

# Boris Jeremić

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## 1 Research Interests

Primary research interests are related to modeling and simulation (rational mechanics formulation, computational implementation, practical applications) of static and dynamic, inelastic, deterministic and probabilistic behavior of engineering solids and structures. Focus is on development and use of methods that reduce Kolmogorov complexity and modeling uncertainty. One example of current work is Realistic Modeling and Simulation of Earthquakes, and Soils, and Structures and their Interaction, represented by the Real-ESSI / MS-ESSI Simulator System (<http://real-essi.info>). In particular, current work is on statics and dynamics, deterministic and probabilistic inelastic modeling and simulation using high performance computing software systems for earthquakes, soils, structures and their interaction.

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## 2 Teaching Interests

Teaching interests are closely related to my research activities, focusing on theoretical, computational and applied aspects of mechanics on both undergraduate and graduate levels. In particular, recent teaching is related to:

Theoretical and computational, deterministic and probabilistic elastic-plastic mechanics

Deterministic and stochastic, static and dynamic, elastic-plastic finite element methods

Application of the computational models and computer simulations to solving practical civil engineering problems

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## 3 Education

**Doctor of Philosophy** Degree in Civil Engineering at the University of Colorado at Boulder, Department of Civil, Environmental and Architectural Engineering, July 1997. Thesis title: *"Finite Deformation Hyperelasto-plasticity of Geomaterials"*, thesis Advisor Professor Stein Sture.

**Master of Science** Degree in Civil Engineering at the University of Colorado at Boulder, Department of Civil, Environmental and Architectural Engineering, May 1994. Thesis title *"Implicit Integration Rules in Elasto-plasticity: Theory and Implementation"*, thesis Advisor Professor Stein Sture.

**Diploma Engineer** Degree in Civil Engineering at Belgrade University, The Faculty of Civil Engineering, Engineering Mechanics and Theory of Structures Department, Belgrade, Yugoslavia, July 1989. Diploma Thesis: *Dynamic Analysis of Axisymmetric Solids Subjected to Non-Symmetric Loading by the Finite Element Method"*, thesis Advisor Professor Miodrag Sekulović.

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## 4 Academic Experience

### Current

**Professor**, University of California, Davis, California, July 2009-pres.

**Faculty Scientist**, Lawrence Berkeley National Laboratory, Berkeley, California, August 2010-pres.

**Visiting Professor**, University of Kragujevac, Faculty of Mechanical Engineering, Kragujevac, Serbia, June 2009-pres.

### Past

**Visiting Professor**, University of Belgrade, Faculty of Civil Engineering, Belgrade, Serbia, March 2008-June 2012.

**Visiting Professor**, Union University, Faculty of Construction Management, Graduate School, Belgrade, Serbia, January 2009- September 2012.

**Associate Professor**, University of California, Davis, California, July 2003-June 2009.

**Assistant Professor**, University of California, Davis, California, July 1999-June 2003.

**Assistant Professor**, Clarkson University, Potsdam, New York, August 1997-June 1999.

**Graduate Teaching and Research Assistant**, University of Colorado at Boulder, August 1992-August 1997

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## 5 Professional Experience

**Consultant**, International Atomic Energy Agency, United Nations, Vienna, Austria, 2015 – present,

**Consultant**, Canadian Nuclear Safety Commission, 2010 – 2016,

**Consultant**, FUGRO Consultants Inc., Oakland, California, 2014 – 2015,

**Consultant**, The Open Hazards Group (<http://www.openhazards.com/>), Davis, California, 2009 – present,

**Consultant**, United States Army Corps of Engineers, Nashville, Tennessee, 2010,

**Consultant**, Kinemetrics Inc., Los Angeles, California, 2010,

**Consultant**, LACHEL FELICE & Associates, Inc., 2009 – 2010.

**Consultant**, NEES @ Colorado, Boulder, Colorado, 2006,

**Consultant**, Baker–Hughes Inc., Houston, Texas, 2003 – 2004,

**Consulting Civil Engineer**, Energoprojekt Hidroinžinjeri Engineering Company (EHEC), Belgrade, Yugoslavia, 1991 – 1992,

**Design Civil Engineer**, Gasser–Scepan Engineering Bureau, Baar, Switzerland, 1991,  
**Consulting and Design Civil Engineer**, EHEC, Belgrade, Yugoslavia, 1990 – 1991,  
**Consulting and Design Civil Engineer**, on Bekhme Dam Project site in Iraq, with EHEC, 1990,  
**Assistant Civil Engineer**, EHEC, Belgrade, Yugoslavia, 1989 – 1990,  
**Summer intern**, Gasser–Scepan Engineering Bureau, Baar, Switzerland, 1988,  
**Surveying assistant**, Kosovoprojekt Engineering Company, Belgrade, Yugoslavia, 1983,

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## 6 Teaching Experience

**Department of Civil and Environmental Engineering, University of California, Davis**, July 1999. – present,

### Graduate Courses

**“Linear and Nonlinear Dynamic Finite Elements, with Emphasis on Earthquake-Soil-Structure Interaction”** ECI 280B; New course developed by B. Jeremić. Spring 2009, Spring 2012, Spring 2014, Spring 2016, Spring 2017

**“Nonlinear Finite Elements for Elastic–Plastic Problems”** ECI 280A; New course developed by B. Jeremić. Spring 2008, Spring 2010, Spring 2013, Spring 2015, Spring 2017

**“Finite Elements: Application to Linear and Nonlinear Solid and Structural Mechanics Problems”** ECI 212B; Spring 2001

**“Computational Geomechanics: Inelastic Finite Elements for Pressure Sensitive Materials”** ECI 285; New course developed by B. Jeremić. Spring 2002, Spring 2004, Spring 2005, Spring 2006, Spring 2007

**“Theoretical Geomechanics”** ECI 284; New course developed by B. Jeremić. Winter 2000, Winter 2001, Winter 2002, Winter 2003, Winter 2004, Winter 2005, Winter 2010, Winter 2011, Winter 2012, Winter 2013, Winter 2014, Winter 2016

**“Advanced Soil Mechanics”** ECI 281A; Fall 2001, Fall 2002, Fall 2003, Fall 2004, Fall 2006, Fall 2007, Fall 2008, Fall 2014

### Undergraduate Courses

**“Mechanics of Materials”** ENG 104: Fall 2000, Winter 2007, Summer 2006, Winter 2007, Summer 2010 in Paris, Fall 2011, Fall 2012, Fall 2014

**“Soil Mechanics”** ECI 171: Spring 2000, Fall 2008, Spring 2010, Spring 2011, Fall 2015, Fall 2016

**“Statics”** ENG 35: Fall 2013, Fall 2017

**“C Programming for Civil Engineers”** ECI 19; New course developed by B. Jeremić. Winter 2008

**“Introduction to C Programming Language for Engineers”** ECI 189D, ECI 119A; New course developed by B. Jeremić. Winter 2002, Winter 2003, Winter 2004

**“Parallel Computing for Engineers”** ECI 189D, ECI 119B; New course developed by B. Jeremić. Spring 2002, Spring 2003

**Department of Civil and Environmental Engineering, Clarkson University, August 1997. – June 1999,**

Graduate Courses

**“Introduction to the Finite Element Method”** CE538 ; CE438; ME515; ME436; Fall 1997, Fall 1998

Undergraduate Courses

**“Introduction to the Soil Mechanics”** CE310; Spring 1998, Spring 1999

**“Multidisciplinary Project: Parallel Computations, Domain Decomposition”**, MP 112-512; New course developed by B. Jeremić. Spring 1999

**“Multidisciplinary Project: Parallel Computations, MPI Tools”**, MP 112-512; New course developed by B. Jeremić. Fall 1998

**“Multidisciplinary Project: Design, Construction and Testing of Concrete Canoe”**, MP104-504; Fall 1998

**“Multidisciplinary Independent Study: Numerical Computations on Parallel Computers”** CE496; CS498; New course developed by B. Jeremić. Spring 1998

**Short Courses, other than University Teaching, 1990. – present,**

**Real ESSI Simulator for Professional Practice**, Short Course: Nonlinear Earthquake Soil Structure Interaction Modeling and Simulation, San Francisco, CA, USA, 12th - 14th December 2017.

**Slovenian Nuclear Safety Administration (SNSA)**, Short Course: IAEA -Training on Seismic Design and Assessment for Nuclear Power Plants, Ljubljana, Slovenia, 14th - 16th November 2017.

**Real ESSI Simulator at LBNL**, Short Course: Nonlinear Earthquake Soil Structure Interaction Modeling and Simulation, Lawrence Berkeley National Laboratory, Berkeley, CA, USA, September and October 2017.

**Real ESSI Simulator at ILEE**, State Key Laboratory of Disaster Prevention in Civil Engineering, Tongji University, Short Course on Earthquake Soil Structure Interaction Modeling and Simulation using Real ESSI Simulator, Shanghai, People's Republic of China, 16th August 2017.

**US-NRC, Rockville, Maryland**, Short Course on Earthquake Soil Structure Interaction Modeling and Simulation using Real ESSI Simulator, May 2013.

**Earthquake–Soil–Structure Interaction, at the University of Belgrade.** Serbia. June 2008.

**Topics in Contemporary Computational Geomechanics.** Four day short course for University of Kragujevac, Kragujevac, Serbia and Montenegro, with remote participants: students from the Institute of Structural Analysis & Seismic Research, Faculty of Civil Engineering, National Technical University Athens, Greece. June 2005.

**Energoprojekt–Hidroinžinjer Engineering Company (EHEC), Belgrade, Yugoslavia**, Instructor for Computer Information Technology. 1990-1992.

**Bekhme dam project site (with Energoprojekt – Dijla Joint Venture,)**, Iraq, Instructor for **Computational Mechanics Program Packages.** April–August 1990.

## 7 Projects

**High Performance, Multidisciplinary Simulations for Regional Scale Earthquake Hazard and Risk Assessments**, 2017-2021, with Dr. David McCallen (UCOP, LBNL), Dr. Anders Petersson (LLNL), Dr. Hans Johansen (LBNL), Dr. Arthur Rodgers (LLNL), and Prof. James Rector (UCB and LBNL)

**Seismic Probabilistic Risk Assessment of Power Energy Structures**, May 2016 - December 2018, International Joint Research Laboratory of Earthquake Engineering (ILEE), with Prof. Zhiguang Zhou (Tongji University),

**State of practice and state of the art in soil structure interaction modeling**, a UN IAEA Technical Document (TECDOC) development project, January 2016-August 2019, with Prof. Alain Pecker (ENPC, RS, GetS) and Dr. James Johnson (JJJ and Assoc.),

**A Modern Computational Framework for the Nonlinear Seismic Analysis of Nuclear Facilities and Systems**, June 2015 - May 2020, DOE, with Dr. David McCallen (UCOP, LBNL) and Prof. Ian Buckle (UNR)

**Nonlinear Soil-Structure Interaction (NLSSI) Analysis on the Moose Framework**, August 2014 - August 2015, INL

**Development of Analytical Tools for Soil-Structure Interaction Analysis**, January 2013 - March 2016, CNSC-CCNS

**Collaborative Research: Stochastic Nonlinear Dynamic Simulation for Prediction of Seismic Ground Motion** July 2012 – June 2016, NSF

**Integrated Performance and Safety Codes - Seismic Behavior of Embedded Small Modular Reactors** September 2011 – September 2012, DOE

**Methods, Computational Platform, and Case Studies for Time-Domain Soil-Structure-Interaction Modeling and Simulations Incorporating Complex Seismic Loads** September 2010 – September 2015, US-NRC

**Assessment of Seismic Input and Soil Structure Interaction for Deeply Embedded, Large Foundations**, July 2010 - March 2011, CNSC

**Comparison of 2D vs 3D Slope Stability for the Wolf Creek Dam**, March 2010 - June 2010, USACE

**Elastic-Plastic Modeling and Simulation of Intact Rock for Shock Loading**, June 2009 - February 2010, DTRA

**Time Domain Soil-Structure-Interaction (SSI) Modeling Topics: Investigation of Analysis Methods to Incorporate Multi-Dimensional Loading and Incoherent Ground Motion in Soil-Structure-Interaction Analysis**. September 2009 - October 2010, US-NRC

**Amendment to: Computational Simulation of Stochastic Soils**. January 2009–August 2010, NSF

**Seismic Design Guidelines of Retaining Walls with/without Sound Wall**. June 2008– July 2010, with Prof. Lijuan Dawn Cheng (PI), Caltrans,

**Computational Geomechanics Tools for Soil–Structure Interaction Modeling, V.** October 2006–October 2007, NSF–PEER

**Computational Simulation of Stochastic Soils.** September 2006–August 2010, NSF

**Texas Advanced Computing Center Resources Award**, 50,000 CPU– hours, November 2006. With Prof. Sharon Wood (UT).

**Amendment to: Design Guidelines for Foundation Rocking of Bridge Piers**, July 2006 – December 2007, with Prof. Stephen Mahin (PI, UCB) and Bruce Kutter, Caltrans,

**Computational Geomechanics Tools for Soil–Structure Interaction Modeling, IV.** February 2006–October 2006, NSF–PEER # 2212005 (National Science Foundation, Pacific Earthquake Engineering Research Center),

**Center for Information Technology Research in the Interest of Society (CITRIS) Research Support**, October 2005.

**San Diego Supercomputing Center NEES Computational Resources Award**, 60,000 CPU– hours, November 2005.

**TeraGrid Wide Roaming Access**, Computational Resources Award, 30,000 CPU– hours, October 2005.

**San Diego Supercomputing Center DAC Award**, Datastar Computational Resources, 10,000 CPU–hours, February 2005.

**Computational Geomechanics Tools for Soil–Structure Interaction Modeling, III.** October 2004–October 2005, NSF–PEER

**National Parallel Super–Computer Resources Award**, startup award on NERSC (National Energy Research Scientific Computing Center) SP parallel computer Seaborg (at Lawrence Berkeley National Lab), 20,000 SP-equivalent hours and 5,000 Storage Resource Units, October 2004.

**Design Guidelines for Foundation Rocking of Bridge Piers**, July 2004 – June 2006, with Profs. Stephen Mahin (PI, UCB) and Bruce Kutter, Caltrans,

**Collaborative Research: Demonstration of NEES for Studying Soil-Foundation-Structure Interaction.** September 2003–August 2005, with Prof. Bruce Kutter and Dr. Dan Wilson, NSF

**Computational Geomechanics Tools for Soil–Structure Interaction Modeling, II.** October 2003–October 2004, NSF–PEER # 2212003 (National Science Foundation, Pacific Earthquake Engineering Research Center),

**U. S. Participation at the High Performance Computing Workshop in Parallel Finite Element Analysis; September 1-5 2003; Manchester University, UK..** August 2003 - June 2004, NSF

**Micromechanical Modeling of Asphalt Pavement Material.** July 2003 - June 2004, with Prof. Niels Jensen (PI), UC Pavement Research Center, Richmond Field Station,

**Computational Geomechanics Tools for Soil–Structure Interaction Modeling, I.** October 2002–October 2003, NSF–PEER

**Earthquake Response of Bridge Abutment Backfills Constructed with Tire Shreds.** June 2002–July 2004, The California Integrated Waste Management Board,

**3D Soil Simulation Models in OpenSees.** October 2001–October 2002, NSF–PEER

**I-880 Testbed Simulation.** October 2001–October 2003, with Prof. Sashi Kunnath (PI) NSF–PEER (National Science Foundation, Pacific Earthquake Engineering Research Center),

**Simulation of Soil-Foundation-Structure Interaction for Deep Foundations.** October 2001–October 2003, with Prof. Ross Boulanger (PI) NSF–PEER (National Science Foundation, Pacific Earthquake Engineering Research Center).

