-2000

University of California, Berkeley, California, Associate Director, EERC, 1992-1997

Forell/Elsesser Engineers, San Francisco, California, Senior Engineer, 1989-1991

Connell Wagner Group, Melbourne, Australia, Senior Engineer, 1978-1984

**SUNY Distinguished Professor,** *University at Buffalo, (2018-present)*

**Professor,** *University at Buffalo, (2004-2018)*

Dr. Whittaker's current research interests include

- Seismic protective systems for bridges, buildings, infrastructure and nuclear power plants: new isolation systems; analytical models for isolators; system response; effects of gamma radiation
- Blast and impact engineering of bridges, buildings and infrastructure: clearing effects; material models at high strain rates; progressive collapse; hydrocode analysis; ground shock
- Nuclear structures: fragility evaluation of conventional and isolated power plants; seismic isolation; advanced seismic PRA
- Seismic fluid-structure interaction for equipment and infrastructure

Dr. Whittaker teaches undergraduate and graduate classes at the University at Buffalo, including

- Undergraduate: CIE 324, Introduction to design
- Undergraduate: CIE 423, Structural engineering III
- Undergraduate: CIE 428, Steel design
- Undergraduate: CIE 429, Reinforced concrete design
- Undergraduate: CIE 416, Capstone design
- Graduate: CIE 525, Reinforced concrete
- Graduate: CIE 618, Blast engineering
- Graduate: CIE 619, Structural dynamics and earthquake engineering II

**Associate Professor,** *University at Buffalo, (2001-2004)*

**Associate Director**, *Pacific Earthquake Engineering Research Center, (1998-2000)*

Dr. Whittaker served as the Associate Director of the Pacific Earthquake Engineering Research (PEER) Center. In this capacity, he served as a member of the Research Executive Committee, worked with the Director to draft the research and strategic plans for the Center, and directed the PEER Business and Industry Partnership (BIP) program and Implementation Advisory Board.

**Associate Director**, *Earthquake Engineering Research Center, (1993-1998)*

Dr. Whittaker was the technical director of the Earthquake Engineering Research Center (EERC) from 1993 to 1998, managing research activities and large-scale experimental facilities. He taught graduate and undergraduate classes in the Department of Civil Engineering at the University of California at Berkeley, developed and executed research projects and programs with federal and state agencies and private consortia, participated in workshops and short courses organized by the department and EERC, led the effort to upgrade the Berkeley earthquake simulator, and conducted research on steel structures and protective systems utilizing the Center's large-scale dynamic testing facilities.

**Consultant**, *(1992-present)*

Dr. Whittaker has provided consulting, peer-review and expert-witness services to private companies, local, state, and federal government agencies in the United States, South America, Europe, United Kingdom, Russia, Australia, and Asia. A focus of his consulting work is the application of performance-based seismic design and advanced blast engineering to long-span bridges, tall and ultra-tall buildings and power-related infrastructure. Fields of work related to earthquake engineering include long- and short-span bridges, historic structures, ultra-high-rise buildings, oil and gas production and transmission infrastructure, nuclear power and waste storage facilities, U.K. MoD marine assets, nuclear-safety-related buildings and dry docks, mission-critical buildings and infrastructure, towers, airport infrastructure, and monumental buildings. *Projects include*: Buildings: U.S. Court of Appeals Building, San Francisco; New Zealand Parliament buildings, Wellington, New Zealand; San Francisco City Hall, San Francisco, CA; Pioneer Courthouse, Portland, OR; Green Library, Stanford, CA; New Zealand National Museum, Wellington, New Zealand; WDI Disney Resort parking structure, Anaheim, CA; Caltrans OCTMC, Irvine, CA; Santa Clara Police Facility, Santa Clara, CA; Universal headquarters building; Los Angeles, CA; Church of the Year 2000, Rome, Italy; LA Cathedral; Los Angeles, CA; AboveNet web-hosting facility, San Francisco, CA; Maples Pavilion, Stanford, CA; Prada building, San Francisco, CA; Ara Pacis Museum, Rome, Italy; SouthBay Tower, San Jose, CA; Microsoft Gibraltar data center, Seattle, WA; Kourion timber structures, Cyprus; New de Young Museum, San Francisco, CA; King County Courthouse, Seattle, WA; Tarabya Hotel, Istanbul, Turkey; CYTA telecom building retrofit program, Cyprus; Bosphorus residences, Istanbul, Turkey; Nordstrom building, Los Angeles, CA; St. Francis Towers ($2\times$60-story towers), Manila, Philippines; Diamond of Istanbul (65 stories), Istanbul, Turkey; Soyuk Tower (30 stories), Istanbul, Turkey; Los Faros de Panama ($1\times$95 stories, $2\times$78 stories), Panama City, Panama; Glasgow International Airport, Glasgow, UK (blast analysis and design); Capital Partners Towers ($2\times$42 stories) and Residential Buildings ($2\times$18 stories), Almaty, Kazakhstan; Qatar National Bank (600 m), Doha, Qatar; Torre Reforma (57 stories), Mexico City, Mexico; Sahiba Gokcen International Terminal Building, Turkey; Shanghai Tower (600 m), Shanghai, China; MAK Hyatt (41 stories), Mongolia; Loma Linda University Medical Center, Los Angeles; Hospital del Nino, Panama City, Panama; PH Celeste, Panama City, Panama; Bioma, Panama City, Panama; Microsoft SJC04 Data Center, San Jose, CA. Bridges: Benicia-Martinez bridge, Benicia, CA; Ferrocar Viaduct, Caracas, Venezuela; Willamette River bridge, Portland, OR; Stutson Bridge, Rochester, NY; Marcy Bridge, Rome, NY; A30 Autoroute, Montreal, Canada; Gerald Desmond Bridge, Long Beach, CA; New Bridge over the St. Lawrence Corridor, Montreal, Canada; Infrastructure: Trans-Alaskan Pipeline, Alaska; Caltrans SRMD Test Facility, San Diego, CA; San

Francisco International Airport terminal, San Francisco, CA; JFK International Airport terminal, NY; HMNB Devonport SRC core pond building, Devonport, UK; BMS (Trident) cradles, Devonport, UK; BMS refit facilities, Devonport, UK; Ataturk International Airport terminal building, Turkey; HMNB Devonport Reactor Access Housing; Devonport, UK; Sutro Tower, San Francisco, CA (1999); Nuclear waste storage facilities, Hunterston, U.K.; Sakhalin I oil platform, Russia; Sakhalin II gas platforms, Russia; ANSTO nuclear reactor, Lucas Heights, Australia; Bakim aircraft hangar, Ataturk Airport, Istanbul, Turkey; HMNB Clyde Faslane jetties, U.K.; LNG Tanks, Long Beach, CA.; LNG Tanks, Baja California, Mexico; Petrochemical facilities, Japan; Plum Point power station, Missouri; AWE Facilities, Aldermaston, UK; LNG Tanks, Quoddy Bay, Maine; Columbia Bottoms Well Field, St. Louis, Missouri; Beaver Stadium, PA; Sutro Tower, San Francisco, CA (2008); Transbay Transit Center, San Francisco; Tomakak (ITER) Fusion Reactor, Cadarache, France (2010); WEC AP1000 Fission Reactors (2010-2011), UK; Ft. Greely power plant, Alaska (2010); Tocumen International Airport terminal, Panama City, Panama; NuScale Small Modular Reactor, Corvallis, OR; TerraPower Power Reactor, Seattle, WA; Mexico City International Airport, Mexico City, Mexico; Kairos Power Small Modular Reactor, Alameda, CA; Cruas nuclear power plant, France; BART Silicon Valley Phase II expansion, CA; Dow Seadrift XE-100, Long Mott, TX; Rolls Royce Small Modular Reactor, UK; Aalo-X Small Modular Reactor, Austin, TX; X-energy, Small Modular Reactor, Rockville, MD. Special Structures: Fabrications, Museum of Modern Art, New York; Hermes Statue, Olympia, Greece; Oakland Cathedral, Oakland, CA; Plutonium Facility, Los Alamos, NM; Giant Magellan Telescope, Chile; Hanford Double Shell Tanks, Hanford, WA; Hanford Single Shell Tanks, Hanford, WA; Hanford Site SME, Hanford, WA; Pacheco Reservoir Expansion, CA; DOE PELE Microreactors SME; Hanford Site, Tank Integrity Expert Panel.

