

# José Antonio Abell Mena, Ph.D.

*Doctor in Civil Engineering at University of California, Davis Department of Civil & Environmental Engineering*

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## Personal background

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## Professional experience

Aug. 2008 to Present Assistant professor at Universidad de los Andes, Santiago, Chile

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## Private Consulting

2015 Seismic stability assessment for earth dam “Empedrado” for MN Ingenieros  
2013 Seismic stability assessment for CFRD dam “Camiña” for MN Ingenieros.  
2011 Seismic stability assessment for CFRD dam “Livilcar” for MN Ingenieros.  
2010 Seismic stability assessment for CFRD dam “Valle Hermoso” for MN Ingenieros

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## Education

March 2016 **Doctor of Philosophy**, *University of California, Davis*, Department of Civil & Environmental Engineering, Adviser: Professor Boris Jeremic, Ph.D.  
Dissertation: “Earthquake-Soil-Structure Interaction Modeling of Nuclear Power Plants for Near-Field Events”  
August 2009 **Master of Science in Civil Engineering**, *Pontificia Universidad Católica de Chile*, Escuela de Ingeniería, Adviser: Professor Juan Carlos de la Llera, Ph.D.  
Thesis: “InSAR compatible ground motions for Northern Chile”  
December 2007 **Civil Engineer with diploma in Structural Engineering**, *Pontificia Universidad Católica de Chile*, Escuela de Ingeniería.

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## Research

- Earthquake-soil-structure interaction (ESSI), i.e. detailed modeling of the earthquake source rupture, wave-propagation, nonlinear site response, and structural response.

- Stochastic and deterministic, nonlinear, dynamic finite-element procedures applied to ESSI problems (e.g the UCD Earthquake-Soil-Structure Interaction Simulator).
- Large scale scientific computing with heterogeneous computer clusters.

## ISI journal publications

- Fortuño, C; de la Llera, J.C.; Wicks, C.W.; and Abell, J.A., *Synthetic Hybrid Broadband Seismograms Based on InSAR Coseismic Displacements*, Bull. Seismol. Soc. Am., 2014; 104(6):2735–2754. DOI:10.1785/0120130293
- Abell J.A., de la Llera J.C., Wicks C., *Enhancement of long period components of recorded and synthetic ground motions using InSAR*, Soil Dynamics and Earthquake Engineering, 2011; 31(5):817–829. DOI:10.1016/j.soildyn.2011.01.005

## Other publication

- N. Tafazzoli, F. Pisanò, J. A. Abell M., B. Kamrani, C.-G. Jeong, B. Aldridge, R. Roche, A. Kammerer, and B. Jeremic - *ESSI Simulator Program, Current Status*. Proceedings of the 22nd. Structural Mechanics in Reactor Technology (SMiRT 22) Conference, San Francisco, California, U.S.A.

## Awards

- **2016** UC Davis Prize for Excellence in Geotechnical Engineering (I.M. Idriss award)
- **2015** Fugro-West Fellowship
- **2010** Becas Chile 2010 – Scholarship for doctoral studies CONICYT, Gobierno de Chile, Programa de formación de capital humano avanzado – Concurso de beca para doctorado en el extranjero.
- **2008** Graduated from M.S. program with “Maximum distinction”. Pontificia universidad Católica de Chile, Escuela de Ingeniería
- **2007** Earned civil engineering degree with “Maximum distinction”. Pontificia universidad Católica de Chile, Escuela de Ingeniería

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| Programming languages | C/C++, MATLAB/Gnu Octave, Python, TCL, Flex, Bison                       |
| FE-analysis           | RealESSI Simulator, Gmsh, GID, FLAC, GeoStudio, SAP2000, ETABS, OpenSEES |
| CAD & 3D              | Autodesk Autocad, OpenCAD, 3D Studio, Blender                            |
| Text processing       | LaTeX, LibreOffice, MS. Office   |
| Image processing      | Adobe Photoshop, Illustrator, GIMP, Inkscape                             |
| Satellite geodesy     | GAMMA Software, ROI-Pac  |
| Languages             | Native spanish, Fluent english speaker (scored 112 in TOEFL iBT)         |