

EDUARDO J. MONTALTO

Address: 1111 Engineering Drive, UCB 428, ECOT 542

Phone: (510) 990 - 4385

Email: eduardo.montalto@colorado.edu

Professional Experience

Since 2026	Assistant Professor of Civil, Environmental and Architectural Engineering University of Colorado Boulder
Jul 2016	Design Engineer
Jul 2019	FSA Ingeniería & Arquitectura , San José, Costa Rica

Education

2025	PhD in Engineering. Structural Engineering, Mechanics and Materials Program (GPA 4.0/4.0) University of California, Berkeley Dissertation: Reinforcement Bending Effects on Elastomeric Seismic Isolators Minors: Computational Solid Mechanics, Numerical Analysis Adviser: Dr. Dimitrios Konstantinidis
2020	MS in Engineering. Structural Engineering, Mechanics and Materials Program (GPA 4.0/4.0) University of California, Berkeley
2016	BS in Civil Engineering (GPA 9.61/10.00) University of Costa Rica

Research Experience

May 2020 Dec 2025	Graduate Student Researcher at UC Berkeley Formulation of buckling theory for short elements considering warping for stability design of elastomeric isolators. Development of computational model for elastomeric isolators using multiscale approach which captures macroscale finite deformation and mesoscale periodic composite structure. Nonlinear finite element analysis for high-fidelity evaluation of isolator response under complex static and dynamic loading conditions. UTM and DMA material tests and DIC measurements for mechanical characterization of polyurethane and rubber materials for isolators. Large-scale component and shake-table testing of elastomeric seismic isolators.
Jun 2014 Dec 2015	Research Assistant in Bridge Unit, LanammeUCR, University of Costa Rica Reduced scale testing either static or dynamic using small scale shake tables. Development of laboratory testing procedures for undergraduate courses in structural analysis and solid mechanics. Bridge database completion. Translation of AASHTO LRFD code requirements. Field trips and data processing for structural health monitoring of bridges.
Mar 2014 Dec 2014	Research Assistant in Earthquake Engineering Laboratory, University of Costa Rica Seismic waves selection for site effects calculations, and site effects calculations. Field trips for recording ambient vibrations through the array technique and generation of shear wave velocity models using FK and SPAC methodologies, and Vs30 parameter calculation for various locations.

Teaching Experience

2020 2025	Department of Civil and Environmental Engineering, UC Berkeley Graduate Student Instructor <i>CIVENG C30 Introduction to Solid Mechanics, Fall 2025 (Undergraduate course)</i> Weekly teaching of discussion section, office hours, <i>CIVENG 220 Structural Analysis Theory and Applications, Fall 2023 (Graduate course)</i> Weekly teaching of discussion section, office hours, exam grading <i>CIVENG 132 Applied Structural Mechanics, Spring 2023 (Upper-division undergraduate course)</i> Weekly teaching of discussion section, office hours, assignment grading <i>CIVENG 223 Earthquake Protective Systems, Spring 2021 (Graduate course)</i> Office hours, final project formulation and evaluation, exam grading <i>CIVENG123L Structural Concrete Design Project, Spring 2020 (Upper-division undergraduate course)</i> Occasional lab teaching, office hours, assignment grading <i>CIVENG122L Structural Steel Design Project, Spring 2020 (Upper-division undergraduate course)</i> Occasional lab teaching, office hours, assignment grading
2019	Various Departments, UC Berkeley Reader <i>ARCH150 Introduction to Structures, Fall 2019 (Upper-division undergraduate course)</i> Assignment grading <i>MATH128A Numerical Analysis, Fall 2019 (Upper-division undergraduate course)</i> Assignment grading
2013	School of Civil Engineering, University of Costa Rica Teaching Assistant <i>IC – 0501 Solid Mechanics I (Undergraduate course)</i> Office hours, assignment grading

Leadership Positions

Aug 2023 July 2024	President of EERI Student Chapter at Berkeley Lead organization which promotes dissemination of earthquake engineering knowledge and disaster awareness. Complete requirements for institutional recognition of the organization, coordinate monthly meetings with chapter officers, define chapter's goals and coordinate activities with officers in charge of seminars, education outreach, collaboration with undergraduate teams, etc.
Aug 2022 May 2023	Co-Founder and President of UC Berkeley's SEMM DSR Organization Co-lead the creation of student organization that promotes dissemination of research and interaction among doctoral students and researchers of the SEMM program. Complete

requirements for institutional recognition of the organization and coordinate monthly meetings with chapter officers.

Since 2021	Graduate Student Adviser to UC Berkeley's Seismic Design Team Provide guidance to the undergraduate Cal Seismic Design Team competing in the annual international EERI's Seismic Design Competition. Hold monthly meetings to address analysis and design questions, review team's report and provide feedback, organize seminar for the team to practice their presentation ahead of competition.
Aug 2020 Aug 2024	Co-Lead of UC Berkeley's SEMM Graduate Mentoring Program Co-lead program that connects SEMM graduate students with professionals to provide them with support at the beginning of their careers. Budget negotiation with department, contact professionals to serve as mentors, organize and lead speed-mentoring event to introduce program, manage program registration, track progress of participating students, manage student reimbursements.