**Associate**, *Forell/Elsesser Engineers; San Francisco, (1989-1992)*

Dr. Whittaker participated in numerous seismic rehabilitation projects including the development of seismic isolation systems for buildings; ground motion criteria for conventional and isolated building structures; peer review of the seismic isolation upgrade of the Parliament Buildings in Wellington, New Zealand; and the preparation of construction documents for the upgrade of the earthquake-damaged Green Library at Stanford University.

**Senior Engineer**, *Connell Wagner Group; Melbourne, Australia, (1978-1984)*

Dr. Whittaker's projects with the Connell Wagner Group included the design and construction supervision of the Victorian Arts Center and the Melbourne World Trade Center; design of two high-rise buildings (South Yarra Project); design of a casino and convention center; design of a 52-story building in Kuala Lumpur; and the design of a sports stadium to seat 70,000 patrons (VFL Park, Waverley).

**Awards and Honors**

Gold Award, James Lincoln Arc Welding Foundation, 1987
Outstanding 1998 Journal Paper, *Los Angeles Tall Buildings Structural Design Council*, "Evaluation of pre-Northridge moment resisting frame joints."
Outstanding 1998 Journal Paper, *Los Angeles Tall Buildings Structural Design Council*, "Evolution of seismic design practice in Japan."
Grand Award, 2002, *American Council of Engineering Companies*, "Seismic modernization of the new Ataturk International Airport, Istanbul, Turkey."
Diamond Award 2002, *New York Association of Consulting Engineers*, "Seismic modernization of the new Ataturk International Airport, Istanbul, Turkey."
Best Paper Award, 2002, *5th World Congress on Joints, Bearings and Seismic Systems for Concrete Structures*, "Cyclic behavior of high-damping rubber bearings."
Outstanding Journal Paper, 2003, *Los Angeles Tall Buildings Structural Design Council*, "Forensic studies of a large cover-plate steel moment-resisting connection."

Fellow, 2012, American Concrete Institute
Fellow, 2016, Structural Engineering Institute, American Society of Civil Engineers
Fellow, 2016, American Society of Civil Engineers
Engineering Educator of the Year, 2016, Erie-Niagara Chapter of the NYS Society of Professional Engineers
SEAS Senior Researcher of the Year Award, 2016, University at Buffalo
Stephen D. Bechtel Jnr. Energy Award, 2016, American Society of Civil Engineers
Walter P. Moore Jnr. Award, 2017, American Society of Civil Engineers
Professor of Earthquake Engineering, 2018-2019, International Joint Laboratory for Earthquake Engineering Research, Tongji University, China
Nathan M. Newmark Medal, 2023, American Society of Civil Engineers
Untermeyer & Cisler Reactor Technology Medal, 2023, American Nuclear Society
Life Member, 2024, American Society of Civil Engineers
Distinguished Member, 2025, American Society of Civil Engineers
Doctor of Engineering, *honoris causa*, 2025, University of Melbourne, Australia
Member, 2025, UC Berkeley CEE Academy of Distinguished Alumni
Member, 2026, US National Academy of Engineering
Ernest E. Howard Award, 2026, American Society of Civil Engineers
President's Medal, 2026, SUNY University at Buffalo

**Professional Memberships and Committees**

Dr. Whittaker is a member of the following professional organizations:

American Concrete Institute

American Institute of Steel Construction

American Nuclear Society

American Society of Civil Engineers, Life Member

Earthquake Engineering Research Institute

Structural Engineering Institute of the American Society of Civil Engineers

Dr. Whittaker serves on a significant number of state, national and international committees as listed below and is an active member of the design professional community in the United States.

*American Association of State Highway and Transportation Officials (AASHTO)*

Member, Working Group, 2009 AASHTO Guide Specification for Seismic Isolation Design, 2008-2011

*American Concrete Institute (ACI)*

Member, Committee 349, Reinforced Concrete Nuclear Structures, 2001-2026

*American Nuclear Society (ANS)*

Member, ASME/ANS Joint Committee on Nuclear Risk Management: Working Group 5 for PRA, 2022-2024

Member, Rapid Response Task Force, 2022-present

Member, ANS Committee 2.26, 2024-present

Member, ANS Committee 2.3, 2026-present

*American Society of Civil Engineers (ASCE)*

Member, ASCE Seismic Isolation Testing Standards Committee, 1995-2004

Member, ASCE Task Committee on Seismic Isolation, 1996-2004

Member, Steering Committee, Structural Engineers World Congress, 1997-1998

Member, ASCE Task Committee on Supplemental Damping Systems, 1999-2004

Member, Seismic Task Committee, ASCE/SEI Standard 7, 2000-2012, 2017-2023

Task Committee Lead, Seismic Isolation and Energy Dissipation Systems, ASCE Standard 7, 2017-2023

Member, Main Committee, ASCE/SEI Standard 7, 2005-2012, 2017-2023

Member, Seismic Analysis of Safety-related Nuclear Structures, ASCE/SEI Standard 4, 2007-2026

Member, ASCE Nuclear Standards Committee, 2010-2026

Chair, ASCE Nuclear Standards Committee, 2015-2026

Member and Task Committee Chair, ASCE/SEI Standard 59, 2003-2022

Member, ASCE Blast, Shock and Impact Committee, 2009-2019

Co-guest Editor, Journal of Structural Engineering, Vol. 134, No. 1, 2008

Member, ASCE Ad-hoc Committee on Accreditation, 2016-2018

Member, ASCE SEI Codes and Standards Activities Division, Executive Committee, 2017-2023

Member, O.H. Amman Fellowship Committee, 2017-2019

Member, Blue Ribbon Panel, ASCE Manual of Practice, Structural Design for Physical Security, 2017-2020

Member, ASCE SEI Advisory Council, 2023-present

Co-chair, ASCE/SEI Standard 92 committee, 2026-present

*Applied Technology Council (ATC)*

Member, Technologies Team, ATC-33: Seismic Rehabilitation of Buildings, 1992-1997

Member, Analysis Team, ATC-33: Seismic Rehabilitation of Buildings, 1992-1997

Project Director, ATC-34: Study of *R* Factors and Critical Code Issues, 1993-2002

Member, Steering Committee, ATC-15-8, US-Japan Workshop, August 2000

Structural Products Team Leader, ATC-58: Performance based earthquake engineering, 2002-2012

Member, Steering Committee, ATC-29-2 Seminar, October 2003

Project Director, ATC-82: Selection and Scaling of Earthquake Ground Motions, 2010-2012