**Summer Research Grant.** Academic Senate, University of California, Davis. April 2001,

**Development of Geotechnical Capabilities in G3 Finite Element Platform.** May 2000–October 2001, NSF–PEER

**Centrifuge Characterization and Numerical Modeling of the Dynamic Properties of Tire Shreds for use as Bridge Abutment Backfill.** September 1999 – May 2000, California Integrated Waste Management Board.

**EERI Young Professional Travel Grant .** December 1998,

**General Motors Corporation and General Motors Foundation, Student Projects for Engineering Experience and Design (SPEED): Small Scale Parallel Finite Element Computations, Hardware and Software Issues,** building of a Beowulf class parallel computer from commodity PC hardware. Numerical computations on parallel computers. December 1997,

## 8 Advising and Supervising–Related Activities

### Current Collaborators and Students (chronologically ordered)

**Post-Doc: Dr. Fangbo Wang,** (2018–present) *Topics in Probabilistic Earthquake Soil Structure Interaction Modeling and Simulation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

**Ph.D. Student: Mr. Hexiang Wang,** (2016–present) *Topics in Earthquake Soil Structure Interaction Modeling and Simulation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

**Ph.D. Student: Mr. Han Yang,** (2015–present) *Topics in Computational Mechanics Modeling and Simulation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

**Ph.D. Candidate: Mr. Yuan Feng,** (2014–present) *Topics in Earthquake Soil Structure Interaction Modeling and Simulation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

**Visiting Researcher: Ms. Güneş Babagiray,** (2018–2019) *Static and Dynamic Behavior of Buried Pipes*, University of California, Davis. PhD Student at Gazi University, Ankara, Turkey.

### Past Collaborators and Students:

**Post-Doc, Staff Scientist: Dr. Floriana Petrone,** (2015–2018) *A Modern Computational Framework for the Nonlinear Seismic Analysis of Nuclear Facilities and Systems*, collaborator, Environmental and Earth Sciences Area, Lawrence Berkeley National Laboratory.



**Staff Scientist: Dr. Francis McKenna**, (2015–2018) *A Modern Computational Framework for the Nonlinear Seismic Analysis of Nuclear Facilities and Systems*, collaborator, Environmental and Earth Sciences Area, Lawrence Berkeley National Laboratory.

**Post-Doc: Dr. Jenna Wong**, (2015–2018) *A Modern Computational Framework for the Nonlinear Seismic Analysis of Nuclear Facilities and Systems*, collaborator, Environmental and Earth Sciences Area, Lawrence Berkeley National Laboratory.

**Ph.D.: Mr. You Chen Chao**, (2007–2017) *Probabilistic Framework for Computational Simulations of Seismic Ground Motions*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

**PhD, Post-Doc: Dr. José Abell**, (2011–2016, 2016) *Computational Systems for Earthquake-Soil-Structure Interaction Modeling and Simulations, Stochastic Modeling and Simulation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently: Associate Professor, University of Andes, Santiago, Chile.

**Post-Doc, Visiting Professor: Dr. Federico Pisanò**, (2012–2013, 2014, 2015) *Topics in Earthquake-Soil-Structure Interaction with Uncertainties*, Post-Doctoral Associate, Department of Civil and Environmental Engineering, University of California, Davis. Currently Assistant Professor, Delft University of Technology, Delft, The Netherlands.

**Visiting Researcher: Mr. Chao Luo**, (2013–2015) *Dynamic Earthquake Soil/Rock Structure Interaction for Large Bridges*, Adviser, Department of Civil and Environmental Engineering, University of

**Visiting Researcher: Mr. Kohei Watanabe**, (2012–2014) *Dynamic Earthquake Soil/Rock Structure Interaction for Nuclear Power Plants*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Staff Engineering, Shimizu Corporation, Tokyo, Japan.

**Ph.D., Post-Doc: Dr. Kallol Sett**, (2003–2007, 2007–2009) *Probabilistic Elasto-Plasticity and its Application in Finite Element Simulations of Stochastic Elastic-Plastic Boundary Value Problems*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Assistant Professor, University of Buffalo, Buffalo, NY, USA.

**Ph.D., Post-Doc: Dr. Zhao Cheng**, (2002–2006, 2006–2007) *Computational Inelastic Geomechanics of Dry and Saturated Geomaterials in Small and Large Deformations*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently: FLAC3D project lead, Itasca Consulting Group, Minneapolis, MN, USA.

**Post-Doc: Dr. Ingrid Hotz**, (2003–2004) *Tensor field visualizations*, Post-Doctoral Associate, collaborator, Center for Image Processing and Integrated Computing (CIPIC), University of California, Davis. Currently, Professor in Interactive Visualization, Linköping University, Linköping, Sweden.

**Post-Doc: Dr. Feng Xiong**, (2002–2003) *Grid of Modeling and Computational Resources*, visiting Post-Doctoral Researcher from Sichuan University, China, collaborator, Department of Civil and Environmental Engineering, University of California, Davis. Currently Professor, Sichuan University, China.

**Ph.D., Post-Doc: Dr. Zhaohui Yang**, (1998–2002, 2002–2003) *Computational Tools for Analysis of Static and Dynamic Soil-Structure Interaction Problems*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Professor, University of Alaska, Anchorage.

- Ph.D., Post-Doc: Mr. Nima Tafazzoli**, (2007–2012, 2012–2013) *Topics in Earthquake–Soil–Structure Interaction*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis, Post-Doc, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Senior Staff Engineer, ABA Engineering, Vancouver, BC, Canada.
- Ph.D.: Dr. Alisa Neeman**, (2005–2009) *Visualization Techniques for Computational Mechanics*, co-Adviser with Professor Alex Pang, UCSC, Department of Computer Sciences, University of California, Santa Cruz. Currently, Senior Staff Member, University of Buffalo (SUNY) Center for Computational Research, Buffalo, NY, USA.
- Ph.D.: Dr. Mahdi Taiebat**, (2004–2008) *Advanced Elastic-Plastic Constitutive and Numerical Modeling in Geomechanics*, co-Adviser with Professor Yannis Dafalias, Department of Civil and Environmental Engineering, University of California, Davis. Currently Associate Professor, University of British Columbia, Canada.
- Ph.D.: Dr. Guanzhou Jie**, (2003–2007) *High Performance Computational Geomechanics and Applications to the Soil–Foundation–Structure Interaction Problems*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Senior Financial Engineer, Wachovia Corporation, New York, NY, USA.
- M.S.: Mr. Sumeet Kumar Sinha**, (2015–2017) *Concrete Soil Contact Modeling*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis, CA, USA.
- M.S.: Ms. Fatemah Behbehani**, (2015–2017) *Theoretical and Numerical Modeling of Unsaturated Soil Using Fully Coupled Finite Element Formulation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis, CA, USA.
- M.S.: Mr. Konstantinos Karapiperis**, (2013–2015) *Intrusive Stochastic Inelasticity*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, PhD student Caltech, Pasadena, CA, USA.
- M.S.: Mr. Justin Anderson**, (2012–2014) *High Performance Constitutive Modeling and Simulations Using Template Metaprograms*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Gregor Vilhar**, (2012) *Computational Systems for Modeling of Soils and Structures*, visiting M.S. student from the Institute for mining, geotechnology and environment, Slovenia, co-supervisor, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Chang-Gyun Jeong**, (2010–2013) *Nonlinear Earthquake-Soil-Structure Interaction of Nuclear Power Plants*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Staff Engineer, Golder and Assoc., Vancouver, BC, Canada.
- M.S.: Mr. Benjamin Aldridge**, (2011–2013) *Rotational Seismic Ground Motions and Their Influence on Soil-Structure-Interaction Modeling*, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Giorgos Perikleous**, (2008–2011) *Computational Modeling and Simulations of Dynamic Soil–Structure Interaction*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Senior Staff Engineer, Cathie Associates, Paris, France.

- M.S.: Ms. Charikleia Prassa**, (2008–2011) *Design of Dynamic Soil–Structure Interaction Experiments*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis, Currently PhD student at NTUA.
- M.S.: Ms. Panagiota Tasiopoulou**, (2008–2010) *Verification and Validation of Liquefaction Numerical Simulations*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis, Ph.D. Currently a PhD student at NTUA.
- M.S.: Mr. Jose Ugalde**, (2005–2008) *Rocking of Foundations and its Implications on Seismic Behavior of Bridges*, co–Adviser with Professor Bruce Kutter, Department of Civil and Environmental Engineering, University of California, Davis. Currently, Staff Engineer, Fugro Assoc., Oakland, CA, USA.
- M.S.: Mr. George Hu**, (2005–2006) *Seismic Energy Dissipation of Rocking Bridge Foundations*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Horacio Tapia**, (2003–2005) *Micromechanical Modeling of Asphalt Concrete*, co–Adviser with Professor Niels Grönbech–Jensen, Department of Applied Sciences, University of California, Davis.
- M.S.: Mr. Qing Liu**, (2003–2005) *Verification and Validation of Fully Coupled, Solid–Fluid Behavior of Soils*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Matthias Preisig**, (2003–2005) *Nonlinear Finite Element Analysis of Dynamic Soil–Foundation–Structure Interaction*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. PhD, HTL, Lausanne, Switzerland.
- M.S.: Ms. Ritu Jain**, (2003–2004) *Distributed Parallel Simulations Tools in Computational Geomechanics*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Ms. Jinxiu Liao**, (2001–2003) *Domain Reduction Methods in Seismic Modeling of Inelastic Soil–Structure Interaction Problems, Formulation and Implementation*, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Vladimir Vukadin**, (2002) *Anisotropic Material Models in Computational Geomechanics*, visiting M.S. student from the Institute for mining, geotechnology and environment, Slovenia, co-supervisor, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Ms. Xiaoyan Wu**, (2000–2002) *Fully Coupled, Solid–Fluid Behavior of Soils, Formulation and Implementation*, M.S. Thesis, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Tiejun Li**, (2000–2001) *Distributed Parallel Computations in Geomechanics*, M. S. Thesis, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.
- M.S.: Mr. Jan Frey**, (2000) *Analysis of tensor field topology for simulated earthquake data*, visiting M.S. student from the department of Computer Science, University of Kaiserslautern, Germany, co-supervisor, Center for Image Processing and Integrated Computing (CIPIC), University of California, Davis.
- Under–Grad: Mr. William Max Cunha Gaspar**, (2016) *Earthquake Records, 3D Characterization*, Department of Civil and Environmental Engineering, University of California, Davis.
- Under–Grad: Mr. Rafael Siero**, (2008–2011) *Aspects of Computational Modeling in Solid and Structural Mechanics*, Department of Civil and Environmental Engineering, University of California, Davis.

**Under-Grad: Mr. Nathan Borgo**, (2010–2011) *Aspects of Computational Modeling in Solid and Structural Mechanics*, Department of Civil and Environmental Engineering, University of California, Davis.

**Under-Grad: Mr. Benjamin Aldridge**, (2010–2011) *Aspects of Computational Modeling in Solid and Structural Mechanics*, Department of Civil and Environmental Engineering, University of California, Davis.

**Under-Grad: Ms. Alice Ng**, (2008–2009) *Aspects of Computational Modeling in Solid and Structural Mechanics*, Adviser Department of Civil and Environmental Engineering, University of California, Davis.

**Under-Grad: Mr. Ian Tucker**, (2003–2007) *Distributed Computational Environments: Hardware and Software Experiments*, Undergraduate Student: Researcher, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

**Under-Grad: Mr. Wai Ching Sun**, (2003–2005) *Performance Based Simulations Tools for Soil–Foundation–Structure Interaction*, Undergraduate Student: Researcher, Adviser, Department of Civil and Environmental Engineering, University of California, Davis. Currently Assistant Professor, Columbia University, New York, NY, USA.

**Under-Grad: Mr. Kevin Murakoshi**, (2002–2003) *GLOBUS Distributed Computational Environment*, Computer Science Undergraduate Student: Researcher, Adviser, Department of Civil and Environmental Engineering, University of California, Davis.

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## 9 Professional Activities

### Conferences

**Minisymposia organizer**, 12th International Conference on Applications of Statistics and Probability in Civil Engineering, Vancouver, Canada, July 12-15, 2015

**Guest Editor**, Nuclear Engineering and Design, Special Issue of SMiRT-22 in San Francisco: Improving Safety and Reliability of Nuclear Energy, 2014.

**Minisymposia organizer and co-chairman**, *Dynamic Soil Structure Interaction Modeling and Simulation*, 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2013), Kos, Greece, 12-14 June 2013.

**Minisymposia organizer and co-chairman** *Stochastic/Probabilistic Modeling and Simulations in Computational Mechanics*, South-East European Conference on Computational Mechanics (SEECCM 2013), Kos, Greece, 12-14 June 2013.

**Scientific Committee Member**, 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2013), Kos, Greece, 12-14 June 2013.

**Scientific Committee Member**, South-East European Conference on Computational Mechanics (SEECCM 2013), Kos, Greece, 12-14 June 2013.

**Editorial Board Member**, The Third International Conference on Parallel, Distributed, Grid and Cloud Computing for Engineering, Pećs, Hungary, 25-27 March 2013.

**Minisymposia organizer and co-chairman**, *New Trends in Computational Geomechanics*, Tenth World Congress on Computational Mechanics: 8 -13 July 2012, São Paulo, Brazil, with Professors Dorival Pedroso, Kristian Krabbenhoft, Jose E Andrade, Marcio A Murad, Ronaldo Borja, Leonardo Guimarães, Lyesse Laloui and Richard Regueiro.

