## **Technical Reports**

Copyright to material below is held by Boris Jeremić through General Public Licence. Please treat this material in a way consistent with the "fair use" provisions of appropriate copyright law.

Recent presentations are available in PDF below

- 41. Yuan Feng and Boris Jeremić. Cosserat Continuum: Solids and Elasto-Plasticity. UCD-ESSI-02-2021.
- 40. Yuan Feng and Boris Jeremić. Hight Performance Computing for ESSI Problems. UCD-ESSI-01-2021.
- 39. Boris Jeremić, Han Yang, Hexiang Wang and Bret Lizundia. Direct Analysis Soil-Structure Interaction Case Studies for the ATC-144 Project. (PDF)
- 38. Sumeet Kumar Sinha and Boris Jeremić. Soft and Hard Interface/Contact/Joint Modeling for Rock, Soil, Concrete and Steel Interfaces. UCD-CompGeoMech-05-2017.
- 37. José Abell, Sumeet Kumar Sinha, Yuan Feng and Boris Jeremić. Real ESSI Simulator Executable Build Procedures. UCD-CompGeoMech-04-2017.
- 36. José Abell, Sumeet Kumar Sinha, Yuan Feng and Boris Jeremić. Real ESSI Simulator Output Formats. UCD–CompGeoMech–03–2017.
- 35. José Abell, Yuan Feng, Sumeet Kumar Sinha, Fatemah Behbehani and Boris Jeremić Real ESSI Simulator Domain Specific Language (DSL) UCD-CompGeoMech-02-2017.
- 34. Fatemah Behbehani and Boris Jeremić, Theoretical and Numerical Modeling of Unsaturated Soil Using Fully Coupled Finite Element Formulation. UCD-CompGeoMech-01-2017.
- 33. Boris Jeremić, Development of Analytical Tools for Soil-Structure Analysis. Report to the Canadian Nuclear Safety Commission. March 2016. (Available from the CNSC-CCSN)
- 32. Boris Jeremić, Development of Analytical Tools for Soil-Structure Analysis. Report to the Canadian Nuclear Safety Commission. March 2016. (Available from the CNSC-CCSN)
- Boris Jeremić, Methods, Computation Platform, and Case Studies for Time-Domain Soil-Structures-Interaction Modeling and Simulation Incorporating Complex Seismic Loads. Report to the US Nuclear Regulatory Commission. October 2015. (Available from the US-NRC)
- 30. Federico Pisanò and Boris Jeremić. Cyclic Behavior of Soil and Rock for Seismic Modeling and Simulation of Small Modular Reactors. Report to the US Department of Energy. October 2012. (not for public distribution, available from the US DOE)
- 29. Boris Jeremić (with contributions by: Sashi K. Kunnath, Norman A. Abrahamson Timothy D. Ancheta and Nima Tafazzoli). Assessment of Seismic Input and Soil Structure Interaction for Deeply Embedded, Large Foundations. Report to the Canadian Nuclear Safety Commission (CNSC), March 2011. (not for public distribution, available from the CNSC)
- 28. Boris Jeremić and Charikleia Prassa. Time Domain Modeling and Simulation of Soil Retaining Wall Interaction with and without the Sound Wall. Report to California Department of Transportation (Caltrans), January 2011. (available from Caltrans)
- Boris Jeremić, Nima Tafazzoli, Babak Kamrani, Panagiota Tasiopoulou and Chang-Gyun Jeong. Investigation of Analysis Methods to Incorporate Multi-Dimensional Loading and Incoherent Ground Motions in Soil-Structure Interaction Analysis Report to the US – Nuclear Regulatory Commission (NRC), September 2010. (available from the US-NRC)