Member, Project Management Committee, ATC-115: High Strength Reinforcement, 2014

*Building Seismic Safety Council (BSSC)*

Member, BSSC, PUC Technical Subcommittee 12, 1992-2005

Member, BSSC, Technical Subcommittee 2, 2006-2020

Member and Subgroup Leader, Issue Team 4, Seismic Design Procedures, 2006-2009

Member, Issue Team on Response-History Analysis, 2010-2016

Corresponding Member, Issue Team on Shear Walls, 2016-2019

Lead, Issue Team 11, Risk Targets for Seismic Isolation Systems, 2022-2026

*California Department of Transportation (Caltrans)*

Member, Caltrans SRMD Peer Review Panel, 1997-2000

Member, Caltrans Statewide Seismic Program Advisory Board, 1998-2001

*Consortium of Universities for Research in Earthquake Engineering (CUREE)*

Member, Board of Directors, 2001-2011

Chair, CUREE Future Research Projects Committee, 2001-2011

Vice President, 2003-2004

President, 2005-2011

Member, CUREE-Kajima, Joint Venture Management Committee, 2006-2011

Member, NEHRP Consultants (ATC-CUREE) Joint Venture Management Committee and Program Committee, 2007-2012

*Department of Homeland Security (DHS)*

Member, Peer Review Panel, Blast tolerance of steel building structures, 2004-2010

*Earthquake Engineering Research Institute (EERI)*

Co-chair, US-Australia Bilateral Commission on Earthquake Engineering, 2004-2010

Coordinator, International Programs, 8th USNCEE, 2005-2006

Member, Board of Directors, 2007-2010

Chair, Research Policy Committee, 2008-2010

Responsible Editor, Earthquake Spectra

Member, Board of Directors, New York Chapter, 2019-2022

*National Academy of Science/National Research Council*

Member, Committee on Earthquake Resilience—Research, Implementation and Outreach, 2009-2011

*National Institute of Standards and Technology (NIST)*

Member, Oversight Committee, Guidelines for Testing Passive Energy Dissipation Devices, 1998-2004

*Southern California Earthquake Center (SCEC)*

Member, External Advisory Committee, 2010-2017

*Structural Engineers Association of California (SEAOC)*

Member, Ad-Hoc Energy Dissipation Systems Committee, 1995-1999

*Structural Engineers Association of Northern California (SEAONC)*

Member, Board of Directors, 1996-1998

Chair, Protective Systems Subcommittee, 1992-1999

*United States Geological Survey (USGS)*

Alternate Member, ANSS National Steering Committee, 2001-2010

Chair, USGS_ANSS Structural Instrumentation Committee, 2004-2005

*University of California, Berkeley (UCB)*

Member, University of California at Berkeley Seismic Review Committee, 1996-2000

*University of California, San Diego (UCSD)*

Member, Academic/International Advisory Group, NSF NEESR Full-sale structural and nonstructural building system performance project, 2009-2012

*White House*

Member, Nuclear project management and delivery working group, 2024

*World Seismic Safety Initiative (WSSI)*

Member, Board of Directors, 2008-2011

Member, Board of Senior Advisors, 2011-2019

*Other*

Member, International Scientific Advisory Committee, International Conference on Computational Methods for Smart Structures and Materials, Rome, Italy, 1998

Member, International Advisory Committee, Third International Conference on Behavior of Steel Structures in Seismic Areas, Montreal, Canada, 2000

Member, International Advisory Committee, Fourth International Conference on Behavior of Steel Structures in Seismic Areas, Naples, Italy, 2003

Member, International Advisory Committee, Fifth International Conference on Behavior of Steel Structures in Seismic Areas, Lehigh University, United States of America, 2008

Member, International Advisory Committee, Eighth International Conference on Shock and Impact on Structures, University of Adelaide, Australia, 2009

Member, International Advisory Committee, First International Conference on a Sustainable Built Environment, Sri Lanka, 2010.

Member, International Advisory Committee, Sixth International Conference on Behavior of Steel Structures in Seismic Areas, Chile, 2012

Member, Scientific Committee, Technological Innovations in Nuclear Civil Engineering, France, 2018

Member, International Organizing Committee, 25th International Conference on Structural Mechanics in Reactor Technology (SMiRT25), Raleigh, North Carolina, 2019

Member, Scientific Advisory Committee, International Joint Laboratory for Earthquake Engineering Research, Tongji University, China, 2020

Member, Scientific Advisory Committee, Building 4.0 CRC, Australian Department of Industry, Science, Energy, and Resources, 2021-2022

Member, Scientific Advisory Committee, 19th World Conference on Seismic Isolation, Berkeley, California, 2025

**Professional Service**

Dr. Whittaker reviews research proposals for U.S. National Science Foundation, Canadian Natural Sciences and Engineering Research Council, and the Australian Research Council. He reviews manuscripts for the American Nuclear Society, American Society of Civil Engineers (Journals of Structural Engineering, Engineering Mechanics, and Wind Engineering & Industrial Aerodynamics), American Society of Mechanical Engineers (Journal of Risk and Uncertainty in Engineering Systems), Bulletin of Earthquake Engineering, Earthquake Spectra, Earthquake Engineering and Structural Dynamics, International Journal of Protective Structures, Journal of Earthquake Engineering, Nuclear Engineering and Design, Reliability Engineering and System Safety, Soil Dynamics and Earthquake Engineering, the Structural Design of Tall Buildings, and the Journal of Sound and Vibration; and reviews papers for national and international conferences on earthquake, blast and structural engineering. Dr. Whittaker serves on editorial boards for *The Structural Design of Tall and Special Buildings* and the *International Journal of Protective Structures*.

**University and Professional Service**

Member, University of California at Berkeley Seismic Review Committee, 1996-2000

Reviewer, Research Program, Department of Structural Engineering, Tokyo Institute of Technology, Yokohama, Japan, 2001

Reviewer, Research Program, Department of Civil and Environmental Engineering, University of Melbourne, Australia, 2001, 2003

Member, University at Buffalo Faculty Senate Tenure and Privileges Committee, 2002-2006

Chair, External Advisory Board, UCSD-NEES project, University of California, San Diego, 2002-2004

Peer Review, USAID and ACEC, Washington, D.C., Applications for University Partnerships to Reduce Vulnerability to Seismic Hazards, 2003, 2003

Member, University at Buffalo Centers and Institutes Task Group, 2004-2005

Reviewer, National Science Foundation, Engineering Research Centers, 2005

Reviewer, National Science Foundation, CMMI, 2009

Reviewer, National Science Foundation, CMMI, 2011

Reviewer, National Science Foundation, CMMI, 2013

Member, External Review Panel, Department of Civil and Environmental Engineering, Carnegie Mellon University, November 2017

Member, SEAS Dean Search Committee, 2019-2020

Member and Sub-group Lead, Presidential Advisory Group, 2021-2022

Chair, SAP Dean Search Committee, 2022-2023

Member, Board of Directors, TerraPraxis, 2023-present

Reviewer, National Science Foundation, CMMI Committee of Visitors, 2024

**College Service**

SEAS Academic Infraction Appeals Committee, 2002-2012

Chair, SEAS Chief Financial Officer Search Committee, 2015

Chair, SEAS-CAS Department of Materials, Design and Innovation, Search Committee, 2015-2016

Chair, SEAS-CAS Department of Materials, Design, and Innovation, Search Committee, 2016-2017

Chair, SEAS-CAS Department of Materials, Design, and Innovation, Search Committee, 2017-2018

Chair, SEAS Chief Financial Officer Search Committee, 2019

Chair, SEAS Honors and Awards Committee, 2021-2022

Member, SEAS-CAS Department of Materials, Design, and Innovation, Search Committee, 2022-2023