- Minisymposia organizer and co-chairman**, Computational Geomechanics, 11th U.S. National Congress on Computational Mechanics (USNCCM0-11), July 25-29, 2011, in Minneapolis, Minnesota, with Professors Stein Sture, Ronaldo Borja and Richard Regueiro.
- Scientific Committee Member**, 3rd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2011), Corfu, Greece, 26-28 May 2011.
- Editorial Board Member**, The Second International Conference on Parallel, Distributed, Grid and Cloud Computing for Engineering, Ajaccio, Corsica, France, 12-15 April 2011.
- Member of Technical Programme Committee**, Organization for Economic Co-operation and Development (OECD) - Nuclear Energy Agency (NEA), International Atomic Energy Agency (IAEA)/International Seismic Safety Centre (ISSC) Workshop on "Soil Structure Interaction (SSI) Knowledge and Effect on the Seismic Assessment of NPPs Structures and Components", Ottawa, Canada, 6-8 October 2010,
- Technical Advisory Committee Member**, New Frontiers in Computational Geotechnics (NFCom-Geo) Workshop, Brisbane, Australia, 26-27 June 2010.
- Minisymposia organizer and chairman**, *Minisymposia on Dynamic Soil-Structure Interaction*, 2nd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2009), Island of Rhodes, Greece, 22-24 June 2009.
- Scientific Committee Member**, Special Interest Conference on Computational Mechanics (SEECCM 2009), Rhodes, Greece on 22-24 June 2009.
- Minisymposia organizer and co-chairman**, *Stein Sture Minisymposia on Geomechanics*, Inaugural International Conference of the Engineering Mechanics Institute (EM08), Minneapolis, Minnesota May 18-21, 2008, with Professor Kaspar Willam.
- Minisymposia organizer and co-chairman**, *Computational Geomechanics*, Eight World Congress on Computational Mechanics: June 30th–July 3rd, 2008, Venice, Italy, with Professors Stein Sture, Fusao Oka, Ronaldo Borja, Claudio Tamagnini and Richard Rigueiro.
- Minisymposia organizer and co-chairman**, *Computational Geotechnics*, Ninth U.S. National Congress on Computational Mechanics (9USNCCM), July 23-26, 2007, in San Francisco, California, with Professors Stein Sture, Ronaldo Borja and Richard Regueiro,
- Minisymposia organizer and chairman**, *Minisymposia on Dynamic Soil-Structure Interaction*, 1st International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2007), 13–16 June, 2007, Rethymno, Crete, Greece.
- Minisymposia organizer and co-chairman**, *Computational Geomechanics*, Seventh World Congress on Computational Mechanics, July 17-21, 2006, Los Angeles, California, U.S.A., with Professors Stein Sture, Fusao Oka, Ronaldo Borja and Richard Rigueiro.
- Member of the Scientific Committee** for the First South-East European Conference on Computational Mechanics (SEECCM 06), Kragujevac, Serbia and Montenegro, 28-30 June 2006.
- Member of the International Advisory Committee** for the Second International Congress on Computational Mechanics and Simulation (ICCMS-06), Guwahati, India, December 2006.
- Minisymposia organizer and co-chairman**, *Computational Geotechnics*, Eighth U.S. National Congress on Computational Mechanics (8USNCCM): July 24-28, 2005, at Austin, Texas, with Professors Stein Sture, Ronaldo Borja, Claudio Tamagnini and Dr. Richard Regueiro,
- Minisymposia organizer and co-chairman**, *Computational Geotechnics*, Seventh U.S. National Congress on Computational Mechanics (USNCCM7): July 27-31, 2003, Albuquerque, New Mexico, with Professors Stein Sture, Ronaldo Borja, Claudio Tamagnini and Dr. Richard Regueiro,

**Minisymposia organizer and co-chairman (invited)**, *Computational Geotechnics*, Fifth World Congress on Computational Mechanics, July 7-12, 2002, Vienna, Austria, with Professor Stein Sture,

**Minisymposia organizer and co-chairman**, *Computational Plasticity*, ASCE 15th Engineering Mechanics Conference June 2-5, 2002, Columbia University, New York City, U.S.A., with Professor Majid Manzari,

**Minisymposia organizer and co-chairman**, *Geotechnical Applications*, Sixth U.S. National Congress on Computational Mechanics, August 1-4, 2001, Dearborn Michigan, with Professor Stein Sture,

**Session organizer and co-chairman**, *Soil Plasticity*, 8th International Symposium on Plasticity, July 2000, Whistler Resort, British Columbia, Canada, with Professor Dunja Perić

**Minisymposia organizer and co-chairman**, *Geotechnical Applications*, Fifth U.S. National Congress on Computational Mechanics: five sessions, August 1999, Boulder Colorado, with Professor Stein Sture,

### Workshops

**Community Workshop on Computational Simulation and Visualization Environment for NEES**, Co-organizer with Professors Pauline Baker, Philip Liu, Steve Mahin, Kim Mish, Kim Roddis, November 2003, University of Kansas in Lawrence, Kansas,

**PEER's Earthquake Engineering Scholars' Course: Public Policy**, Organizer, University of California, Davis, November 7-9, 2003,

**High Performance Computing Summer School in Parallel Finite Element Analysis**, Co-organizer with Professor Ian Smith, Manchester University, Manchester U.K., 1st - 5th September 2003,

**PEER's Earthquake Engineering Scholars' Course: Geotechnical Earthquake Engineering**, Organizer, University of California, Davis September 28-30, 2001,

### Professional Societies

**EMI** (Engineering Mechanics Institute) Editor of the EMI Newsletter, 2008 – 2010

**USUCGER** (United States Universities Council on Geotechnical Engineering Research), Webmaster and email list maintainer ([www.usucger.org](http://www.usucger.org)), 1999 – 2003

**ASCE** (American Society of Civil Engineers), Inelastic Committee member 1999 – 2003

**CUREe** (Consortium of Universities for Research in Earthquake Engineering), Research Committee member, 1999 – 2003

**PEERC** (Pacific Earthquake Engineering Research Center), Educational Committee member, 1999 – 2004.

### Editorial and Advisory Boards

Member of the Advisory Board, *International Journal for Numerical and Analytical Methods in Geomechanics* (2003-present)

Member of the Editorial Board, *Coupled Systems Mechanics* (2012-2015)

Member of the Advisory Panel, *Geotechnique Letters* (2013-2014)

Member of the Editorial Board, *Journal of Serbian Society for Computational Mechanics* (2005-2010)

Member of the Editorial Board, *Scientific Technical Review* (2005-2010)

Member of the Editorial Board, ASCE Journal of Computing in Civil Engineering (2008-2012)

### **Journal Reviewer**

International Journal for Numerical and Analytical Methods in Geomechanics  
International Journal for Mechanics of Cohesive-Frictional Materials  
International Journal for Numerical Methods in Engineering  
International Journal for Computer Methods in Applied Mechanics and Engineering  
International Journal for Solids and Structures  
International Journal for Computers and Geotechnics  
International Journal for Computer–Aided Civil and Infrastructure Engineering  
Engineering Computations: International Journal for Computer–Aided Engineering and Software  
International Journal of Computers in Physics  
International Journal of Engineering with Computers  
International Journal for Earthquake Engineering & Structural Dynamics  
Transport in Porous Media  
Journal of Computing in Civil Engineering  
ASCE Journal of Engineering Mechanics  
ASCE Journal of Geotechnical and Geoenvironmental Engineering  
ASCE Journal of Structural Engineering  
ASCE Journal of Cold Regions Engineering  
ASCE Journal of Computing in Civil Engineering  
ASME Journal of Applied Mechanics  
ASME Journal of Computational and Nonlinear Dynamics  
Earthquake Spectra  
IEEE Transactions on Visualization and Computer Graphics  
Physics A: Statistical Mechanics and its Applications

### **Book Reviewer**

John Wiley & Sons, Inc.

### **Proposal Reviewer**

National Science Foundation

- \* Panel review: April 2001, May 2002.
- \* Mail review: September 2001, June 2003, February 2004, March 2005, May 2005, May 2006, December 2007, September 2012, October 2012, April 2014, November 2015.

United States Civilian Research and Development Foundation

- \* Mail review: May 2001.

The Petroleum Research Fund, American Chemical Society

- \* Mail review: April 2003.

United States Department of Agriculture

- \* Mail review: December 2003, May 2005  
United States Defense Threat Reduction Agency, Basic Research Program,
  - \* Online review: September 2009.
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## 10 Services to the University

### Department, College and University Committees

- Member**, College of Engineering Research and Library committee, UCD, 2015-2016, 2017-present
  - Member**, Academic Senate, Library committee, UCD, 2016-present
  - Member**, Computer committee, CEE Department, UCD, 2017-present
  - Member**, Academic Senate, Undergraduate Instruction & Program Review committee UCD, 2015-present
  - Chair**, College of Engineering Research and Library committee, UCD, 2016-2017
  - Chair**, Computer committee, CEE Department, UCD, 2013-2017
  - Chair**, Academic Senate Committee on Information Technology, UCD, 2013-2015
  - Member**, Search Committee, CEE Department, UCD, 2004-2005, 2015-2016
  - Member**, Academic Senate Executive Council, UCD, 2014-2015
  - Member**, The University Committee on Computing and Communications, UC, 2013-2015
  - Member**, Campus Council for Information Technology, UCD, 2013-2015
  - Member**, Computer committee, CEE Department, UCD, 1999-2002, 2004-2005, 2006-2012
  - Member**, College of Engineering Awards committee, UCD, 2012-2013
  - Member**, Curriculum committee, CEE Department, UCD, 2011-2014
  - Member**, Academic Senate Committee on Information Technology, UCD, 2012-2013
  - Member**, Faculty Advisory Committee on Revenue Opportunities, UCD, 2011-2012
  - Member**, Computer committee (CEE Department, UCD, 2011-2013
  - Member**, Academic Senate, Graduate Council's Courses Committee, UCD, 2009-2011
  - Member**, Graduate program committee (CEE Department, UCD, 2001-2002, 2003-2005, 2009-2010
  - Member**, Search Committee, Department of Geology, UCD, 2007-2008
  - Member**, College of Engineering Committee on Program Planing and Assessment, UCD, 2003 - 2004
  - Member**, Scholarship and Award committee, CEE Department, UCD, 2000-2001
  - Faculty Advisor**, ASCE chapter, UCD, 1999-2004
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**Member** Student Projects for Engineering Experience and Design (SPEED) committee, Clarkson University, 1998-1999,

**Faculty Advisor** Clarkson Parallel Computing Team, Clarkson University, 1998-1999,

**Faculty Advisor** Clarkson Concrete Canoe Team, Clarkson University, 1998-1999,

**Member** Undergraduate committee, Clarkson University, 1997-1999

### **Dissertation and Thesis Committees**

**Chair**, M.S. committee, Ms. Fatemah Behbehani, July 2017, UCD (graduated under my guidance),

**Chair**, Ph.D. committee, Dr. José Antonio Abell Mena, March 2016, UCD (graduated under my guidance),

**Chair**, M.S. committee, Mr. Justin Anderson, March 2014, UCD (graduated under my guidance),

**Chair**, M.S. committee, Mr. Benjamin Aldridge, December 2013, UCD (graduated under my guidance),

**Chair**, M.S. committee, Mr. Chang-Gyun Jeong, March 2013, UCD (graduated under my guidance),

**Chair**, Ph.D. committee, Dr. Nima Tafazzoli, March 2012, UCD (graduated under my guidance),

**Member**, Ph.D. committee, Dr. Richard Armstrong, August 2010, UCD,

**Chair**, M.S. committee, Ms. Panagiota Tasiopoulou, March 2010, UCD (graduated under my guidance),

**Member**, Ph.D. committee, Dr. Alisa Neeman, September 2009, UCSC, (graduated under my co-guidance),

**Member**, Ph.D. committee, Dr. Mahadevan Ilankatharan, October 2008, UCD,

**Member**, Ph.D. committee, Dr. Yi Bian, October 2008, UCD,

**co-Chair**, Ph.D. committee, Dr. Mahdi Taiebat, September 2008, UCD, (graduated under my co-guidance),

**Member**, Ph.D. committee, Dr. Alireza Tabarei, September 2008, UCD,

**Member**, Ph.D. committee, Dr. Louie Yaw, August 2008, UCD,

**Member**, Ph.D. committee, Dr. Mili Selimotić, May 2008, UCD,

**Chair**, Ph.D. committee, Dr. Kallol Sett, September 2007, UCD (graduated under my guidance),

**Chair**, Ph.D. committee, Dr. Guanzhou Jie, March 2007, UCD (graduated under my guidance),

**Chair**, Ph.D. committee, Dr. Zhao Chang, November 2006, UCD (graduated under my guidance),

**Member**, Ph.D. committee, Dr. Sivapalan Gajan, August 2006, UCD

**Member**, Ph.D. committee, Dr. Mien Yip, November 2005, UCD

**member**, Ph.D. committee, Dr. Purnendu Narayan Singh, August 2005, UCD

**Member**, Ph.D. committee, Dr. Shin-Tai Song, August 2005, UCD

**Chair**, M.S. committee, Dr. Matthias Preisig, April 2005, UCD

**Member**, M.S. committee, Ms. Martin Walker, February 2005, UCD

**Member**, M.S. committee, Ms. Raquel Miller, December 2004, UCD

**Member**, Ph.D. committee, Dr. Stefano Berton, September 2003, UCD

**Member**, Ph.D. committee, Dr. Sayed Ali Bastani, February 2003, UCD

**Member**, M.S. committee, Mr. Nicholas Rocco, February 2003, UCD

**Chair**, Ph.D. committee, Dr. Zhaohui Yang, September 2002, UCD (graduated under my guidance),

**Chair**, M.S. committee, Ms. Xiaoyan Wu, September 2002, UCD (graduated under my guidance),

**Member**, M.S. committee, Mr. Segaran Logeswaran, September 2002, UCD

**Member**, M.S. committee, Mr. David Palmer, June 2002, UCD

**Chair**, M.S. committee, Mr. Tiejun Li, June 2001, UCD (graduated under my guidance),

**Member**, M.S. committee, Dr. Sivapalan Gajan, December 2001, UCD

**Member**, M.S. committee, Mr. Garret Broughton, June 2001, UCD

**Member**, M.S. committee, Mr. Tim Wehling, January 2001, UCD

**Member**, M.E. committee, Mr. Curt Taras, December 2000, UCD

**Member**, M.S. committee, Ms. Berna Sunman, May 2000, UCD

**Member**, M.S. committee, Mr. Karthik Subramanian, June 2000, UCD

**Member**, M.S. committee, Mr. Mien Yip, September 2000, UCD

**Member**, M.S. committee, Mr. Jeff Tomure, July 2000, UCD

**Member**, Ph.D. committee, Dr. Ariyaputhirar Balakrishnan, November 1999, UCD

**Member**, Ph.D. committee, Dr. Ian Hazen, November 1998, Clarkson University

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## 11 Honors, Awards and Honorary Societies

**“Invited Keynote Speaker”** 2nd Workshop on Best PSHANI, Cadarache-Château, Cadarache, France, 14-16 May 2018,

**“Invited Plenary Speaker”** 6th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece, 15-17 June 2017.

**“Invited Speaker”** Institute for Testing of Materials of Serbia, Association of Civil Engineers of Serbia, Society for Earthquake Engineering and Engineering Geology, Serbian Society of Soil Mechanics and Geotechnical Engineering and Civil Engineering Faculty of the University of Belgrade, Belgrade, Serbia, 16th December 2016.

**“Invited Speaker”** International Laboratory for Earthquake Engineering, Tongji University, Shanghai, China, 9-11 December 2016.