Publications

- Montalto, E.J.,** Konstantinidis, D. & Ankem, N.M. (2024). Phenomenological Modeling of Fiber-Reinforced Elastomeric Isolators at Multiple Lateral Deformation Levels. *Earthquake Engineering and Structural Dynamics*, 53(11), 3335-3357.
- Montalto, E.J.** & Konstantinidis, D. (2024). Effective Warping Properties and Buckling Analysis of Fiber-Reinforced Elastomeric Isolators. *Journal of Engineering Mechanics*, 150(5), 04024018.
- Montalto, E.J.** & Konstantinidis, D. (2024). Buckling of Short Beams Considering Shear Warping: Application to Fiber-Reinforced Elastomeric Isolators. *Journal of Engineering Mechanics*, 150(1), 04023105.
- Montalto, E.J.** & Liu, Y. C. (2016). Ambient Vibration Test of a Prestressed Concrete Box Girder Bridge. *Métodos & Materiales*, 6(1), 8-17.

Conference Papers

- Montalto, E.J.** & Konstantinidis, D. (2025). Effects of Reinforcement Thickness on the Response of Elastomeric Seismic Isolators. *19th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures*. Berkeley.
- Montalto, E.J.** & Konstantinidis, D. (2025). Two-Scale Modeling Framework for Elastomeric Isolators. *19th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures*. Berkeley.
- Montalto, E.J.** & Konstantinidis, D. (2024). Mechanical Response of Fiber-Reinforced Elastomeric Isolators Under Vertical and Lateral Loading. *18th World Conference on Earthquake Engineering*. Milan.
- Montalto, E.J.,** Konstantinidis, D. & Ankem, N.M. (2024). Dynamical Modeling of Fiber-Reinforced Elastomeric Isolators at Multiple Lateral Deformation Levels. *18th World Conference on Earthquake Engineering*. Milan.
- Montalto, E.J.** & Konstantinidis, D. (2022). Dynamic Modeling of the Lateral Response of Unbonded Fiber-Reinforced Elastomeric Isolators. *Proceedings of the 3rd International Conference on Natural Hazards and Infrastructure*. Athens: National Technical University of Athens.

Montalto, E.J. & Guevara, E. (2019). Structural Design of 48m Tall Automated Parking Building Using Nonlinear Analysis. *Structures Congress 2019, XIV Seminar of Structural and Earthquake Engineering*. San José: Costa Rican Association of Structural and Earthquake Engineering.

Others

Montalto, E.J. (2025). *Reinforcement Bending Effects on the Lateral Response and Stability of Elastomeric Seismic Isolators*. Doctoral Dissertation, University of California Berkeley.

Montalto, E.J. (2016). *Finite Element Model Updating of Tenorio River Bridge on National Route No. 1 based on an Operational Modal Analysis*. Bachelor's Thesis, University of Costa Rica.

Journal Reviewer

Construction and Building Materials

Journal of Bridge Engineering

International Journal of Solids and Structures

Honors, Awards & Scholarships

2024	Applied Technology Council Diversity in Structural Engineering Scholarship, NCSEA One of 25 scholarships for historically underrepresented students in structural engineering
2024	Outstanding Graduate Student Instructor Award, UC Berkeley Award given to fewer than 10% of GSIs for demonstrating outstanding skills in teaching
2023	The Harry H. Hilp Fellowships in Engineering, UC Berkeley Full tuition and stipend
2023	H2H8 Graduate Research Grant to Advance Humanity, Hearts to Humanity Eternal Association Yearly grant awarded to promote research that advances humanity
2023	Structural Stability Student Competition Winner at EMI 2023, Engineering Mechanics Institute Award based on conference presentation evaluated by EMI Stability Committee
2022	The Professor Alex & Georgia Scordelis Fellowship in Structural Engineering, UC Berkeley Full tuition and stipend
2022	O. H. Ammann Research Fellowship in Structural Engineering, ASCE One of five fellowships awarded nationwide
2016	Honors Graduation, University of Costa Rica Highest honor awarded upon graduation
2014	Highest GPA in School of Civil Engineering, University of Costa Rica Highest academic recognition in School of Civil Engineering

2013	Highest GPA in Faculty of Engineering, University of Costa Rica Highest academic recognition in Faculty of Engineering
2013	Highest GPA in School of Civil Engineering, University of Costa Rica Highest academic recognition in School of Civil Engineering
2011 2016	Academical Excellence Scholarship, University of Costa Rica Full tuition

Other Courses and Certificates

Dec 2024	Certificate in Teaching and Learning in Higher Education <i>Graduate Division, UC Berkeley</i>
Aug 2018 Sep 2018	Design of Prestressed Concrete Components and Structures <i>Costa Rican Association of Structural and Earthquake Engineering</i>
May 2015	Design of Simple Span Prestressed Concrete Bridges <i>National Laboratory of Materials and Structural Models, University of Costa Rica</i>
Feb 2015 Mar 2015	Design of Wood Structures <i>National Laboratory of Materials and Structural Models, University of Costa Rica</i>
Jul 2014	Introduction to Bridge Inspection <i>National Laboratory of Materials and Structural Models, University of Costa Rica</i>

Professional Memberships

Since 2023	Member, Engineering Mechanics Institute Stability Committee
Since 2020	Student member, American Society of Civil Engineers
Since 2019	Member, Earthquake Engineering Research Institute
Since 2019	Member, American Institute of Steel Construction
Since 2017	Member, Costa Rican Association of Structural and Earthquake Engineering
Since 2016	Member, Costa Rican Federate College of Engineers and Architects
Since 2016	Registered Professional Civil Engineer, License IC-29788, Costa Rica

Languages

- Spanish (native) and English advanced level (TOEFL iBT 120, TOEIC 990)