Faculty lead, SEAS Dean's Advisory Council Energy Working Group, 2022-present

**Departmental Service**

Chair, CSEE Educational Laboratories Committee, 2001-2005

Member, CSEE Undergraduate Studies Committee, 2001-2005

Coordinator, CSEE Ph.D. Qualifying Examination, 2002-2010

Coordinator, CSEE M.S. Comprehensive Examination, 2007-2010

Faculty Advisor, UB EERI Student Chapter, 2003-2010

Member, CSEE Search Committee, 2003-2004

Chair, Computational Mechanics Search Committee, 2006

Member, CSEE Graduate Studies Committee, 2005-2010

Deputy Director, NEES@Buffalo, 2005-2007

Deputy Director, NEES@Buffalo, 2008-2009

Member, MCEER Management Council, 2008-2011

Member, CSEE Search Committee, 2009-2010

Director, NEES@Buffalo, 2009-2011

Chair, 2010-2016

Deputy Director, NEES@Buffalo, 2011-2012

Director, MCEER, 2011-2020

Director, Institute of Bridge Engineering, 2014-present

Deputy Director, SEESL, 2014-2016, 2018-2019

Director, SEESL, 2016-2018

Director, Graduate Studies Committee, 2021-2022

Director, Institute for Sustainable Transportation and Logistics, 2022-present

**Research Supervision**

**Ph.D. Degree, Advisor**

Oscar Ramirez, University at Buffalo, co-advised with M. Constantinou (May 2000)

Position: President and Professor, Technical University of Panama

Taejin Kim, UC Berkeley, co-advised with B. Stojadinovic (May 2003)

Position: President, TI Structural Engineers, Seoul, South Korea

Fei Deng, University at Buffalo (July 2004)

Position: Program Leader, Infrastructure and Sustainable Development, World Bank, Washington, D.C.

Gordon Warn, University at Buffalo (June 2006)

Position: Professor, Pennsylvania State University, College Park, PA

Claudia Marin, University at Buffalo (November 2006)

Position: Professor, Howard University, Washington, D.C.

Yin-Nan Huang, University at Buffalo (June 2008)

Position: Associate Professor, National Taiwan University, Taiwan

Cevdet Gulec, University at Buffalo (June 2009)

Position: Principal, Thornton-Tomasetti, Engineers, Los Angeles

Dhiman Basu, University at Buffalo, co-advised with Michael Constantinou (April 2012)

Position: Professor, Indian Institute of Technology, Gandhinagar, India

Jinwon Shin, University at Buffalo (May 2014)

Position: Associate Professor, Catholic Kwandong University, Gangwon-do, South Korea

Siamak Epackachi, University at Buffalo (December 2014)

Position: Assistant Professor, Amirkabir University, Tehran, Iran

Chandu Bolisetti, University at Buffalo (October 2014)

Position: Facility Risk Group Lead, Department of Energy, Idaho National Laboratory

Manish Kumar, University at Buffalo (May 2015)

Position: Associate Professor, Indian Institute of Technology, Mumbai, India

Manish Kumar, University at Buffalo (April 2015)

Position: Associate Professor, Indian Institute of Technology, Gandhinagar, India

Nam Nguyen, University at Buffalo (January 2016)

Position: Senior Structural Engineer, LCI Consultants, Brisbane, Australia

Bismarck Luna, University at Buffalo (January 2016)

Position: Research Structural Engineer, Linde, Buffalo, NY

Brian Terranova, University at Buffalo (May 2017)

Position: US Government, Washington, DC

Jon Rivera, University at Buffalo (November 2017)

Position: Senior Engineer, Thornton Tomasetti, Boston, MA

Guoliang Ma, Tongji University, Shanghai, China (March 2019)

Justin Coleman, University at Buffalo, co-advised with Anthony Tessari (May 2019)

Position: Senior Technical Advisor, Microreactors, Idaho National Laboratory, Idaho Falls, ID

Alok Abhay Deshpande, University at Buffalo (May 2019)

Position: Staff Consultant, Simpson, Gumpertz and Heger, Waltham, MA

Ching-Ching Yu, University at Buffalo (February 2021)

Position: Senior Engineer, TerraPower, Bellevue, WA

Faizan Ul Haq Mir, University at Buffalo (June 2023)

Position: Assistant Professor, Indian Institute of Technology, Jammu, India

Kaivalya Lal, University at Buffalo (August 2024)

Position: Structural Engineer, SI Solutions, Atlanta, GA

Sharath Parsi, University at Buffalo (August 2024)

Position: Engineer II, X-energy, Rockville, MD

Ajay Patel, University at Buffalo (expected December 2026)

Abhayank Bansal, University at Buffalo (expected December 2028)

**Ph.D. Dissertation Committees**

Eric Wolff, August 2003 (Member)

Ani Natali Sigaher-Boyle, June 2004 (Member)

Panayiotis Roussis, September 2004 (Member)

Eleni Pavlou, May 2005 (Member)

Methee Chiewanichakorn, December 2004 (Member)

Jun Wang, May 2005 (Member)

Wasim Bahram, May 2005 (Member)

Darren Vian, December 2005 (Member)

Jeff Berman, February 2006 (Member)

Khalid Al-Gahtani, May 2006 (Member)

Wael Alnahhal, October 2006 (Member)

Xiaoyun Shao, December 2006 (Member)

Mehdi Ahmadizadeh, September 2007 (Member)

Xiaobo Luo, December 2007 (Member)

Hongbo Wang, December 2007 (Member)

Daniel Fenz, April 2008 (Member)

Mohamad Abdulhamid, May 2008 (Member)

Elvira Elvira, May 2008 (External Examiner, University of Melbourne)

Ioannis Kalpakidis, August 2008 (Member)

Dimitrios Lignos, August 2008 (External Examiner, Stanford University)
Alper Ucak, May 2009 (External Examiner, Catholic University of America)
Kiarash Dolatshahi, February 2012 (Member)
Hongwei Cai, June 2012 (Member)
Maria Cortes Delgardo, June 2013 (Member)
Javad Hashemi, August 2013 (Member)
Michael Del Carpio, December 2013 (Member)
Nasi Zhang, May 2014 (Member)
Hanjin Hu, August 2014 (Member)
Afsoon Nickham, August 2014 (Member)
Juan Aleman, June 2014 (Member)
Zhang Zhongwen, November 2014 (External examiner, Nanyang Technological University, Singapore)
Moses Matovu, July 2015 (Member)
Aikaterina Stefanki, February 2016 (Member)
Francisco Javier Hernandez Prado, June 2016 (External examiner, University of Western Australia)
Shoma Kitayama, May 2017 (Member)
Hamidreza Anajafi, August 2018 (External examiner, University of New Hampshire)
Mauricio Diaz, August 2018 (Member)
Jianming Hao, January 2019 (Member)
Vivek Bhaskar Kote, January 2019 (Member)
Huseyin Cilsalar, April 2019 (Member)
Cancan Yang, April 2019 (Member)
Hamidreza Fakhri, May 2019 (Member)
Yushan Fu, September 2020 (Expected, Member)
Reda Snaiki, January 2020 (Member)
Dhanendra Kumar, December 2020 (Member)
Gholamreza Moghimi, May 2021 (External examiner, Southern Methodist University)
Haifeng Wang, July 2021 (Member)
Nan Hua, July 2021 (Member)
Sina Basereh, July 2021 (Member)
Omid Sajedi, June 2022 (Member)
Shaopeng Li, August 2022 (Member)
Mohammad Syed, August 2022 (Member)
Amr Soliman, January 2023 (Member)
Anirudh Saboo, June 2023 (External examiner, Indian Institute of Technology, Gandhinagar)
Kareem Eltouny, December 2023 (Member)
Sebastian Lopez Restrepo, May 2024 (Member)
Mi Jin Jung, August 2024 (Member)
Dylan Scott, June 2025 (Member)
Vidhi Solanki, July 2025 (Member)