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- “Invited Expert”** United Nations, International Atomic Energy Agency, Earthquake Response of Structures, 2016, 2017.
- “Invited Semi-Plenary Speaker”** 5th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Crete, Greece, 25 - 27 May 2015.
- “Invited Panelist and Speaker”** American Nuclear Society, 2014 Winter Meeting, Panel on “Global Seismic Safety Issues After the Fukushima Daiichi Accident: On Identification and Treatment of Uncertainty about Seismic Issues”, Anaheim, California, November 9-13, 2014,
- “Invited Speaker”** Department of Energy, presentation to the Secretary of Energy, Washington DC, September 15th, 2014,
- “Invited Semi-Plenary Speaker”** 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Kos, Greece, 12-14 June 2013.
- “Invited Speaker”** Quake Summit 2011 - Earthquake & Multi-Hazards Resilience: Progress and Challenges, Buffalo, NY., June 9-11, 2011,
- “Invited Keynote Speaker”** Organization for Economic Co-operation and Development (OECD)/OECD - Nuclear Energy Agency (NEA), International Atomic Energy Agency (IAEA)/International Seismic Safety Centre (ISSC) Workshop on “Soil Structure Interaction (SSI) Knowledge and Effect on the Seismic Assessment of NPPs Structures and Components”, Ottawa, Canada, 6-8 October 2010,
- “Invited Speaker”** Workshop on Ground Shock in Faulted Media, McLean, Virginia, 12-15 January 2010.
- “Invited Speaker”** International Workshop on Soil-Foundation-Structure Interaction, University of Auckland, New Zealand, 26-27 November 2009.
- “Invited Semi-Plenary Speaker”** 2nd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, 22-24 June 2009.
- “Invited Speaker”** A Multidisciplinary Scientific Workshop on Deformation and Failure of Geomaterials, Masseria Salamina, Brindisi, Italy, 14-19 June 2009.
- “Invited Speaker”** Association of Pacific Rim Universities Symposium: Multi-Hazard Around the Pacific Rim, University of California, Davis, August 2008.
- “Invited Speaker”** University of Southern California Seminar Series, USC, December 2007.
- “Invited Speaker”** IX International Conference on Computational Plasticity, Fundamentals and Applications, COMPLAS 2007, September 5-7, 2007, Barcelona, Spain.
- “Invited Keynote Speaker”** CompDyn2007, Computational Methods in Structural Dynamics and Earthquake Engineering, 13-16 June, 2007, Rethymno, Crete, Greece.
- “Invited Speaker”** University of Belgrade, Faculty of Civil Engineering Seminar Series, 6 June 2007, Belgrade, Serbia.
- “Invited Speaker”** Fourth Joint United States-Japan Workshop on Soil-Structure Interaction, March 28-30, 2007, Tsukuba, Japan.
- “Invited Plenary Speaker”** , First South-East Conference on Computational Mechanics SEECCM 06, Kragujevac, Serbia and Montenegro, 28-30 June 2006.

- “Invited Speaker”** , Second Japan-U.S. Workshop on Testing, Modeling and Simulation in Geomechanics, Kyoto, Japan, September 8-11, 2005.
- “Invited Speaker”** University of California at Los Angeles Seminar Series, UCLA, May 2004.
- “Distinguished Educator”** , ASUCD Excellence in Education Award, (Associated Students of the University of California, Davis), May 2004, Davis, California.
- “Invited Speaker”** Third Joint United States-Japan Workshop on Soil-Structure Interaction, March 29-30, 2004, Menlo Park, California.
- “Invited Speaker”** First Japan-U.S. Workshop on Testing, Modeling, and Simulation in Geomechanics, June 27 - 29, 2003, Boston, Massachusetts.
- “Invited Speaker”** Scientific Computing Seminars Series, National Energy Research Scientific Computing Center, Lawrence Berkeley National Laboratory, August 2002.
- “Invited Keynote Lecturer”** Fifth World Congress on Computational Mechanics: **Computational Geotechnics**, July 2002, Vienna, Austria.
- “Invited Speaker”** University of California at San Diego, Structural Engineering Seminar Series, March 2002,
- “Invited Speaker”** Bay Area Scientific Computing Day 2002, March 2nd, 2002, Sandia National Laboratories, Livermore, California.
- “Invited Speaker”** International Workshop on Earthquake Simulation in Geotechnical Engineering, November 8–10th, 2001, The George S. Dively Center, Case Western Reserve University, Cleveland, Ohio.
- “Who’s Who”** in Science and Engineering, October 1998.
- “Who’s Who”** in Information Technology, June 1998.
- “Chi Epsilon”** National Civil Engineering Honor Society, December 1997.
- “Awardee, Serbian Academy of Science Fellowship”** for research project in Nonlinear Elasto–plastic Material Models, Belgrade, Yugoslavia, January 1992.
- “Awardee, Belgrade University Council Award”** for the highest grades at the Faculty of Civil Engineering, Belgrade University, Belgrade, Yugoslavia, June 1987.
- “Awardee, Professor Nesić Award”** for the best results in Technical Mechanics at the Faculty of Civil Engineering, Belgrade University, Belgrade, Yugoslavia, November 1986.
- “Awardee, Energoprojekt Engineering Company Scholarship”**, Belgrade, Yugoslavia, October 1985 - June 1989
- “Awardee, Mihajlo Petrović Alas Award”** for top results in Mathematics and Physics in Mathematical High School, Belgrade, Yugoslavia, May 1982.
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## 12 Technical Meetings

**ILEE Forum** International Laboratory for Earthquake Engineering (ILEE), Eight Kwang-Hua Forum on Innovations and Implementations in Earthquake Engineering Research Area, State Key Laboratory of Disaster Prevention in Civil Engineering, Tongji University, December 14th-16th, 2018, Shanghai, China,

**GeoMEast** Conference, November 24th-28th, 2018, Cairo, Egypt.

**Department of Energy (DOE) Natural Phenomena Hazards (NPH) Conference**, October 23rd-24th, 2018, North Bethesda, MD, U.S.A.

**National Academies of Sciences, Engineering, and Medicine** Committee on Geological and Geotechnical Engineering, Large Deformations Modeling and Simulations Meeting, October 22nd, 2018, Washington DC U.S.A.

**USBR**, Technical Meeting and Visit, August 22nd, 2018, Denver, CO, USA.

**13th WCCM**, World Congress on Computational Mechanics, July 22nd-27th, New York, NY, USA.

**11th NCEE**, National Conference on Earthquake Engineering, June 25th-29th 2018, Los Angeles, CA, USA,

**ENSI** Technical Meeting, May 18 2018, Brugg, Switzerland.

**ETH** Technical Meeting and Visit, May 17 2018, Zürich, Switzerland.

**Best-PSHANI** International Workshop on Best Practices in Physics-based Fault Rupture Models for Seismic Hazard Assessment of Nuclear Installations, May 14-16 2018, Château de Cadarache, France.

**ASCE-4/43 Standards Meeting**, May 3rd-4th, 2018, Chicago, IL, U.S.A.

**Pacific Earthquake Engineering Research (PEER) Center**, annual meeting, 19 January 2018, Berkeley, CA, USA.

**Ørsted Energy, ESSI for Energy Infrastructure**, Ørsted Energy Headquarters, 15 January 2017, Copenhagen, Denmark.

**UN-IAEA International Seismic Safety Centre (ISSC) Meeting**, United Nations (UN) – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, 12 January 2017, Vienna, Austria.

**UN-IAEA TECDOC Meeting**, United Nations (UN) – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, 9-11 January 2017, Vienna, Austria.

**Liquefaction Experiments and Analysis Projects (LEAP) for Validation, Workshop** 15 December 2017, Davis, CA, USA.

**Real ESSI Short Course** for professional practice, 12-14 December 2017, San Francisco, CA, USA.

**UN-IAEA Mission** to Slovenian Nuclear Safety Administration (SNSA): Training for Seismic Design and Assessment of Nuclear Power Plants, 14-16 November, 2017, Ljubljana, Slovenia.

**ASCE-4 Standards Meeting**, 2nd-3rd November, 2017, Las Vegas, NV, U.S.A.

**Structural Mechanics in Reactor Technology (SMiRT) 23 Conference**, 20th-25th August 2015, Busan, South Korea.

**International Laboratory for Earthquake Engineering (ILEE) Meeting**, State Key Laboratory of Disaster Prevention in Civil Engineering, Tongji University, 17th August, 2017, Shanghai, China,

**4th South-East European Conference on Computational Mechanics**, ECCOMAS Special Interest Conference, 3-5 July 2017, Kragujevac, Serbia.

**UN-IAEA TECDOC Meeting**, United Nations (UN) – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, 21-23 June, 2017, Vienna, Austria.

**6th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2015)**, 14-17 June 2017, Rhodes Island, Greece.

**CNerdWG** (Civil Nuclear Energy Research and Development Working Group meeting, USA-Japan), May 16th-18th, 2017, Idaho National Laboratory, Idaho Fall, ID, U.S.A.

**ASCE-4/43 Standards Meeting**, April 26th-28th, 2017, Reston, VA, CA, U.S.A.

**Department of Energy**, Office of Science, A Modern Computational Framework for the Nonlinear Seismic Analysis of Nuclear Facilities and Systems, Project Overview, February 27th, 2017, Germantown, MD, U.S.A.

**2017 Pacific Rim Forum, Earthquake Resilience of Nuclear Facilities**, 23rd-24th January 2017, University of California, Berkeley, CA, U.S.A.

**UN-IAEA TECDOC Meeting**, United Nations (UN) – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, December 13th-15th, 2016, Vienna, Austria.

**ILEE Forum** International Laboratory for Earthquake Engineering (ILEE), Seventh Kwang-Hua Forum on Innovations and Implementations in Earthquake Engineering Research Area, State Key Laboratory of Disaster Prevention in Civil Engineering, Tongji University, December 9th-11th, 2016, Shanghai, China,

**ASCE-4/43 Standards Meeting**, December 1st-2nd, 2016, Walnut Creek, CA, U.S.A.

**Department of Energy (DOE) Natural Phenomena Hazards (NPH) Conference**, October 18th-19th, 2016, Germantown, MD, U.S.A.

**Department of Energy**, National Nuclear Security Administration, A Modern Computational Framework for the Nonlinear Seismic Analysis of Nuclear Facilities and Systems, Project Overview, October 17th, 2016, Washington D.C., U.S.A.

**UN-IAEA TECDOC Meeting**, United Nations (UN) – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, October 3rd-5th, 2016, Vienna, Austria.

**ASCE-4/43 Standards Meeting**, July 14th-15th, 2016, Chicago, IL, U.S.A.

**Department of Energy, Office of Nuclear Energy**, Numerical Modeling and Simulations for Safety and Economy of Nuclear Facilities meeting, June 8th, 2016, Washington D.C., U.S.A.

**DOE Project Review Meeting**, 1st June 2016, UNR, Reno, NV, U.S.A.

- Department of Energy, Office of Science**, High Performance Computing for Seismic Behavior of Nuclear Facilities meeting, May 12th, 2016, Washington D.C., U.S.A.
- Canadian Nuclear Safety Commission** Technical Meeting, March 3-4, 2016 Ottawa, Ontario, Canada.
- UN-IAEA TECDOC Meeting**, United Nations (UN) – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, February 23rd-26th, 2016, Vienna, Austria.
- CNerdWG** (Civil Nuclear Energy Research and Development Working Group meeting, USA-Japan), Japanese Ministry of Economy, Trade and Industry (METI), January 26th-28th, 2016, Tokyo, Japan.
- Earthquake Soil Structure Interaction Modeling Meeting** Earthquake Research Institute (ERI), January 25th, 2016, Tokyo, Japan.
- CompGeoMech Discussion**, University of Washington, December 17th, 2015, Seattle, WA, U.S.A.
- DOE Project Design Review Meeting**, 11th December 2015, UCD, Davis, CA, U.S.A.
- SIGMA**, Seismic Ground Motions Assessment Symposium, November 23-25, 2015, Paris, France.
- BestPSHANI** International Workshop on Best Practices in Physics-based Fault Rupture Models for Seismic Hazard Assessment of Nuclear Installations, United Nations – International Atomic Energy Agency (IAEA) Headquarters, Vienna International Center, November 18-20 2015, Vienna, Austria.
- Canadian Nuclear Safety Commission** Technical Meeting, November 5-6, 2015 Ottawa, Ontario, Canada.
- International Scientific Collaboration Meeting at the Southwest Jiaotong University**, October 12-13 2015, Chengdu, China.
- DOE Project Meeting**, 2nd October 2015, UNR, Reno, NV, U.S.A.
- DOE Project Meeting**, 1st September 2015, UCD, Davis CA, U.S.A.
- Structural Mechanics in Reactor Technology (SMiRT) 23 Conference**, August 10th - 14th 2015, Manchester, UK.
- Canadian Nuclear Safety Commission** Technical Meeting, July 6th-7th, 2015, Ottawa, Ontario, Canada.
- DOE Project Meeting**, 23rd June 2015, UNR, Reno, NV, U.S.A.
- 2015 UC Pacific Rim Forum, Earthquake Resilience of Nuclear Facilities**, 8-9 June 2015, University of California, Berkeley, CA, U.S.A.
- 5th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2015)**, 25-27 May 2015, Crete Island, Greece.
- SCEC** Workshop on 3D Site Effects in Physics-Based Ground Motion Simulations May 5, 2015, Southern California Earthquake Center Headquarters, Los Angeles, CA, U.S.A.
- CNerdWG** (Civil Nuclear Energy Research and Development Working Group meeting, USA-Japan), January 27th-29th, 2015, Argonne National Laboratory, Argonne, IL, U.S.A.
- PRENOLIN 4th Workshop**, 15th-17th December, 2014, Nice, France.
- Canadian Nuclear Safety Commission** Technical Meeting, November 20th-21st, Ottawa, Ontario, Canada.

**American Nuclear Society, 2014 Winter Meeting**, November 9-13, 2014, Anaheim, CA, U.S.A.

**Department of Energy (DOE) Natural Phenomena Hazards (NPH) Workshop** October 21-22, 2014, Germantown, MD, U.S.A.

**Department of Energy**, Seismic Behavior of Nuclear Facilities meeting, September 15th, 2014, Washington D.C., U.S.A.

**UCD/FGG/IRGO Workshop on Development of Numerical Tools in Geotechnics**, 26-27th June 2014, Davis, CA, U.S.A.

**INL SSI Steering Committee Meeting**, 23rd June 2014, Salt Lake City, UT, U.S.A.

**Canadian Nuclear Safety Commission** Technical Meeting, 19-20th June 2014, Ottawa, Ontario, Canada.

**ASME SMR 2014 Symposium**, 15th-17th April, 2014, Washington, D.C., U.S.A.

**PRENOLIN 3rd Workshop**, 7th-8th April, 2014, Nice, France.

**Idaho National Laboratory** Technical Meeting 17-18th March 2014, Idaho Falls, ID, U.S.A.

**INL SSI Steering Committee Meeting**, 15th-16th, December, 2013, Idaho Falls, ID, U.S.A.

**PRENOLIN 2nd Workshop**, 4th-5th November, 2013, Nice, France.

**Canadian Nuclear Safety Commission** Technical Meeting, 24-25th October 2013, Ottawa, Ontario, Canada.

**Structural Mechanics in Reactor Technology (SMiRT) 22 Conference**, August 18th - 23rd 2013, San Francisco, CA, U.S.A.

**4th U.S. - China Workshop on Earthquake Engineering**, 7-8 August 2013, Reno, NV, U.S.A.

**4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn2013)**, 11-14 June 2013, Island of Kos, Greece.

**3rd South East European Conference on Computational Mechanics**, 11-14 June 2013, Island of Kos, Greece.

**Canadian Nuclear Safety Commission** Technical Meeting, 28th May 2013, Ottawa, Ontario, Canada.

**Canadian Nuclear Safety Commission** Technical Meeting, 4th February 2013, Ottawa, Ontario, Canada.

**Workshop on Analytical Methods for Seismic SSI Analysis**, PEER, January 9-10, 2013, University of California, Berkeley, CA, U.S.A.