- 26. Boris Jeremić. Comparison of 2D vs 3D Slope Stability for the Wolf Creek Dam. Report to USACE, June 2010. (not for public distribution)
- 25. Boris Jeremić. Elastic-Plastic Modeling and Simulation of Intact Rock. Report to LACHEL FELICE & Associates, January 2010. (not for public distribution)
- 24. Boris Jeremić and Guanzhou Jie. Plastic Domain Decomposition Method for Parallel Elastic–Plastic Finite Element Computations in Geomechanics Report UCD CompGeoMech 03–2007. (PDF)
- 23. Boris Jeremić and Guanzhou Jie. Parallel Finite Element Computations for Soil–Foundation—Structure Interaction Problems Report UCD CompGeoMech 02–2007. (PDF)
- 22. Boris Jeremić, Zhao Cheng and Mahdi Taiebat. Coupled (fluid-porous solid) soil modeling and simulations. Report UCD CompGeoMech 01-2007.
- 21. Boris Jeremić, Kallol Sett and M. Levent Kavvas. Probabilistic Elasto-Plasticity: Solution and Verification in 1D. Report UCD CompGeoMech 02–2005. (PDF)
- 20. Boris Jeremić, Kallol Sett and M. Levent Kavvas. Probabilistic Elasto-Plasticity: Formulation in 1D. Report UCD CompGeoMech 01–2005. (PDF)
- 19. Boris Jeremić. Neobično ponašanje materijala i konstrukcija. Monografija u čast 85. godina rodjena profesora Milana Djurić-a, Gradjevinski Fakultet Univerziteta u Beogradu, 2005. Non-intuitive Behavior of Materials and Structures. Monograph in honour of 85 years since the birth of Professor Milan Djurić, Civil Engineering Faculty, University of Belgrade, 2005, in Serbian.
- 18. Boris Jeremić. Lecture Notes on Computational Geomechanics (aka Inelastic Finite Elements for Pressure Sensitive Materials) University of California, Davis, 2000–2004.
- 17. Boris Jeremić, James Putnam, Zhaohui Yang, Kallol Sett, Jinxiu Liao, Guanzhou Jie. Final Report: Earthquake Response of Bridge Abutment Backfills Constructed with Tire Shreds. University of California, Davis, April 2004.
- 16. Boris Jeremić, Qing Liu and Xiaoyan Wu. Theoretical Formulation, Computer Implementation and Verification of Fully Coupled, Solid-Fluid, Dynamic Behavior of Soils University of California, Davis, June 2004.
- 15. Boris Jeremić and Ritu Jain. The Plastic Domain Decomposition Method in Parallel Computational Geomechanics. University of California, Davis, March 2004.
- 14. Boris Jeremić, James Putnam, Zhaohui Yang, Kallol Sett, Jinxiu Liao, Guanzhou Jie. Interim Report: Earthquake Response of Bridge Abutment Backfills Constructed with Tire Shreds. University of California, Davis, September 2003.
- Silvia Mazzoni, Frank McKenna, Michael H. Scott, Gregory L. Fenves and Boris Jeremić. Open System for Earthquake Engineers Simulation: User Manual. Pacific Earthquake Engineering Research Center, University of California, Berkeley, December 2002. http://peer.berkeley.edu/~silvia/OpenSees/manual/html2/
- 12. Boris Jeremić. Development of Geotechnical Capabilities in G3, report # PEER 2132000-3. Pacific Earthquake Engineering Research Center University of California, Berkeley, September 2001.

- 11. Boris Jeremić, Dan W. Wilson Key Rosebrook and Zhaohui Yang. Centrifuge Characterization and Numerical Modeling of the dynamic properties of Tire Shreds for Use as Bridge Abutment Backfill Center for Geotechnical Modeling Report No. UCD CGM-00/01, May 2000.
- 10. Boris Jeremić, Michael Akers, Kevin Makles and Nathan Straz. Beowulf class parallel computer for large scale computations in geomechanics: Design and construction. Progress report, Clarkson University, 1998.
- 9. Boris Jeremić. Finite Deformation Hyperelasto-plasticity of Geomaterials. PhD thesis, University of Colorado at Boulder, July 1997.
- 8. Dunja Perić, Boris Jeremić, Teng-Fung Yang, Stein Sture, Hon-Yim. Ko, and Y. Atsushi. The elasto plastic material model: Model description and numerical predictions. Report to: VELACS extension project for the M.I.T. meeting, October 30-31, 1995.
- Boris Jeremić and Stein Sture. Finite element implementation of elasto plastic material model. Report to: NASA, Marshall Space Flight Center, Contract: NAS8-38779, University of Colorado at Boulder, May 1995.
- 6. Boris Jeremić, Roy Swanson, Stein Sture, Khalid Al–Shibli, and Runing Zhang. Automation of digitization process for recording grid displacement. Report to NASA Marshall Space Flight Center, Contract: NAS8-38779, University of Colorado at Boulder, September 1994.
- 5. Boris Jeremić. Implicit integration rules in plasticity: Theory and implementation. Master's thesis, University of Colorado at Boulder, May 1994.
- 4. Boris Jeremić, Khalid Al–Shibli, Runing Zhang, Roy Swanson, and Stein Sture. Static and dynamic testing of MGM triaxial specimens. Report to NASA Marshall Space Flight Center, Contract: NAS8-38779, University of Colorado at Boulder, February 1994.
- 3. Boris Jeremić. nDarray Programming Tool. Object Oriented Approach to Numerical Computations in Elastoplasticity, Reference Manual, University of Colorado at Boulder, December 1993.
- 2. Boris Jeremić. Nonlinear Effects in Structures: Report to PAK group, Kragujevac, May 1992, In Serbian.
- 1. Boris Jeremić. "Dynamic Analysis of Axisymmetric Solids Subjected to Non-Symmetric Loading by the Finite Element Method", Diploma Thesis, July 1989, Faculty of Civil Engineering, Belgrade University, In Serbian.