Baichuan Deng, December 2025 (Expected, Member)

**M. S. and M. Eng Degree, Advisor and External Examiner**

Andrew Thompson, U.C. Berkeley, May 1999

Position: President and co-founder, Safehub, San Francisco

Troy Morgan, U.C. Berkeley, May 2000

Position: Practice Director, Exponent, NY

Taejin Kim, U.C. Berkeley, May 2000

Despoina Tsamandoura, University at Buffalo, December 2002

Hiram Badillo, University at Buffalo, August 2003

Position: Associate Professor, Autonomous University of Zacatecas, Mexico

Janet Lane, University at Buffalo, August 2003

Position: Engineer, US Army Corps of Engineers, Cleveland

Edgard Escobar, University at Buffalo, May 2004

Position: Consulting engineer, Managua, Nicaragua

Michael Astrella, University at Buffalo, December 2004

Position: Associate Partner, Catena Engineers, Portland, Oregon

Ryan Cyr, University at Buffalo, January 2005

Cevdet Gulec, University at Buffalo, June 2005

Position: Principal, Thornton-Tomasetti, Engineers, Los Angeles

Erick Burgos, University at Buffalo, July 2006

Position: Consulting engineer, San Salvador, El Salvador

Ionnis Christovasilis, University at Buffalo, August 2006

Position: Structural engineer, Athens, Greece

Nicholas Kipfer, University at Buffalo, May 2007

Position: Engineering Manager, Fabritec, Dallas, TX

Toshi Yoza, University at Buffalo, June 2007

Position: Structural engineer, Arup, Los Angeles

Graeme Ballantyne, University at Buffalo, August 2007

Position: Software developer, Computers and Structures, Inc, CA

Brian Regan, University at Buffalo, May 2008

Robert Catalina, University at Buffalo, December 2008

Position: Structural engineer, C&S Companies, Syracuse, NY

Yu Su, University of Adelaide, January 2009, External Examiner

Laura Przybylski, University at Buffalo, January 2009, Co-advised with Professor Filiatrault

Position: Structural engineer, Canon Design, Buffalo, New York

Jeffrey Chambers, University at Buffalo, December 2008

Position: Structural engineer, Constellation Energy, Rochester, New York

Maikol Del Caprio Ramos, University at Buffalo (August 2009)

Position: Structural engineer, KPFF, Los Angeles, California

Daniel Gavahi, University at Buffalo (December 2009)

Position: Director of design and construction, Providence, California

John Veith, University at Buffalo (December 2009)

Position: Director of project management, Birdair, Buffalo, New York

Kar-Him Chiu, University at Buffalo (December 2009)

Position: Structural engineer, Arup, Hong Kong, China

Vikram Singan, University at Buffalo (May 2010)

Position: Structural engineer, TAPP Inc, Houston, TX

Chandrakanth Bolisetti, University at Buffalo (December 2010)

Position: Research scientist, Department of Energy, Idaho National Laboratory

Pushkaraj Sherkar, University at Buffalo (August 2010)

Position: Associate Principal, Thornton-Tomasetti, Los Angeles

Joshua Rocks, University at Buffalo (February 2012)

Position: Structural engineer, Constellation Energy, Syracuse, NY

Basit Qayyum, University at Buffalo (August 2016)

Position: PhD student, Virginia Tech

Nataliia Igrashkina, University at Buffalo (May 2019)

Position: PhD student, University of Nevada, Reno

**M.S. Thesis Committees**

Yehezkiel Tumewu, August 2016 (Member)

Maria Federova, November 2016 (Member)

**Post-Doctoral Fellows and Research Engineers**

Dr. Amir Gilani, Research Engineer; UC Berkeley, 1996-2000

Position: Senior Engineer, Caltrans, Sacramento

Dr. Juan Chavez, Research Engineer; UC Berkeley, 1996-1998

Position: Senior Engineer, GPLA, San Francisco

Dr. Shakzod Takhirov, Research Engineer; UC Berkeley, 1997-2000

Position: Research Engineer, University of California, Berkeley

Mr. Hidemi Nakashima, Visiting Scholar, Shimizu Corporation; UC Berkeley, 1999

Position: Senior Engineer, Shimizu Corporation, Japan

Dr. Michio Yamaguchi, Post-doctoral Fellow, Tokyo Institute of Technology; UB, 2002-2003

Position: Senior Engineer, Nippon Steel Corporation, Japan

Dr. Taejin Kim, Visiting Scholar, SungKyunKwan University, Korea; UB 2008-2010

Position: Partner, Chang-Minwoo Consultants, Seoul, Korea

Dr. Yin-Nan Huang, Post-doctoral Fellow; UB 2008-2009

Position: Associate Professor, National Taiwan University, Taiwan

Dr. Dhiman Basu, Post-doctoral Fellow; UB 2012

Position: Professor, Indian Institute of Technology, Gandhinagar

Dr. Caglar Akkaya, Post-doctoral Fellow; UB 2012
Position: Associate Professor, Istanbul Technical University, Turkey
Dr. Manish Kumar, Post-doctoral Fellow; UB 2015
Position: Associate Professor, Indian Institute of Technology, Gandhinagar
Dr. Siamak Epackachi, Post-doctoral Fellow; UB 2015-2016
Position: Assistant Professor, Amirkabir University, Tehran, Iran
Dr. Manish Kumar, Post-doctoral Fellow; UB 2015-2016
Position: Associate Professor, Indian Institute of Technology, Bombay
Dr. Gustavo Palazzo, Visiting Scholar, National Technological University, Argentina; UB 2016
Position: Professor, National Technological University, Mendoza, Argentina
Dr. Junjie Xu, Visiting Scholar, Institute of Engineering Mechanics, Beijing, PRC; UB 2018-2019
Position: Associate Professor, Institute of Engineering Mechanics, Beijing, PRC
Dr. Ching-Ching Yu, Post-doctoral Fellow; UB 2021-2022
Position: Senior Engineer, TerraPower, Bellevue, WA
Dr. Faizan Ul-Haq Mir, Post-doctoral Fellow; UB 2023
Position: Assistant Professor, Indian Institute of Technology, Jammu, India
Dr. Sharath Parsi, Post-doctoral Fellow; UB 2024-2025
Position: Engineer II, X-energy, Rockville, MD

**Teaching**

| | |
|---|---|
| **2000-2001:** | CIE 423, Structural Engineering III |
| | CIE 619, Earthquake Engineering and Structural Dynamics II |
| **2001-2002:** | CIE 525, Reinforced Concrete (incl. Enginet) |
| | CIE 619, Earthquake Engineering and Structural Dynamics II (incl. Enginet) |
| **2002-2003**: | CIE 361, Civil Engineering Laboratory |
| | CIE 428, Steel Structures |
| | CIE 525, Reinforced Concrete (incl. Enginet) |
| | CIE 619, Earthquake Engineering and Structural Dynamics II (incl. Enginet) |
| **2003-2004**: | CIE 525, Reinforced Concrete (incl. Enginet) |
| | CIE 619, Earthquake Engineering and Structural Dynamics II (incl. Enginet) |
| **2004-2005**: | CIE 525, Reinforced Concrete (incl. Enginet) |
| | CIE 428, Steel Structures |
| | CIE 619, Earthquake Engineering and Structural Dynamics II |
| **2005-2006**: | CIE 525, Reinforced Concrete |
| | CIE 428, Steel Structures |
| | CIE 619, Earthquake Engineering and Structural Dynamics II |
| **2006-2007**: | CIE 428, Steel Structures |
| | CIE 500B, Blast Engineering |
| | CIE 525, Reinforced Concrete |
| | CIE 619, Earthquake Engineering and Structural Dynamics II |