**International Experts Meeting on Protection against Extreme Earthquakes and Tsunamis in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant**, September 4-7, 2012, Vienna, Austria.

**Idaho National Laboratory, Seismic Safety of Nuclear Power Plants, Modeling and Simulation**, July 16-17, 2012, Idaho Falls, ID, U.S.A.

**ASME Verification and Validation Symposium**, May 2-4, 2012, Las Vegas, NV, U.S.A.

**Geo-Congress 2012**, Geo Institute Annual Conference, March 25-29, 2012, Oakland, CA, U.S.A.



- DOE Nuclear Energy Advanced Modeling and Simulation Campaign (NEAMS), SHARP Integrated Performance and Safety Codes - Seismic - LLNL, Gap Workshop**, 27-28 February, 2012, Lawrence Livermore National Laboratory, Livermore CA, U.S.A.
- 21st Structural Mechanics in Reactor Technology (SMiRT) Conference**, November 6-11, 2011, New Delhi, India,
- 11th International Conference on Applications of Statistics and Probability in Civil Engineering, (ICASP11)**, August 1-4, 2011, ETH Zurich, Switzerland.
- 11th US National Congress on Computational Mechanics, (USNCCM11)**, July 25-28, 2011, Minneapolis, MN, U.S.A.
- Quake Summit 2011**, Earthquake & Multi-Hazards Resilience: Progress and Challenges, June 9-11, 2011, Buffalo, NY, U.S.A.
- Canadian Nuclear Safety Commission** Technical Meeting, 7th March 2011, Ottawa, Ontario, Canada.
- Quake Summit 2010**, NEES & PEER Annual Meeting, 8 – 9 October, 2010, San Francisco, CA, U.S.A.
- Organization for Economic Co-operation and Development (OECD) - Nuclear Energy Agency (NEA), International Atomic Energy Agency (IAEA)/International Seismic Safety Centre (ISSC) Workshop on "Soil Structure Interaction (SSI) Knowledge and Effect on the Seismic Assessment of NPPs Structures and Components"**, 6-8 October 2010, Ottawa, Ontario, Canada.
- Canadian Nuclear Safety Commission** Technical Meeting, 9th July 2010, Ottawa, Ontario, Canada.
- Wolf Creek Dam Foundation Remediation Project**, 19 – 21 April 2010, Wold Creek Dam site, KY, U.S.A.
- Real Time, Large Structure Monitoring Meeting**, 29 January - 2 February 2010, Dubai, United Arab Emirates.
- Earthquake Engineering Vision 2020 Workshop**, 25-26 January 2010, St. Louis, MO, U.S.A.
- Ground Shock in Faulted Media Workshop**, 12-15 January 2010, McLean, VA, U.S.A.
- International Workshop on Soil-Foundation-Structure Interaction**, 26-27 November 2009, University of Auckland, New Zealand.
- 2nd South East European Conference on Computational Mechanics**, 22-24 June 2009, Island of Rhodes, Greece.
- 2nd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn)**, 22-24 June 2009, Island of Rhodes, Greece.
- A Multidisciplinary Scientific Workshop on Deformation and Failure of Geomaterials**, 14-19 June 2009, Masseria Salamina, Brindisi, Italy.
- Association of Pacific Rim Universities Symposium: Multi-Hazard Around the Pacific Rim**, August 21st-22nd, 2008, Davis, CA, U.S.A.
- Eight World Congress on Computational Mechanics**, June 30th – July 4th, 2008, Venice, Italy.
- IV GEESD, Fourth Geotechnical Earthquake Engineering and Soil Dynamics Conference**, May 19-21st, 2008, Sacramento, CA, U.S.A.

- EMI, First International Conference of the Engineering Mechanics Institute**, May 19-21st, 2008, Minneapolis, MN, U.S.A.
- 4ICEGE, Fourth International Conference on Earthquake and Geotechnical Engineering**, 25-28 June, 2007, Thessaloniki, Greece.
- CompDyn2007, Computational Methods in Structural Dynamics and Earthquake Engineering**, 13-16 June, 2007, Rethymno, Crete, Greece.
- Fourth Joint United States-Japan Natural Resources Workshop on Soil-Structure Interaction**, March 28-30, 2007, Tsukuba, Japan.
- GeoDenver 2007**, Geo Institute Annual Conference, February 19-21, 2007, Denver, CO, U.S.A.
- Workshop on Fast Hybrid Simulations**, November 2-3, 2007, University of Colorado, Boulder, CO, U.S.A.
- Seventh World Congress on Computational Mechanics**, July 17-21, 2006, Los Angeles, CA, U.S.A.
- First South-East European Conference on Computational Mechanics (SEECCM 06)**, 28-30 June 2006, Kragujevac, Serbia.
- NEES Annual Meeting**, June 21-23, 2006, Washington, DC, U.S.A.
- University of California Office of the President Forum on Performance Based Design for Nuclear Energy Systems**, June 15-16, 2006, Doubletree Hotel, Berkeley, CA, U.S.A.
- The NSF – Johns Hopkins Workshop on Modeling and Simulations in Geotechnical Engineering**, November 3-4, 2005, The Johns Hopkins University, Baltimore, MD, U.S.A.
- Caltrans Bridge Conference 2005**, October 31st – November 1st 2005, Sacramento, CA, U.S.A.
- Library-Centric Software Design LCSD'05 Workshop**, October 16th, 2005, San Diego, CA, U.S.A.
- Second Japan-U.S. Workshop on Testing, Modeling and Simulation in Geomechanics**, September 8-11, 2005 Kyoto, Japan.
- Eighth U.S. National Congress on Computational Mechanics (8USNCCM)**, July 24-28, 2005, Austin, TX, U.S.A.
- Twenty Fifth Yugoslav Congress on Theoretical and Applied Mechanics**, June 1-3, 2005, Novi Sad, Serbia and Montenegro.
- 13th World Congress on Earthquake Engineering**, August 1-7, 2004, Vancouver, British Columbia, Canada.
- NEES Annual Meeting**, May 20-21, 2004, San Diego, CA, U.S.A.
- Third Joint United States-Japan Natural Resources Workshop on Soil-Structure Interaction**, March 29-30, 2004, Vallombrosa Center, Menlo Park, CA, U.S.A.
- International Workshop on Uncertainties in Nonlinear Soil Properties and their Impact on Modeling Dynamic Soil Response**, March 18-19, 2004, University of California Richmond Field Station, Richmond, CA, U.S.A.

- National Research Council of the National Academies Workshop**, Committee on Geological And Geotechnical Engineering in the New Millennium: Opportunities for Research and Technology Innovation, February 3–6, 2004, Beckman Center, Irvine, CA, U.S.A.
- High Performance Computing Summer School in Parallel Finite Element Analysis**, 1st - 5th September, 2003, Manchester University, Manchester, England, U.K.
- Short Course on Verification and Validation in Computational Mechanics**, by Dr. William Oberkampf, Sandia National Laboratories July 27th, 2003, Albuquerque, NM, U.S.A.
- Seventh U.S. National Congress on Computational Mechanics**, July 28th - 30th, 2003, Albuquerque, NM, U.S.A.
- First Japan-U.S. Workshop on Testing, Modeling, and Simulation in Geomechanics**, June 27 - 29, 2003, Boston, MA, U.S.A.
- NEES Annual Meeting**, May 21-22, 2003, Park City, UT, U.S.A.
- Pacific Earthquake Engineering Research Center**, 2003 Annual Meeting, March 7th and 8th, Palm Springs, CA, U.S.A.
- Fifth World Congress on Computational Mechanics, WCCM V**, July 7-12, 2002, Vienna, Austria.
- Bay Area Scientific Computing Day 2002**, March 2nd, 2002, Sandia National Laboratories, Livermore, CA, U.S.A.
- Pacific Earthquake Engineering Research Center**, 2002 Annual Meeting, January 17-18, 2002, Oakland, CA, U.S.A.
- International Workshop on Earthquake Simulation in Geotechnical Engineering**, November 8-10th, 2001, The George S. Dively Center, Case Western Reserve University, Cleveland, OH, U.S.A.
- Sixth U.S. National Congress on Computational Mechanics**, August 1-4th, 2001, Dearborn, MI, U.S.A.
- The 2001 Joint Summer Meeting** of American Society of Mechanical Engineers (ASME) American Society of Civil Engineers (ASCE) and Society of Engineering Science (SES), July 27–29th, 2001, San Diego, CA, U.S.A,
- International Workshop** on Deep Mixing Technology for Infrastructure Developments: Current Practice & Research Needs, July 17th, 2001, Oakland, CA, U.S.A.
- Pacific Earthquake Engineering Research Center**, Third Annual Meeting, January 25–26, 2001, Oakland, CA, U.S.A.
- GeoDenver 2000**, Geo Institute Annual Conference, August 5-8, 2000, Denver, CO, U.S.A.
- Pacific Earthquake Engineering Research Center**, Second Annual Meeting, May 23-24, 2000, Richmond, CA, U.S.A.
- 1999 Civil Engineering Conference & Exposition, ExCEED** Effective Teaching Seminar (by Richard Felder and Rebecca Brent), October 16-17, 1999, Charlotte, NC, U.S.A.
- Model Based Simulations Workshop**, National Science Foundation, June 24-25 1999, Arlington, VA, U.S.A.

- Pacific Earthquake Engineering Research Center**, First Annual Meeting, June 16-17, 1999, Richmond, CA, U.S.A.
- 13th Engineering Mechanics Specialty Conference**, American Society of Civil Engineers, June 13-15, 1999, Department of Civil Engineering, The Johns Hopkins University, Baltimore, MD, U.S.A.
- 51st EERI Annual Meeting**, February 3-6, 1999, San Diego, CA, U.S.A.
- USUCGER Workshop**, 14-17 November 1998, Newport, RI, U.S.A.
- 1998 ASCE Specialty Conference on Geotechnical Earthquake Engineering and Soil Dynamics**, August 3-6, 1998, University of Washington Seattle, WA, U.S.A.
- 14th International Symposium on Ice**, Clarkson University, July 27–31, 1998, Potsdam, NY, U.S.A.
- Thirteenth U.S. National Congress of Applied Mechanics**, University of Florida, June 21–26 1998, Gainesville, FL, U.S.A.
- Twelfth Engineering Mechanics Conference**, American Society of Civil Engineers, May 17–20, 1998, La Jolla, CA, U.S.A.
- The 1997 Joint Summer Meeting** of American Society of Mechanical Engineers (ASME) American Society of Civil Engineers (ASCE) and Society of Engineering Science (SES), Northwestern University, June 29–July 2, 1997 Evanston, IL, U.S.A.
- Academic Careers Workshop**, Computing Research Association (CRA), June 4–5 1997, Denver, CO, U.S.A.
- Eleventh Engineering Mechanics Conference**, American Society of Civil Engineers, May 19–22, 1996, Fort Lauderdale, FL, U.S.A.
- American Society of Civil Engineers, Colorado Section Geotechnical Group Seminar**: “Down and Dirty”, Applying Geotechnical Engineering to Construction, April 11. 1996, Denver, CO, U.S.A.
- National Science Foundation, VELACS extension project meeting**, Massachusetts Institute of Technology, October 30–31, 1995, Cambridge, MA, U.S.A.
- Tenth Engineering Mechanics Conference**, American Society of Civil Engineers, May 22–25 1995, Boulder, CO, U.S.A.

## 13 Publications

*Most publications below are available electronically (some through links to L<sup>A</sup>T<sub>E</sub>X sources and PDFs below). Copyright to material below is held by the publishers and by Authors (Boris Jeremić). Please treat this material in a way consistent with the "fair use" provisions of appropriate copyright law.*

### Books

2. Boris Jeremić, Zhaohui Yang, Zhao Cheng, Guanzhou Jie, Nima Tafazzoli, Matthias Preisig, Panagiota Tasiopoulou, Federico Pisano, Jose Abell, Kohei Watanabe, Yuan Feng, Sumeet Kumar Sinha, Fatemah Behbehani, Han Yang, and Hexiang Wang.  
Nonlinear Finite Elements: Modeling and Simulation of Earthquakes, Soils, Structures and their Interaction. University of California, Davis, CA, USA; and Lawrence Berkeley National Laboratory, Berkeley, CA, USA, 2617 pages; 2018;  
ISBN: 978-0-692-19875-9
1. Alain Pecker, James J. Johnson and Boris Jeremić,  
Seismic Soil Structure Interaction for Design and Assessment of Nuclear Installations.  
United Nations, International Atomic Energy Agency. 300 pages, 2019.

### Book Chapters

5. John B. Rundle, James R. Holliday, William R. Graves, Paul B. Rundle, Boris Jeremić, Sashi K. Kunnath, Richard Feltstykke, Kevin Mayeda, Donald L. Turcotte, Andrea Donnellan. A Practitioner's Guide to Operational Real Time Earthquake Forecasting Chapter in a book: Applied Geology of Northern California, Edited by: Robert Anderson and Horacio Ferriz, 2014.
4. Jeremic, B., Sett, K., Taiebat, M. and Tafazzoli, N.. Computational Geomechanics", in Structural, Geotechnical and Earthquake Engineering, edited by Sashi K. Kunnath, in Encyclopedia of Life Support Systems (EOLSS), Developed under the Auspices of the UNESCO, EOLSS Publishers, Paris, France, 2014. [<http://www.eolss.net>]
3. Boris Jeremić, Justin Coleman and Andrew Whitaker. Nonlinear Time Domain Soil-Structure Interaction Analysis , Chapter in Standard: ASCE-4, Seismic Analysis of Safety-Related Nuclear Structures and Commentary, 2014.
2. Boris Jeremić. High Fidelity Modeling and Simulation of SFS Interaction: Energy Dissipation by Design, Chapter in Book: Soil-Foundation-Structure Interaction, Edited by R.P. Orense, N. Chouw, and M. Pender, CRC Press, Taylor & Francis Group, pp 125-131, 2010.
1. Boris Jeremić and Guanzhou Jie. Parallel Soil-Foundation-Structure Computations. Chapter in Book: *Progress in Computational Dynamics and Earthquake Engineering*, Edited by M. Papadrakakis, D.C. Charmpis, N.D. Lagaros and Y. Tsompanakis, Taylor and Francis Publishers, 2008.