**2007-2008**: CIE 500B, Blast Engineering
CIE 525, Reinforced Concrete (incl. Enginet)
**2008-2009**: CIE 429, Reinforced Concrete Design
CIE 500B, Blast Engineering
CIE 525, Reinforced Concrete
**2009-2010**: CIE 429, Reinforced Concrete Design
CIE 500B, Blast Engineering
CIE 525, Reinforced Concrete
**2010-2011**: CIE 500B, Blast Engineering
CIE 525, Reinforced Concrete
**2011-2012**: CIE 525, Reinforced Concrete
CIE 500, Independent Study
**2011-2012**: CIE 525, Reinforced Concrete
CIE 500, Independent Study (Earthquake Engineering)
CIE 500, Independent Study (Blast Engineering)
**2012-2013**: CIE 525, Reinforced Concrete
CIE 500, Independent Study (Earthquake Engineering)
CIE 500, Independent Study (Blast Engineering)
**2013-2014**: CIE 525, Reinforced Concrete
CIE 618, Blast Engineering
**2014-2015**: CIE 525, Reinforced Concrete
CIE 618, Blast Engineering
**2015-2016:** CIE 525, Reinforced Concrete
CIE 618, Blast Engineering
**2016-2017:** CIE 525, Reinforced Concrete
CIE 324, Introduction to Design
CIE 416, Capstone Design
CIE 502, Independent Study
**2017-2018:** CIE 525, Reinforced Concrete
CIE 502, Independent Study
CIE 416, Capstone Design
**2018-2019:** CIE 525, Reinforced Concrete
CIE 502, Independent Study
CIE 416, Capstone Design
**2019-2020:** CIE 525, Reinforced Concrete
CIE 502, Independent Study
CIE 416, Capstone Design
**2020-2021:** CIE 525, Reinforced Concrete
CIE 502, Independent Study
**2021-2022:** CIE 525, Reinforced Concrete

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|---|---|
| | CIE 502, Independent Study |
| | CIE 416, Capstone Design |
| **2022-2023:** | CIE 525, Reinforced Concrete |
| | CIE 502, Independent Study |
| **2023-2024:** | CIE 525, Reinforced Concrete |
| | CIE 502, Independent Study |
| | CIE 416, Capstone Design |
| **2024-2025:** | CIE 525, Reinforced Concrete |
| | CIE 502, Independent Study |
| **2025-2026:** | CIE 525, Reinforced Concrete |
| | CIE 502, Independent Study |

**Inventions**

Whittaker, A. S., and E. D. Ingersoll, "Commodifying nuclear energy by standardizing plant deployment using seismic protective systems and algorithmic design," *Edison invention report number*: 5992614-22-0001, DOE S-163554, Department of Energy, January 18, 2022.

**Publications**

Google Scholar: https://scholar.google.com/citations?user=G_fWTaEAAAAJ&hl=en

ResearchGate: https://www.researchgate.net/profile/Andrew_Whittaker5

**Textbooks and Textbook Chapters**

(T1) Bruneau, M., C. M. Uang, and A. S. Whittaker, *Ductile Design of Steel Structures*, McGraw-Hill, New York, N.Y., September 1997.

(T2) Uang, C. M., M. Bruneau, A. S. Whittaker, and K. C. Tsai, *Chapter 9, Seismic design of steel structures*, in The Seismic Design Handbook, F. Naeim (ed.), Springer, January 2001.

(T3) Warn, G. and A. S. Whittaker, *Chapter 4, Performance estimates in seismically isolated bridges*, in Research Progress and Accomplishments 2001-2003, MCEER-03-SP-01, Multidisciplinary Center for Earthquake Engineering Research, University at Buffalo, Buffalo, New York, May 2003.

(T4) Reinhorn, A. M., A. Aref, S. L. Billington, M. C. Constantinou, G. C. Lee, and A. S. Whittaker, *Chapter 5, Advanced technologies for response modification of hospital buildings*, in Research Progress and Accomplishments 2001-2003, MCEER-03-SP-01, Multidisciplinary Center for Earthquake Engineering Research, University at Buffalo, Buffalo, New York, May 2003.

(T5) Aref, A. J., M. Bruneau, M. C. Constantinou, G. C. Lee, A. M. Reinhorn, and A. S. Whittaker, *Chapter 8, Seismic response modification of structural and nonstructural systems and components in acute care facilities*, in Research Progress and Accomplishments 2003-2004, MCEER-04-SP-01, Multidisciplinary Center for Earthquake Engineering Research, University at Buffalo, Buffalo, New York, May 2004.

(T6) Warn, G., J. W. Berman, A. S. Whittaker, and M. Bruneau, *Investigation of a damaged high-rise building near Ground Zero*, Chapter in "Beyond September 11th: An Account of Post Disaster Research," Special Publication No. 39, Natural Hazards Research and Applications Information Center, University of Colorado, Boulder, CO., pp. 199-240, July 2003.

(T7) Whittaker, A. S. and M. C. Constantinou, *Chapter 12, Seismic energy dissipation systems for buildings*, in Earthquake Engineering, Bozorgnia and Bertero (eds), CRC Press, Boca Raton, FL, March 2004.

(T8) Thompson, A. C. T., A. M. Kammerer, G. M. Katzman and A. S. Whittaker, *Chapter 7, Natural Hazards*, in Extreme Event Mitigation in Buildings, Meacham (ed), NFPA, Quincy, MA, April 2006.

(T9) Whittaker, A. S. and J. Abruzzo, *Chapter 6, Materials Performance*, in Blast Resistant Design of Buildings, Dusenberry (ed), Wiley, January 2010.

(T10) Lignos, D. G., H. Krawinkler and A. S. Whittaker, *Chapter 1, Collapse Assessment of Steel Moment-Resisting Frames*, in Computational Methods in Earthquake Engineering, Springer, November 2010.

(T11) Huang, Y.-N. and A. S. Whittaker, *Chapter 3*, *Seismic probabilistic risk assessment for nuclear power plants*, in Infrastructure Systems for Nuclear Energy, T. Hsu (ed.), Wiley, January 2014.

(T12) Nikellis, A., K. Sett, T. Wu, and A. S. Whittaker, *Chapter 25*, *Multi-hazard financial risk assessment of a bridge-roadway-levee system*, in Risk-Based Bridge Engineering, K. Mahmoud (ed), CRC Press, September 2019

**Refereed Journals**

(R1) Whittaker, A. S., C. M. Uang, and V. V. Bertero, "Experimental behavior of a dual steel system," *Journal of the Structural Division*, ASCE, Vol. 115, No. 1, pp. 183-200, January 1989.

(R2) Whittaker, A. S., V. V. Bertero, C. L. Thompson, and L. J. Alonso, "Seismic testing of steel-plate energy dissipating devices," *Earthquake Spectra*, Vol. 7, No. 4, pp. 563-604, November 1991.

(R3) Aiken, I. D., D. K. Nims, A. S. Whittaker, and J. M. Kelly, "Testing of passive energy dissipation systems," *Earthquake Spectra*, Vol. 9, No. 3, Earthquake Engineering Research Institute, CA, August 1993.

(R4) Whittaker, A. S., J. P. Moehle, and M. Higashino, "Evolution of building seismic design practice in Japan," *The Structural Design of Tall Buildings*, 7, 93-111, John Wiley, 1998.

(R5) Whittaker, A. S., M. C. Constantinou, and P. Tsopelas, "Displacement estimates for performance-based earthquake engineering," *Journal of Structural Engineering*, Vol. 124, No. 8, pp. 896-905, ASCE, Washington, D.C., August 1998.

(R6) Makris, N., Y. Roussos, A. S. Whittaker, and J. M. Kelly, "Viscous heating of fluid dampers II: large-amplitude motions," *Journal of Engineering Mechanics*, Vol. 124, No. 11, ASCE, Washington, D.C., November 1998.

(R7) Whittaker, A. S., A. Gilani, and V. V. Bertero, "Evaluation of pre-Northridge steel moment-resisting frame joints," *The Structural Design of Tall Buildings*, 7 (4), pp. 263-284, John Wiley, December 1998.

(R8) Whittaker, A. S., M. C. Constantinou, and P. Tsopelas, "Nonlinear procedures for the seismic evaluation of buildings," *The Structural Design of Tall Buildings*, 8 (1), pp. 1-13, John Wiley, March 1999

(R9) Whittaker, A. S., C. Rojahn, and G. C. Hart, "Seismic response modification factors," *Journal of Structural Engineering*, Vol. 125, No. 4, ASCE, Washington, D.C., April 1999.

(R10) Whittaker, A. S., M. C. Constantinou, and N. Sigaher, "Supplemental damping for new and retrofit construction." *Revista De Ingenieria Sismica*, Vol. 61, Sociedad Mexicana de Ingenieria Sismica A.C., Mexico City, December 1999.

(R11) Gilani, A. S. J. and A. S. Whittaker, "Fatigue-life evaluation of steel post structures, part I: background and analysis." *Journal of Structural Engineering*, Vol. 126, No. 3, ASCE, Washington, D.C., March 2000

(R12) Gilani, A. S. J. and A. S. Whittaker, "Fatigue-life evaluation of steel post structures, part II: experimentation." *Journal of Structural Engineering*, Vol. 126, No. 3, ASCE, Washington, D.C., March 2000

(R13) Gilani, A. S. J., A. S. Whittaker, and G. L. Fenves, "Seismic evaluation and retrofit of 230-kV porcelain transformer bushings." Vol. 17, No. 4, *Earthquake Spectra*, EERI, Oakland, CA, November 2001.

(R14) Chang, S.-P., N. Makris, A. S. Whittaker, A. C. T. Thompson, "Experimental and analytical studies on the performance of hybrid isolation systems." Vol. 31, No. 2, *Earthquake Engineering and Structural Dynamics*, Wiley, London, pp 421-443, February 2002

(R15) Kim, T., A. S. Whittaker, A. S. J. Gilani, V. V. Bertero, and S. M. Takhirov, "Experimental evaluation of plate-reinforced steel moment-resisting connections." *Journal of Structural Engineering*, Vol. 128, No. 4, ASCE, Washington, D.C., pp 483-491, April 2002

(R16) Kim, T., A. S. Whittaker, A. S. J. Gilani, V. V. Bertero, and S. M. Takhirov, "Cover-plate and flange-plate steel moment-resisting connections." *Journal of Structural Engineering*, Vol. 128, No. 4, ASCE, Washington, D.C., pp 474-482, April 2002.

(R17) Uriz, P. and A. S. Whittaker, "Retrofit of pre-Northridge steel moment-resisting frames using fluid viscous dampers." *The Structural Design of Tall Buildings*, Volume 10, No. 5, John Wiley, London, pp 371-390, December 2001.

(R18) Whittaker, A. S., A. S. J. Gilani, S. Takhirov, and C. Ostertag, "Forensic studies of a large cover-plate steel moment-resisting connection." *The Structural Design of Tall Buildings*, Volume 11, No. 4, John Wiley, London, pp 265-283, December 2002.

(R19) Ramirez, O. M., M. C. Constantinou, J. D. Gomez, A. S. Whittaker, and C. Z. Chrysostomou, "Evaluation of simplified methods of analysis of yielding structures with damping systems." Volume 18, No. 3, *Earthquake Spectra*, Oakland, CA, pp. 501-530, August 2002.

(R20) Ramirez, O. M., M. C. Constantinou, A. S. Whittaker, C. A. Kircher, and C. Z. Chrysostomou, "Elastic and inelastic seismic response of buildings with damping systems." Volume 18, No. 3, *Earthquake Spectra*, EERI, Oakland, CA, pp. 531-547, August 2002.

(R21) Sezen, H., A. S. Whittaker, K. J. Elwood, and K. M. Mosalam, "Performance of reinforced concrete buildings during the August 17, 1999, Kocaeli, Turkey earthquake, and seismic design and construction practice in Turkey." Volume 25, No. 1, *Engineering Structures*, Elsevier Science, London, pp 103-115, January 2003.

(R22) Whittaker, A. S., M. C. Constantinou, O. M. Ramirez, M. W. Johnson, and C. Z. Chrysostomou, "Equivalent lateral force and modal analysis procedures of the 2000 NEHRP Provisions for buildings with damping systems," Volume 19, No. 4, *Earthquake Spectra*, Oakland, CA, pp. 959-980, November 2003.

(R23) Ramirez, O. M., M. C. Constantinou, A. S. Whittaker, C. A. Kircher, M. W. Johnson, and C. Z. Chrysostomou, "Validation of the 2000 NEHRP Provisions equivalent lateral force and modal analysis procedures for buildings with damping systems," Volume 19, No. 4, *Earthquake Spectra*, Oakland, CA, pp. 981-999, November 2003.

(R24) Warn, G., J. Berman, A. S. Whittaker, and M. Bruneau, "Reconnaissance and preliminary analysis of a damaged building near Ground Zero, *The Structural Design of Tall and Special Buildings*, Volume 12, pp. 371-391, December 2003.

(R25) Whittaker, A. S., G. L. Fenves, and A. S. J. Gilani, "Earthquake performance of porcelain transformer bushings," Volume 20, No. 1, *Earthquake Spectra*, Oakland, CA, pp. 205-223, February 2004.

(R26) Mosqueda, G., A. S. Whittaker and G. L. Fenves, "Characterization and modeling of Friction Pendulum bearings subjected to multiple components of excitation," *Journal of Structural Engineering*, Volume 130, No. 3, pp. 433-442, March 2004.

(R27) Warn, G. and A. S. Whittaker, "Performance estimates in seismically isolated bridges," *Engineering Structures*, Vol. 26, No. 9, pp. 1261-1278, July 2004.

(R28) Grant, D., G. L. Fenves and A. S. Whittaker, "Bidirectional modeling of high-damping rubber bearings," *Journal of Earthquake Engineering,* Vol. 8, Special Issue 1, pp 161-185, September 2004.

(R29) Sezen, H. and A. S. Whittaker, "Seismic performance of industrial facilities affected by the 1999 Turkey earthquake," *Journal of Performance of Constructed Facilities*, Vol. 20, No. 1, ASCE, pp. 28-36, February 2006.

(R30) Kim, T., B. Stojadinovic and A. S. Whittaker, "Seismic performance of welded steel beam moment connections to built-up box columns," *Journal of the Earthquake Engineering Society of Korea*, Vol. 10, No. 1, pp. 25-31, February 2006 (in Korean)

(R31) Warn, G. and A. S. Whittaker, "Property modification factors for seismically isolated bridges," *Journal of Bridge Engineering*, Vol. 11, No. 3, ASCE, pp. 371-377, May 2006.

(R32) Escobar-Sandoval, E., A. S. Whittaker, and G. F. Dargush, "Concentrically loaded circular steel plates bearing on plain concrete," *Journal of Structural Engineering*, Vol. 132, No. 11, ASCE, pp. 1784-1792, November 2006.