## Papers in Refereed Journals

L<sup>A</sup>T<sub>E</sub>X sources and PDFs are linked below

44. Han Yang, Yuan Feng, Hexiang Wang and Boris Jeremić. Energy Dissipation Analysis for Inelastic Reinforced Concrete and Steel Beam-Columns. In Review, *Engineering Structures*, 2018.
43. José Abell, Yuan Feng and Boris Jeremić. Domain Specific Language for Finite Element Modeling and Simulation In Review, *ASCE Journal of Computing in Civil Engineering*, 2018.
42. Yuan Feng, Kaveh Zamani and Boris Jeremić. Procedure to Build Trust in Nonlinear Elastoplastic Integration Algorithm: Solution and Code Verification. In Review, *Engineering with Computers*, 2018.
41. Han Yang, Hexiang Wang, Yuan Feng, Fangbo Wang and Boris Jeremić. Energy Dissipation in Solids due to Material Inelasticity, Viscous Coupling, and Algorithmic Damping. In print, *ASCE Journal of Engineering Mechanics*, 2018.
40. Zhiguang Zhou, Xiaodong Wei, Zheng Lu, and Boris Jeremić. Influence of Soil-Structure Interaction on performance of a super tall building using a new eddy-current tuned mass damper. In Print, *The Structural Design of Tall and Special Buildings*. in print, 2018
39. Han Yang, Sumeet Kumar Sinha, Yuan Feng, David B McCallen and Boris Jeremić. Energy Dissipation Analysis of Elastic-Plastic Materials. *Computer Methods in Applied Mechanics*, 331:309-326, 2018
38. José A. Abell, Nebojša Orbović, David B. McCallen and Boris Jeremić. Earthquake Soil Structure Interaction of Nuclear Power Plants, differences in response to 3-D, 3×1-D, and 1-D excitations. *Earthquake Engineering and Structural Dynamics*, 47 (6), 2018.
37. Régnier, Julie and Bonilla, Luis-Fabian and Bard, Pierre-Yves and Bertrand, Etienne and Hollender, Fabrice and Kawase, Hiroshi and Sicilia, Deborah and Arduino, Pedro and Amorosi, Angelo and Asimaki, Domniki and Boldini, Daniela and Chen, Long and Chiaradonna, Anna and DeMartin, Florent and Ebrille, Marco and Elgamal, Ahmed and Falcone, Gaetano and Foerster, Evelyne and Foti, Sebastiano and Garini, Evangelia and Gazetas, George and Gélis, Céline and Ghofrani, Alborz and Giannakou, Amalia and Gingery, James R. and Glinsky, Nathalie and Harmon, Joseph and Hashash, Youssef and lai, Susumu and Jeremić, Boris and Kramer, Steve and Kontoe, Stavroula and Kristek, Jozef and Lanzo, Giuseppe and Lernia, Annamaria di and Lopez-Caballero, Fernando and Marot, Marianne and McAllister, Graeme and Diego Mercerat, E. and Moczo, Peter and Montoya-Noguera, Silvana and Musgrove, Michael and Nieto-Ferro, Alex and Pagliaroli, Alessandro and Pisanò, Federico and Richterova, Aneta and Sajana, Suwal and Santisi d'Avila, Maria Paola and Shi, Jian and Silvestri, Francesco and Taiebat, Mahdi and Tropeano, Giuseppe and Verrucci, Luca and Watanabe, Kohei International benchmark on numerical simulations for 1D, nonlinear site response (PRENOLIN): Verification phase based on canonical cases. *Bulletin of the Seismological Society of America*, Vol 106, N0 5, pages 2112-2135, 2016.
36. Kohei Watanabe, Federico Pisanò, Boris Jeremić. A Numerical Investigation on Discretization Effects in Seismic Wave Propagation Analyses. *Engineering with Computers*, <http://dx.doi.org/10.1007/s00366-016-0488-4>, pp 1-27, 2016.

35. Konstantinos Karapiperis, Kallol Sett, M. Levent Kavvas, Boris Jeremić. Fokker-Planck linearization for non-Gaussian stochastic elastoplastic finite elements. *Computer Methods in Applied Mechanics and Engineering*, No., 307, pp 451-469, 2016.
34. Panagiota Tasiopoulou, Mahdi Taiebat, Nima Tafazzoli, Boris Jeremić. On Validation of Fully Coupled Behavior of Porous Media using Centrifuge Test Results. *Journal of Coupled Systems*, Vol 4, No. 1, pp 37-65, 2015.
33. Panagiota Tasiopoulou, Mahdi Taiebat, Nima Tafazzoli, Boris Jeremić. Solution Verification Procedures for Modeling and Simulation of Fully Coupled Porous Media: Static and Dynamic Behavior. *Journal of Coupled Systems*, Vol 4. No. 1, pp 67-98, 2015.
32. Federico Pisanò and Boris Jeremić. Simulating stiffness degradation and damping in soils via simple visco-elastic-plastic model. *Soil Dynamics and Geotechnical Earthquake Engineering*, Vol, 63, Pages 98-109, August 2014.
31. Boris Jeremić, Nima Tafazzoli, Timothy Ancheta, Nebojša Orbović and Andrei Blahoianu Seismic behavior of NPP structures subjected to realistic 3D, inclined seismic motions, in variable layered soil/rock, on surface or embedded foundations. *Nuclear Engineering and Design*, Vol, 265, Pages 85-94, 2013.
30. Kallol Sett, Boris Jeremić. and M. Levent Kavvas. Stochastic Elastic-Plastic Finite Elements. *Computer Methods in Applied Mechanics and Engineering*, Vol 200, No. 9-12, pp 997-1007, 2011.
29. Kallol Sett, Berna Unutmaz, Kemal Önder Çetin, Suzana Koprivica and Boris Jeremić. Soil Uncertainty and its Influence on Simulated  $G/G_{max}$  and Damping Behavior. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Volume 137, Issue 3, pp 218-226, March, 2011.
28. Mahdi Taiebat, Boris Jeremić. Yannis F. Dafalias, Amir M. Kaynia, and Zhao Cheng. Propagation of Seismic Waves through Liquefied Soils. *Soil Dynamics and Earthquake Engineering*, No. 30, pp 236-257, 2010.
27. Kallol Sett and Boris Jeremić. Probabilistic Yielding and Cyclic Behavior of Geomaterials. *International Journal for Numerical and Analytical Methods in Geomechanics*, Vol. 34, No. 15, pp 1541-1559, 2010.
26. Zhao Cheng and Boris Jeremić. Numerical Simulations of Piles in Liquefied Soils. *Soil Dynamics and Earthquake Engineering*, No. 29, pp 1405-1416, 2009.
25. Hadi Shahiri, Ali Pak, Mahdi Taiebat and Boris Jeremić. Evaluation of Variation of Permeability in Liquefiable Soil under Earthquake Loading. In print, *Soil Dynamics and Earthquake Engineering*, 2011.
24. Boris Jeremić, Guanzhou Jie, Matthias Preisig and Nima Tafazzoli. Time domain simulation of soil-foundation-structure interaction in non-uniform soils. *Earthquake Engineering and Structural Dynamics*, Volume 38, Issue 5, pp 699-718, 2009.
23. Ciang Wang, Matthew R. Allen, David, B. Burr, Enriqe Lavernia, Boris Jeremić and David P. Fyhrie. Identification of material parameters based on Mohr-Coulomb failure criterion for bisphosphonate

- treated canine vertebral cancellous bone. *Journal of the Mechanical Behavior of Biomedical Materials*, Volume 43, Issue 4, pp. 775 - 780. 2008.
22. Boris Jeremić and Kallol Sett. On Probabilistic Yielding of Materials. *Communications in Numerical Methods in Engineering*, Volume 25, No. 3, pp 291-300, 2009.
  21. Boris Jeremić and Zhao Cheng. On Finite Deformation Hyperelasto–Plasticity of Anisotropic Materials. *Communications in Numerical Methods in Engineering*, Volume 25, Issue 4, pp. 391-400, 2009.
  20. Boris Jeremić, Zhao Cheng, Mahdi Taiebat and Yannis Dafalias. Numerical Simulation of Fully Saturated Porous Materials. *International Journal for Numerical and Analytical Methods in Geomechanics*, Volume 32, No. 13, pp 1635-1660, 2008.
  19. Kallol Sett, Boris Jeremić and M. Levent Kavvas. The Role of Nonlinear Hardening in Probabilistic Elasto-Plasticity. *International Journal for Numerical and Analytical Methods in Geomechanics.*, Vol 31, No. 7, pp 953-975, 2007.
  18. Kallol Sett, Boris Jeremić, and M. Levent Kavvas. Probabilistic Elasto-Plasticity: Solution and Verification in 1D. *Acta Geotechnica*, Volume 2., No. 3. pp 211-220, October 2007.
  17. Boris Jeremić, Kallol Sett and M. Levent Kavvas. Probabilistic Elasto-Plasticity: Formulation in 1D. *Acta Geotechnica*, Volume 2., No. 3. pp 197-210, October 2007.
  16. Boris Jeremić and Zhao Cheng. Significance of Equal Principal Stretches in Computational Hyperelasticity. *Communications in Numerical Methods in Engineering*, Volume 21, Issue 9, pp 477-486, September 2005.
  15. Zhaohui Yang and Boris Jeremić. Study of Soil Layering Effects on Lateral Loading Behavior of Piles *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, Volume 131, No. 6, June 2005, pp. 762-770.
  14. Boris Jeremić, Sashi Kunnath and Feng Xiong. Influence of Soil–Structure interaction on Seismic Response of Bridges. *International Journal for Engineering Structures*, Volume 26, Issue 3, February 2004, pp. 391-402.
  13. Boris Jeremić, Zhaohui Yang and Stein Sture. Numerical Assessment of the Influence of End Conditions on Constitutive Behavior of Geomaterials. *ASCE Journal of Engineering Mechanics*, Volume 130, issue 6, June 2004.
  12. Zhaohui Yang and Boris Jeremić. Numerical Study of the Effective Stiffness for Pile Groups. *International Journal for Numerical and Analytical Methods in Geomechanics*, Volume 27, Issue 15, pp 1255-1276, Dec. 2003.
  11. Zhaohui Yang and Boris Jeremić. Numerical analysis of pile behavior under lateral loads in layered elastic-plastic soils. *International Journal for Numerical and Analytical Methods in Geomechanics*, Volume 26, Issue 14, pp 1385-1406, Dec. 2002.
  10. Boris Jeremić, Gerik Scheuermann, Jan Frey, Zhaohui Yang, Bernd Hamman, Kenneth I. Joy and Hans Haggen. Tensor Visualizations in Computational Geomechanics. *International Journal for Numerical*



- and Analytical Methods in Geomechanics incorporating Mechanics of Cohesive–Frictional Materials*, Vol 26. Issue 10, pp 925-944, August 2002.
9. Boris Jeremić and Zhaohui Yang. Template Elastic–Plastic Computations in Geomechanics. *International Journal for Numerical and Analytical Methods in Geomechanics*, Volume 26, Issue 14, pp 1407-1427, Dec. 2002.
  8. Boris Jeremić and Kenneth Runesson and Stein Sture. Finite Deformation Analysis of Geomaterials. *International Journal for Numerical and Analytical Methods in Geomechanics incorporating Mechanics of Cohesive–Frictional Materials*, Volume 25, No. 8, pp. 809-840, 2001.
  7. Boris Jeremić. Line Search Techniques for Elasto–Plastic Finite Element Computations in Geomechanics. *Communications in Numerical Methods in Engineering*, Volume 17, issue 2, pages 115-125, 2001.
  6. Boris Jeremić and Christos Xenophontos. Application of the p-Version of the Finite Element Method to Elasto–plasticity with Localization of Deformation. *Communications in Numerical Methods in Engineering*, Volume 15, pages 867-876, 1999.
  5. Boris Jeremić and Kenneth Runesson and Stein Sture. Object Oriented Approach to Hyperelasticity. *International Journal for Engineering with Computers*, vol. 15(1), pages 2-12, 1999.
  4. Boris Jeremić and Kenneth Runesson and Stein Sture. A model for elastic–plastic pressure sensitive materials subjected to large deformations. *International Journal of Solids and Structures*, vol. 36 No. 31/32 pages 4901-4918, 1999.
  3. Stein Sture, Nicholas C. Costes, Susan N. Batiste, Mark R. Langton, Khalid A. Al–Shibli, Boris Jeremić, Roy A. Swanson and Melissa Frank. Mechanics of granular materials at low effective stresses. *ASCE Journal of Aerospace Engineering*, vol. 11, No. 3, pages 67-72, 1998.
  2. Boris Jeremić and Stein Sture. Tensor data objects in finite element programming. *International Journal for Numerical Methods in Engineering*, Volume 41, pages 113-126, 1998.
  1. Boris Jeremić and Stein Sture. Implicit integrations in elasto–plastic geotechnics. *International Journal of Mechanics of Cohesive–Frictional Materials*, Volume 2, pages 165-183, 1997.

### **Proceedings of Refereed Conferences**

58. A. Rodgers, N.A. Petersson, A. Pitarka, M. Miah, D. McCallen and B. Jeremić, HPC SIMULATIONS OF BROADBAND NEAR-FAULT GROUND MOTIONS FOR ENGINEERING APPLICATIONS In proceedings of the Eleventh U.S. National Conference on Earthquake Engineering, Integrating Science, Engineering & Policy, Los Angeles, California, USA June 25-29, 2018.
57. Y. Feng, S.K. Sinha, H. Yang, H.Wang, D. McCallen and B. Jeremić, 3D Nonlinear Earthquake Soil Structure Interactions (ESSI) for Nuclear Power Plants (NPP) In proceedings of the Eleventh U.S. National Conference on Earthquake Engineering, Integrating Science, Engineering & Policy, Los Angeles, California, USA June 25-29, 2018.

56. H. Yang, D. McCallen and B. Jeremić, ENERGY DISSIPATION IN EARTHQUAKE SOIL STRUCTURE INTERACTION MODELING AND SIMULATION In proceedings of the Eleventh U.S. National Conference on Earthquake Engineering, Integrating Science, Engineering & Policy, Los Angeles, California, USA June 25-29, 2018.
55. B. Jeremić, Y. Feng, H. Yang, H. Wang, D. Kovačević, A. Rodgers, D. McCallen and INTERFACE BETWEEN EARTHQUAKE GROUND MOTIONS AND STRUCTURAL RESPONSE: NUMERICAL MODELING AND SIMULATION OF ESSI BEHAVIOR In proceedings of Best Practices in Physics-based Fault Rupture Models for Seismic Hazard Assessment of Nuclear Installations: issues and challenges towards full Seismic Risk Analysis. Cadarache Château, France, May 14-16 2018.
54. Yuan Feng, José Abell, Sumeet Kumar Sinha, Han Yang, Fatemah Behbehani, Hexian Wang, Nebojša Orbović, David B McCallen and Boris Jeremić. Verification for the Real ESSI Simulator. In proceedings of Structural Mechanics in Reactor Technology (SMiRT) 24 conference, Busan, South Korea, August 20-25, 2017.
53. Hexian Wang, Han Yang, Sumeet Kumar Sinha, Yuan Feng, Chao Luo, David B McCallen and Boris Jeremić. 3D Non-Linear Earthquake Soil-Structure Interaction Modeling of Embedded Small Modular Reactor (SMR). In proceedings of Structural Mechanics in Reactor Technology (SMiRT) 24 conference, Busan, South Korea, August 20-25, 2017.
52. Sumeet Kumar Sinha, Yuan Feng, Han Yang, Hexiang Wang, Nebojša Orbović, David B McCallen and Boris Jeremić. 3D Non-Linear Modeling and Its Effects in Earthquake Soil-Structure Interaction In proceedings of Structural Mechanics in Reactor Technology (SMiRT) 24 conference, Busan, South Korea, August 20-25, 2017.
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50. José Abell, Sumeet Kumar Sinha, Boris Jeremić, Wavelet Based Synthetic Earthquake Sources for Path and Soil Structure Interaction Modeling: Stress Testing of Nuclear Power Plants In proceedings of IAEA conference on: Best Practices in Physicsbased Fault Rupture Models for Seismic Hazard Assessment of Nuclear Installations, Vienna, Austria, November 18 - 20, 2015.
49. Nebojša Orbović, Boris Jeremić, José Abell, Chao Luo, Robert P. Kennedy and Andrei Blaihoanu, Use of Nonlinear, Time Domain Analysis for Design in Proceedings of the Structural Mechanics in Reactor Technology (SMiRT) 2015 Conference, Manchester, August 10-14, 2015.
48. Boris Jeremić, Robert Roche-Rivera, Annie Kammerer, Nima Tafazzoli, Jose Abell, Babak Kamranimoghaddam, Federico Pisano, ChangGyun Jeong and Benjamin Aldridge The NRC ESSI Simulator Program, Current Status in Proceedings of the Structural Mechanics in Reactor Technology (SMiRT) 2013 Conference, San Francisco, August 18-23, 2013.
47. Justin Coleman, Andrew Whittaker, and Boris Jeremić. Nonlinear Time Domain Seismic Soil Structure Interaction (SSI) Analysis for Nuclear Facilities and Draft Appendix B of ASCE 4 in Proceedings of the Structural Mechanics in Reactor Technology (SMiRT) 2013 Conference, San Francisco, August 18-23, 2013.

46. Kallol Sett, Kow Eshun, You-Chen Chao and Boris Jeremić. Effect of Uncertain Spatial Variability of Soils on Nonlinear Seismic Site Response Analysis in Proceedings of the 2012 Geo-Congress, Oakland, CA, March 25-29, 2012.
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### **Technical Presentations**

Recent presentations are available (linked) in PDF below

145. Boris Jeremić. Modeling and Simulation of Static and Dynamic Behavior of Soil Structure Systems Short Course on Computer Methods and Constitutive Modeling in Geomechanics, with Prof. C.S. Desai and Prof. K. El-Hoseiny, Second GeoMEast Conference, Cairo, Egypt 24–28 November, 2018. [\(PDF\)](#)

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143. Boris Jeremić. Modeling and Simulation of Earthquake Soil Structure Interaction for Nuclear Installations DOE/NRC Natural Phenomena Hazard Meeting, North Bethesda, MD, U.S.A. 23-24 October, 2018.[\(PDF\)](#)
142. Boris Jeremić. Modeling and Simulation of Static and Dynamic Behavior of Soil Structure Systems. United States Bureau of Reclamation, Denver, CO, U.S.A. 22 August, 2018.[\(PDF\)](#)
141. Boris Jeremić. High Fidelity Modeling and Simulation of Earthquake Soil Structure Interaction Effects for Infrastructure Objects. World Congress on Computational Mechanics, New York, NY, U.S.A. 22-27 July, 2018.[\(PDF\)](#)
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139. Boris Jeremić. MS-ESSI for Professional Practice. Eidgenössischen Nuklearsicherheitsinspektorats (ENSI), Inspection fédérale de la sécurité nucléaire (IFSN), Ispettorato federale della sicurezza nucleare (IFSN), Technical Seminar Series, Brugg, Switzerland, 18 May, 2018.[\(PDF\)](#)
138. Boris Jeremić. Modeling and Simulation of Earthquakes, Soils, Structures and their Interaction. Eidgenössische Technische Hochschule (ETH) Zürich, Seminar Series. Zurich, Switzerland, 17 May, 2018.[\(PDF\)](#)
137. Boris Jeremić. Modeling and Simulation of Earthquakes, Soils, Structures and their Interaction. Workshop on Best Practices in Physics-Based Fault Rupture Models for Seismic Hazard Assessment of Nuclear Installations (Best-PSHANI), Château de Cadarache, France, 16 May, 2018.[\(PDF\)](#)
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133. Boris Jeremić. Real ESSI Simulator, Inelastic Modeling and Simulations for Soils, Contacts and Structures. Real ESSI Short Course, San Francisco, CA, USA, 12-14 December 2017. (Available to participants only)
132. Boris Jeremić. Real ESSI Simulator, Seismic Ground Motions. Real ESSI Short Course, San Francisco, CA, USA, 12-14 December 2017. (Available to participants only)
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130. Boris Jeremić. Soil Structure Interaction – Case Studies, Models and Results. UN-IAEA Mission to SNSA, Ljubljana, Slovenia, 14-16 November, 2017. (Available from the UN-IAEA)
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104. Boris Jeremić. Earthquake Soil Structure Interaction Modeling and Simulation. Southern California Earthquake Center (SCEC), Workshop on Integration of 3D Nonlinear Site Effects in Physics-Based Ground Motion Simulations, SCEC Headquarters, University of Southern California, Los Angeles, CA, U.S.A. 5th May 2015.[\(PDF\)](#)
103. Boris Jeremić. Real ESSI Modeling and Simulation: Reduction of Modeling Uncertainty. Civil Nuclear Energy Research and Development Working Group, USA-Japan (CNerdWG), meeting, Argonne National Laboratory, Argonne II. U.S.A. 27th-29th January, 2015.[\(PDF\)](#)
102. Boris Jeremić. Real Earthquake Soil Structure Interaction (Real ESSI) Modeling and Simulation. PRENOLIN workshop, Nice France, 15th-17th December, 2014.[\(PDF\)](#)
101. Boris Jeremić. Nonlinear Time Domain Modeling and Simulation of Surface and Embedded NPPs. Department of Energy, Natural Phenomena Hazard Meeting, Germantown, MD, USA, October 21st-22nd 2014.[\(PDF\)](#)
100. Boris Jeremić. High Fidelity Seismic Modeling and Simulation of Nuclear Facilities. Department of Energy, presentation to the Secretary of Energy, Washington D.C., USA, September 15th, 2014.[\(PDF\)](#)
99. Boris Jeremić. Civil and Structural Engineering Gaps in Small Modular Reactor Designs. ASME SMR 2014 Symposium, Washington, D.C. USA, April 15th-17th, 2014.[\(PDF\)](#)
98. Boris Jeremić. PRENOLIN Meeting Presentation. PRENOLIN 3rd Workshop, Nice, France, April 7th-8th, 2014.[\(PDF\)](#)
97. Boris Jeremić. INL SSI Steering Committee Meeting. Idaho Falls, Idaho, USA, January 15th-16th, 2014.[\(PDF\)](#)
96. Boris Jeremić. Earthquake Soil Structure Interaction (ESSI) Modeling and Simulation. Caltrans Seminar Series, Sacramento, California, USA, December 4th 2013. 2013.[\(PDF\)](#)
95. Boris Jeremić. PRENOLIN Meeting Presentation. PRENOLIN 2nd Workshop, Nice, France, November 4th-5th 2013. 2013.[\(PDF\)](#)
94. Boris Jeremić. ESSI Simulator Program, Current Status. Structural Mechanics in Reactor Technology (SMiRT) 22 Conference, San Francisco, California, U.S.A. August 18th - 23rd, 2013.[\(PDF\)](#)
93. Boris Jeremić. Earthquake Soil Structure Interaction for Nuclear Power Plants, Modeling and Computational Issues. CompDyn2013, 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Kos, Greece, June 12th – 14th, 2013.[\(PDF\)](#)
92. Boris Jeremić. On Earthquake Soil Structure Interaction Modeling and Simulation. National Technical University of Athens Seminar Series, Athens, Greece, June 12th, 2013.[\(PDF\)](#)
91. Boris Jeremić. Select Aspects of Earthquake Soil Structure Interaction Modeling and Simulation. UCD GGSS Seminar Series, Davis, California, May 23rd. 2013.[\(PDF\)](#)
90. Boris Jeremić. Time Domain Nonlinear Earthquake Soil/Rock Structure Interaction Modeling and Simulation. ASCE-4 Meeting, San Diego, California, April 5th. 2013.[\(PDF\)](#)

89. Boris Jeremić. Challenges and Tools for Non-Linear SSI Analysis. Workshop on Analytical Methods for Seismic SSI Analysis PEER, UC Berkeley, Berkeley, California, January 9-10, 2013.(PDF)
88. Boris Jeremić. Nonlinear Soil Modeling for Seismic NPP Applications. Lawrence Berkeley National Laboratory, Nuclear Waste Program Seminar Series, Friday, December 14, 2012.(PDF)
87. Boris Jeremić. Aspects of Deterministic and Probabilistic Modeling and Simulation in Earthquake Engineering. Lawrence Berkeley National Laboratory, Earth Sciences Division Seminar Series, Friday, December 14, 2012.(PDF)
86. Boris Jeremić. The NRC ESSI Simulator. International Experts Meeting on Protection against Extreme Earthquakes and Tsunamis in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant, IAEA, Vienna, Austria, September 4-7, 2012.(PDF)
85. Boris Jeremić. Modeling and Simulation of Earthquake Soil Structure Interaction for Risk Informed Decision Making in Nuclear Power Industry. Idaho National Laboratory, Idaho Falls, Idaho, July 16-17, 2012.(PDF)
84. Boris Jeremić, Nima Tafazzoli, Nebojša Orbović and Andrei Blahoianu. Amplification of Seismic Input due to 1D, 2D and 3D effects, and their Importance for NPP Structures. 21st Structural Mechanics in Reactor Technology (SMiRT) Conference, New Delhi, India, November 6-11, 2011.(PDF)
83. Boris Jeremić, Nima Tafazzoli, Nebojša Orbović and Andrei Blahoianu. 3D Analysis of the Influence of Varying Rock/Soil Profiles on Seismic NPP Response. 21st Structural Mechanics in Reactor Technology (SMiRT) Conference, New Delhi, India, November 6-11, 2011.(PDF)
82. Boris Jeremić, Annie Kammerer, Nima Tafazzoli and Babak Kamrani. The Nonlinear Time-Domain Modeling of Earthquake Soil Structure Interaction for Nuclear Power Plants: Nonlinear Contact Between Foundation and Rock. 21st Structural Mechanics in Reactor Technology (SMiRT) Conference, New Delhi, India, November 6-11, 2011.(PDF)
81. Boris Jeremić, Annie Kammerer, Nima Tafazzoli and Babak Kamrani. The NRC ESSI Simulator. 21st Structural Mechanics in Reactor Technology (SMiRT) Conference, New Delhi, India, November 6-11, 2011.(PDF)
80. Boris Jeremić, Kallol Sett. Stochastic Elastic-Plastic Finite Element Method for Performance Risk Simulations. 11th International Conference on Applications of Statistics and Probability in Civil Engineering. Zürich, Switzerland, August 1-4, 2011.(PDF)
79. Boris Jeremić, Panagiota Tasiopoulou, Mahdi Taiebat, Nima Tafazzoli, Mario Martinelli. Verification Procedures for Simulation of Fully Coupled Behavior of Porous Media. 11th US National Congress on Computational Mechanics, (USNCCM11), Minneapolis, Minnesota, U.S.A., July 25-28, 2011.(PDF)
78. Boris Jeremić. High Performance, High Fidelity Modeling and Simulation of Earthquake-Soil-Structure Interaction for Nuclear Power Industry Quake Summit 2011, NEES & MCEER Annual Meeting, Buffalo, NY, June 9-11, 2011.(PDF)
77. Boris Jeremić. Assessment of Seismic Input and Soil Structure Interaction for Deeply Embedded, Large Foundations. Canadian Nuclear Safety Commission (CNSC), Ottawa, Ontario, Canada, March 7th, 2011. (not for public distribution)

76. Boris Jeremić. Stochastic Elastic-Plastic Finite Element Method. Intel Corporation, Structural TCT Lecture Series (webinar), California, Arizona, Oregon (U.S.A); Malaysia; 18 October, 2010.(PDF)
75. Boris Jeremić, Nima Tafazzoli, Babak Kamrani, You-Chao Chao, Chang-Gyun Jeong, Panagiota Tasiopoulou, Kallol Sett, Annie Kammerer, Nebojša Orbović, and Andrei Blahoianu. On Seismic Soil Structure Interaction Simulations for Nuclear Power Plants. OECD – NEA – IAGE – ISSC Workshop on Soil Structure Interaction Knowledge and Effect on the Seismic Assessment of NPPs Structures and Components, Ottawa, Canada, 6-8 October 2010.(PDF)
74. Boris Jeremić. Factors of Safety for 3D vs 2D for Curved Section of the Wolf Creek Dam. Wolf Creek Dam Foundation Remediation Project. Wolf Creek Dam site, Kentucky, 19 – 21 April 2010, (not for public distribution)
73. Boris Jeremić. Simulations in Geomechanics: The Issue of Uncertainty. University of Tennessee, Department of Civil and Environmental Engineering Seminar Series, 26 March 2010.(PDF)
72. Boris Jeremić. Real-Time Monitoring for Soil-Structure Systems Under Uncertainty. Real Time Monitoring Meeting, Dubai, United Arab Emirates, 29 January - 2 February 2010. (not for public distribution)
71. Boris Jeremić. Continuum Modeling of Intact Rock. Workshop on Ground Shock in Faulted Media, McLean, Virginia, 12-15 January 2010. (not for public distribution)
70. Boris Jeremić. High Fidelity Modeling and Simulation of SFS Interaction: Energy Dissipation by Design. International Workshop on Soil-Foundation-Structure Interaction, University of Auckland, New Zealand, 26-27 November 2009.(PDF)
69. Boris Jeremić, Kallol Sett, Lev Kavvas and Suzana Koprivica. Решење еласто-пластичног проблема у простору вероватноћа и примена на практичне проблеме (Solution for the probabilistic elastic–plastic problem and its application to practical problems) UNION University, Belgrade, Serbia, 29th June, 2009.(PDF)
68. Boris Jeremić, and Kallol Sett. Stochastic Elastic-Plastic Finite Element Method, SEECM2009, 2nd South East European Conference on Computational Mechanics, Island of Rhodes, Greece, 22-24 June, 2009.(PDF)
67. Boris Jeremić, Nima Tafazzoli, Mahdi Taiebat and Guanzhou Jie. Directing Energy Dissipation in Earthquake-Soil-Structure Systems, CompDyn2009, 2nd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Island of Rhodes, Greece, 22-24 June, 2009.(PDF)
66. Boris Jeremić. The Case for Probabilistic Elasto–Plasticity, GGeoMat: Deformation and Failure of Geomaterials, a Multidisciplinary Scientific Workshop, Masseria Salamina, Brindisi, Italy, 14-19 June 2009.(PDF)
65. Boris Jeremić. Verification and Validation in Computational Geomechanics, GGeoMat: Deformation and Failure of Geomaterials, a Multidisciplinary Scientific Workshop, Masseria Salamina, Brindisi, Italy, 14-19 June 2009.(PDF)