(R33) Badillo, H., A. S. Whittaker, and A. M. Reinhorn, "Seismic fragility of suspended ceiling systems," *Earthquake Spectra*, Vol. 23, No. 1, February 2007.

(R34) Warn, G., A. S. Whittaker and M. C. Constantinou, "Vertical stiffness of elastomeric and lead-rubber seismic isolation bearings," *Journal of Structural Engineering*, Vol. 133, No. 9, ASCE, pp. 1227-1236, September 2007.

(R35) Huang, Y.-N., A. S. Whittaker, M. C. Constantinou and S. Malushte, "Seismic demands on secondary systems in isolated nuclear power plants," *Earthquake Engineering and Structural Dynamics*, Vol. 36, No. 12, pp. 1741-1761, October 2007.

(R36) Whittaker, A. S., G. L. Fenves and A. S. J. Gilani, "Seismic evaluation and analysis of high-voltage disconnect switches," *Engineering Structures*, Vol. 29, No. 12, pp. 3538-3549, December 2007.

(R37) Symans, M. D., F. A. Charney, A. S. Whittaker, M. C. Constantinou, C. A. Kircher, M. W. Johnson and R. J. McNamara, "Energy dissipation systems for seismic applications: current practice and recent developments," *Journal of Structural Engineering*, Vol. 134, No. 1, ASCE, pp. 3-21, January 2008.

(R38) Kim, T., B. Stojadinovic and A. S. Whittaker, "Seismic performance of pre-Northridge welded steel moment connections to built-up box columns," *Journal of Structural Engineering*, Vol. 134, No. 2, ASCE, pp. 289-299, February 2008.

(R39) Huang, Y.-N., A. S. Whittaker and N. Luco, "Maximum spectral demands in the near-fault region," *Earthquake Spectra*, Vol. 24, No. 1, pp. 319-341, June 2008.

(R40) Gulec, K., A. S. Whittaker and B. Stojadinovic, "Shear strength of squat rectangular reinforced concrete walls," ACI *Structural Journal*, Vol. 105, No. 4, pp. 488-497, July-August 2008.

(R41) Christovasilis, I. and A. S. Whittaker, "Seismic analysis of conventional and isolated LNG tanks using mechanical analogs," *Earthquake Spectra*, Vol. 24, No. 3, pp. 599-616, August 2008.

(R42) Wu, C., D. J. Oehlers and A.S. Whittaker. "Analysis of FRP retrofitted RC slabs using finite difference models," *Transactions of Tianjin University*, Volume 14, No. 5, pp. 344-347, Springer-Verlag, October 2008.

(R43) Warn G. and A. S. Whittaker, "Vertical earthquake loads on seismic isolation systems in bridges," *Journal of Structural Engineering*, Vol. 134, No. 11, ASCE, pp. 1696-1704, November 2008.

(R44) Marin, C. C, A. S. Whittaker and M. C. Constantinou, "Experimental study of the XY-Friction Pendulum bearing for bridge applications," *Journal of Bridge Engineering*, Vol. 14, No. 3, pp. 193-202, May 2009.

(R45) Gulec, K., A. S. Whittaker and B. Stojadinovic, "Peak shear strength of squat reinforced concrete walls with boundary barbells or flanges," ACI *Structural Journal*, Vol. 106, No. 3, pp. 368-377, May 2009.

(R46) Huang, Y.-N., A. S. Whittaker and N. Luco, "Orientation of maximum spectral demand in the near-fault region," *Earthquake Spectra*, Vol. 25, No. 3, pp. 707-717, August 2009.

(R47) Wu, C., D. J. Oehlers, M. Rebentrost, J. Leach, and A. S. Whittaker, "Blast testing of ultra-high-performance fibre and FRP-retrofitted concrete slabs," *Engineering Structures*, Vol. 31, No. 9, pp. 2060-2069, September 2009.

(R48) Jones, J., C., Wu, D. J. Oehlers, A. S. Whittaker, W. Sun, S. Marks, and R. Coppola, "Finite difference analysis of simply supported RC panels for blast loadings," *Engineering Structures*, Vol. 31, No. 12, pp. 2825-2832, December 2009.

(R49) Ballantyne, G, A. S. Whittaker, A. Aref and G. F. Dargush, "Air blast effects on structural shapes of finite width," *Journal of Structural Engineering*, Vol. 136, No. 2, pp. 152-159, February 2010.

(R50) Kalpakidis, I. V., M. C. Constantinou and A. S. Whittaker, "Effects of large cumulative travel on the behavior of lead-rubber seismic isolation bearings," *Journal of Structural Engineering*, Vol. 136, No. 5, pp. 491-501, May 2010.

(R51) Huang, Y.-N., A. S. Whittaker and N. Luco, "NEHRP site amplification factors and the NGA relationships," *Earthquake Spectra*, Vol. 26, No. 2, pp. 583-593, May 2010.

(R52) Wu, C., G. Fattori, A. S. Whittaker and D. J. Oehlers, "Investigation of air-blast effects from spherical and cylindrical-shaped charges," *International Journal of Protective Structures*, Vol. 1, No. 3, pp. 345-362, September 2010.

(R53) Gulec, K., A. S. Whittaker and J. D. Hooper, "Fragility functions for low aspect ratio reinforced concrete walls," *Engineering Structures*, Vol. 32, pp. 2894-2901, November 2010.

(R54) Marin, C. C and A. S. Whittaker, "Theoretical studies of the XY-FP seismic isolation bearing for bridges," *Journal of Bridge Engineering*, Vol. 15, No. 6, pp. 631-638, November 2010.

(R55) Kalpakidis, I. V., M. C. Constantinou, and A. S. Whittaker, "Modeling strength degradation in lead-runner bearings under earthquake shaking," *Earthquake Engineering and Structural Dynamics*, Vol. 39, No. 13, pp. 1533-1549, November 2010.

(R56) Huang, Y.-N., A. S. Whittaker, and N. Luco, "Seismic performance assessment of base-isolated safety-related nuclear structures," *Earthquake Engineering and Structural Dynamics*, Vol. 39, No. 13, pp. 1421-1442, November 2010.

(R57) Lignos, D. G., H. Krawinkler and A. S. Whittaker, "Prediction and validation of sidesway collapse of two scale models of a 4-story steel moment frame," *Earthquake Engineering and Structural Dynamics*, Available on-line, DOI: 10.1002/eqe.1061, November 2010.

(R58) Gulec, C. K., and A. S. Whittaker, "Empirical equations for the peak shear strength of low aspect ratio reinforced concrete walls," ACI *Structural Journal*, Vol. 108, No. 1, pp. 80-89, January 2011.

(R59) Huang, Y.-N., A. S. Whittaker, N. Luco, and R. O. Hamburger, "Scaling of earthquake ground motions in support of performance-based design," *Journal of Structural Engineering*, Vol. 137, No. 3, pp. 311-321, March 2011.

(R60) Gulec, C. K., B. Gibbons, A. Chen and A. S Whittaker, "Damage states and fragility functions for link beams in eccentrically braced frames," *Journal of Constructional Steel Research*, Vol. 67, Issue 9, pp. 1299-1309, August 2011.

(R61) Huang, Y.-N., A. S. Whittaker, and N. Luco, "A probabilistic seismic risk assessment procedure for nuclear power plants, (I) methodology," *Nuclear Engineering and Design*, Vol. 241, pp. 3996-4003, September 2011.

(R62) Huang, Y.-N., A. S. Whittaker, and N. Luco, "A probabilistic seismic risk assessment procedure for nuclear power plants, (II) application," *Nuclear Engineering and Design*, Vol. 241, pp. 4004-4011, September 2011.

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