64. Boris Jeremić. High Fidelity, Large Scale Modeling and Simulation, GheoMat: Deformation and Failure of Geomaterials, a Multidisciplinary Scientific Workshop, Masseria Salamina, Brindisi, Italy, 14-19 June 2009.[\(PDF\)](#)
63. Boris Jeremić. Fully Coupled, Two Phase Behavior of Geomaterials, GheoMat: Deformation and Failure of Geomaterials, a Multidisciplinary Scientific Workshop, Masseria Salamina, Brindisi, Italy, 14-19 June 2009.[\(PDF\)](#)
62. Boris Jeremić. Elastic–Plastic Behavior of Geomaterials: Modeling and Simulation Issues, GheoMat: Deformation and Failure of Geomaterials, a Multidisciplinary Scientific Workshop, Masseria Salamina, Brindisi, Italy, 14-19 June 2009.[\(PDF\)](#)
61. Boris Jeremić. Earthquake–Soil–Structure Systems, 2008 Association of Pacific Rim Universities Symposium: Multi–Hazard Around the Pacific Rim, Davis, California, August 21st-22nd, 2008.[\(PDF\)](#)
60. Boris Jeremić. On Probabilistic Yielding of (Geo–)Materials, Eight World Congress on Computational Mechanics, Venice, Italy, June 30th – July 4th, 2008.[\(PDF\)](#)
59. Boris Jeremić. Soil Uncertainty and Seismic Ground Motion Fourth Geotechnical Earthquake Engineering and Soil Dynamics Conference, Sacramento, California, May 19-22st, 2008.[\(PDF\)](#)
58. Boris Jeremić. On Uncertain Seismic Wave Propagation, First International Conference of the Engineering Mechanics Institute, University of Minnesota, Minneapolis, Minnesota, May 19-21st, 2008.[\(PDF\)](#)
57. Boris Jeremić. Uncertain Elasto–Plasticity, University of Southern California Seminar Series, December 12th, 2007.[\(PDF\)](#)
56. Boris Jeremić. On Computational Simulations and Predictions, UC Davis Geotechnical Seminar Series, November 1st, 2007.[\(PDF\)](#)
55. Boris Jeremić. Seismic Wave Propagation in Stochastic Soils, 4ICEGE, Fourth International Conference on Earthquake and Geotechnical Engineering, Thessaloniki, Greece 25–28 June, 2007.[\(PDF\)](#)
54. Boris Jeremić. The Plastic Domain Decomposition for Soil Foundation Structure Interaction Computations, CompDyn2007, Computational Methods in Structural Dynamics and Earthquake Engineering, Rethymno, Crete, Greece, 13–16 June, 2007.[\(PDF\)](#)
53. Boris Jeremić. Паралелна рачунарска метода прорачуна интеракције земљотреса, тла и конструкције. (Parallel Computational Method for Simulations of Earthquake, Soil and Structures), University of Belgrade, Faculty of Civil Engineering Seminar Series, Belgrade, Serbia, June 5th 2007.[\(PDF\)](#)
52. Boris Jeremić. Numerical Predictions of Soil–Foundation–Structure Interaction. Caltrans Geotechnical Services Educational Seminar Series, Sacramento, California, April 5, 2007.[\(PDF\)](#)
51. Boris Jeremić. Benefits and Detriments of Soil Foundation Structure Interaction: Simulation Platform and Examples. 4th US–Japan Workshop on SSI, Tsukuba, Japan, March 28-30 2007.[\(PDF\)](#)
50. Boris Jeremić. Benefits and Detriments of Soil–Foundation–Structure Interaction. GeoDenver 2007, Geo–Institute Annual Conference, Denver, Colorado, February 19-21, 2007.[\(PDF\)](#)



49. Boris Jeremić. Modeling and Simulations of Liquefied Soils. GeoDenver 2007, Geo-Institute Annual Conference, Denver, Colorado, February 19-21, 2007.[\(PDF\)](#)
48. Boris Jeremić. UCD CompGeoMech Contributions to OpenSees: Deliverables. PEER Annual Meeting, San Francisco, California, January 26-27 2007.[\(PDF\)](#)
47. Boris Jeremić. Piles in Liquefied Soils. PEER Annual Meeting, San Francisco, California, January 26-27 2007.[\(PDF\)](#)
46. Boris Jeremić. High Performance Computing for Fast Hybrid Simulations. CU-NEES 2006 FHT Workshop, Boulder, Colorado, Nov. 2-3 2006.[\(PDF\)](#)
45. Boris Jeremić. The Role of Material Variability and Uncertainty in Elastic-Plastic Finite Element Simulations. First South-East European Conference on Computational Mechanics (SEECM 06), Kragujevac, Serbia, 28-30 June 2006.[\(PDF\)](#)
44. Boris Jeremić. HPC for NEES: Plastic Domain Decomposition Method. NEES Annual Meeting, Washington, District of Columbia, June 21-23, 2006.[\(PDF\)](#)
43. Boris Jeremić. Uncertain Material Parameters and the Stress-Strain Response. Second Japan-U.S. Workshop on Testing, Modeling and Simulation in Geomechanics, Kyoto, Japan, September 8-11, 2005.[\(PDF\)](#)
42. Boris Jeremić. On Uncertainty of Elasto-Plastic Simulations Universitat Politècnica de Catalunya, Barcelona, Spain, June 2005.[\(PDF\)](#)
41. Boris Jeremić. Topics in Contemporary Computational Geomechanics. A 4 day short course. Topics covered included: Large deformation Hyperelasto-Plasticity for Geomaterials, Parallel processing in computational geomechanics, Numerical simulations of coupled behavior for Geomaterials undergoing small and large deformations, Probabilistic approach to the theory of elasto-plasticity. University of Kragujevac, Kragujevac, Serbia and Montenegro, June 2005.
40. Boris Jeremić. Probabilistic Elasto-Plasticity. 25th Yugoslav Congress on Theoretical and Applied Mechanics, Novi Sad, Serbia and Montenegro, June 2005.[\(PDF\)](#)
39. Boris Jeremić. Soil-Foundation-Structure Interaction Simulations: Static and Dynamic Issues. University of California at Los Angeles Seminar Series, UCLA, May 2004.[\(PDF\)](#)
38. Boris Jeremić. A Brief Overview of the NEESgrid Simulation Platform OpenSees: Application to the Soil-Foundation-Structure Interaction Problems. Third Joint United States-Japan Workshop on Soil-Structure Interaction, Menlo Park, California, March 29-30, 2004.[\(PDF\)](#)
37. Boris Jeremić. I-880 Bridge Testbed Simulations: Soil-Foundation-Structure Interaction Issues. PEER Annual Meeting, Palm Springs, California, February 20-21, 2004.[\(PDF\)](#)
36. Boris Jeremić. Enabling Simulation and Information Technologies Solutions Schemes and Challenges for Very large Models. PEER Annual Meeting, Palm Springs, California, February 20-21, 2004.[\(PDF\)](#)
35. Boris Jeremić. Soil-Foundation-Structure Interaction Simulations and OpenSees. OpenSees Users Workshop, Richmond, California, January 2004.[\(PDF\)](#)

34. Boris Jeremić. Интеракција конструкције и тла у току земљотреса: нумеричка анализа. (Structure-soil interaction during earthquakes: numerical analysis) Грађевински Факултет Универзитета у Београду, Децембар, 2003(Civil Engineering Faculty of the University of Belgrade, December 2003).(PDF)
33. Boris Jeremić, COTS (Commodity off the shelf) Clusters. International Workshop on High Performance Computing in Finite Element Analysis, University of Manchester, U.K, 1st - 5th September 2003.(PDF)
32. Boris Jeremić, The Plastic Domain Decomposition Method in Parallel Computational Geomechanics. International Workshop on High Performance Computing in Finite Element Analysis, University of Manchester, U.K. 1st - 5th September 2003.(PDF)
31. Boris Jeremić. Geomechanics Simulations Using OpenSees Platform. OpenSees Users Workshop, August 2003, Richmond, California.
30. Boris Jeremić. Simulation of Local Inelastic Behavior in Large Scale Dynamics Analysis. Seventh U.S. National Congress on Computational Mechanics, July 27-31, 2003, Albuquerque, New Mexico.
29. Boris Jeremić. Soil–Structure–Interaction in Liquefied Grounds and Countermeasures: Lessons from Numerical Studies. 2003 PEER Annual Meeting, Palm Springs, California.
28. Boris Jeremić. Geomechanics Simulations Using OpenSees Platform. OpenSees Users Workshop, August 2002, Richmond, California.
27. Boris Jeremić, Recent Developments in Computational Modeling in Geomechanics, Invited Keynote Presentation. Fifth World Congress on Computational Mechanics, WCCM V, July 2002, Vienna, Austria.
26. Boris Jeremić, Computational Challenges for Seismic Design of Bridges, Invited Presentation. Scientific Computing Seminars Series, National Energy Research Scientific Computing Center, Lawrence Berkeley National Laboratory, August 2002.
25. Boris Jeremić, Earthquake Engineering Simulation Grid, Invited Presentation. Structural Engineering Seminar Series, March 2002, University of California at San Diego, La Jolla, California.
24. Boris Jeremić, Challenges in Numerically Simulating Seismic Behavior of Constructed Facilities, Invited Presentation. Bay Area Scientific Computing Day 2002, March 2002, Sandia National Laboratories, Livermore, California.
23. Boris Jeremić, Recent Developments in Computer Simulations and Visualization for Geotechnical Earthquake Engineering Problems, Invited Presentation. International Workshop on Earthquake Simulation in Geotechnical Engineering, November 2001, The George S. Dively Center, Case Western Reserve University, Cleveland, Ohio.
22. Boris Jeremić. Geotechnical applications with OpenSees OpenSees Users Workshop, August 2001, Richmond, California.
21. Boris Jeremić. Geotechnical Elements and Material Models OpenSees Developers Workshop, August 2001, Richmond, California.

20. Boris Jeremić. Large Deformation Coupled Formulation for Liquefaction Analysis Sixth U.S. National Congress On Computational Mechanics, August, 2001 Dearborn, Michigan.
19. Boris Jeremić. Dynamic Behavior of Pile Group Foundations During Strong Earthquake Events, Invited Presentation. The 2001 Joint Summer Meeting of American Society of Mechanical Engineers (ASME) American Society of Civil Engineers (ASCE) and Society of Engineering Science (SES), San Diego, July, 2001.
18. Boris Jeremić. Finite Element Methods for 3D Slope Stability Analysis. GeoDenver 2000, Geo Institute Annual Conference, Denver, Colorado, August, 2000.
17. Boris Jeremić. Modeling of Continuous Localization of Deformation. 13th ASCE Engineering Mechanics Specialty Conference, The Johns Hopkins University, Baltimore, MD, USA June, 1999.
16. Boris Jeremić. Finite Element Modeling of Failure in Geotechnical Engineering, Invited Presentation. University of California, Davis, California, April 1999.
15. Boris Jeremić. Elasto–Plasticity and the Finite Element Method: Mathematical Formulation. Presented at the Department of Mathematics and Computer Sciences Seminar Series at Clarkson University, Potsdam, New York, September 1998.
14. Boris Jeremić, Kenneth Runesson, and Stein Sture. Large deformation constitutive integration algorithm. Presented at the 12th ASCE Engineering Mechanics Conference, La Jolla, California, May 1998.
13. Boris Jeremić, Kenneth Runesson, and Stein Sture. Coaxiality of elastic and plastic strain tensors in large deformations. Presented at the Thirteen U.S. National Congress of Applied Mechanics, Gainesville, Florida, June, 1998.
12. Boris Jeremić. Finite Element Modeling of Large Deformation Elasto-plastic Problems in Geotechnics, Invited Presentation. University of California, Davis, California, April 1998.
11. Boris Jeremić. Finite Deformation Elasto-plastic Problems in Solid Mechanics of Pressure Sensitive Materials. Presented at the Department of Mechanical and Aeronautical Engineering Seminar Series at Clarkson University, Potsdam, New York, April 1998.
10. Boris Jeremić and Stein Sture. Globally convergent modification of the implicit integration schemes in soil elastoplasticity. *The 1997 Joint Summer Meeting of the American Society of Mechanical Engineers, American Society of Civil Engineers and the Society of Engineering Science*, Northwestern University, Evanston, Illinois, July, 1997.
9. Boris Jeremić, Kenneth Runesson, and Stein Sture. Invited Presentation: Elastoplastic analysis of pressure sensitive materials subjected to large deformations. Presented at the *1997 Joint Summer Meeting of the American Society of Mechanical Engineers, American Society of Civil Engineers and the Society of Engineering Science*, Northwestern University, Evanston, Illinois, July, 1997.
8. Boris Jeremić. Consistent Computations in Elasto–Plasticity of Geomaterials, Invited Presentation. University of Minnesota, Minneapolis, Minnesota, April 1997.

7. Boris Jeremić. Consistent Computations in Elasto–Plasticity of Geomaterials, Invited Presentation. Clarkson University, Potsdam, New York, April 1997.
6. Boris Jeremić. Consistent Computations in Elasto–Plasticity of Geomaterials, Invited Presentation. University of Texas, Austin, Texas, March 1997.
5. Boris Jeremić and Stein Sture. Refined solution procedures for finite element analysis in geotechnics. Presented at the CAMM seminar 96/2, Center for Acoustics, Mechanics and Materials, University of Colorado, October 1996.
4. Boris Jeremić. Object oriented numerical computations: Applications in continuum mechanics. Presented at the Geotechnical Engineering seminar series, University of Colorado at Boulder, October 1996.
3. Boris Jeremić and Stein Sture. Refined finite element analysis of geomaterials. Presented at 11th ASCE Engineering Mechanics Conference, Fort Lauderdale, Florida, May 1996.
2. Boris Jeremić, Dunja Perić, Teng-Fung Yang, Stein Sture, Hon-Yim Ko, and Y. Atsushi. The elasto plastic material model: Model description and numerical predictions. Presented at the VELACS extension project meeting at M.I.T. October, 1995.
1. Boris Jeremić and Stein Sture. Implicit integrations in geoplasticity. Presented at 10th ASCE Engineering Mechanics Conference, Boulder, Colorado, May 1995.