

# Marios Mavros

---

## CONTACT

### INFORMATION

1 University Avenue  
2109 Aglantzia, Cyprus

*Mobile:* +357 22892268

*E-mail:* mmavro07@ucy.ac.cy

## EDUCATION

**University of California, San Diego**, California, USA

*Ph.D. in Structural Engineering*

**December 2015**

- Dissertation: "Experimental and Numerical Investigation of the Seismic Performance of Reinforced Masonry Structures," advisor: Prof. Benson Shing

**University of California, San Diego**, California, USA

*M.S. in Structural Engineering*

**March 2012**

- G.P.A.: 3.98/4.00

**National Technical University of Athens (NTUA)**, Athens, GREECE

*Diploma in Civil Engineering*

**September 2010**

- Thesis: "Investigation of effective length in members of diagonal braces," advisor: Prof. Charis Gantes
- G.P.A.: 9.48/10.00 (Ranked first)

## RESEARCH AREAS

**Finite Element Modeling.**

**Earthquake Engineering.**

**Reinforced Masonry and Reinforced Concrete.**

## PROFESSIONAL EXPERIENCE

**University of Cyprus**, Nicosia, Cyprus

*Lecturer*

**January 2020 - Present**

**Simpson Gumpertz & Heger**, Waltham, Massachusetts, USA

*Project Consultant*

**September 2010 - August 2019**

**Main tasks:**

- Nonlinear finite element analysis.
- Structural evaluation.
- Product development.
- Risk analysis.
- Optimization.

**University of California, San Diego**, California, USA

*Graduate Student Researcher*

**September 2010 - September 2015**

**Main tasks:**

- Nonlinear dynamic finite element analysis of reinforced masonry structures.
- Constitutive modeling and element formulation for finite element analysis.
- Full-scale shake-table testing of two multistory reinforced masonry structures .

## JOURNAL

### PUBLICATIONS

[1] Ahmadi, Farhad; Mavros, Marios; Shing, Benson; Klingner, Richard; and McLean, David (2013). "Displacement-based Seismic Design for Reinforced Masonry Shear-wall Structures, Part 1: Background and Trial Application." *Journal of Earthquake Spectra.*, DOI: 10.1193/120212EQS345M.

[2] Ahmadi, Farhad; Mavros, Marios; Shing, Benson; Klingner, Richard; and McLean, David (2013). "Displacement-based Seismic Design for Reinforced Masonry Shear-wall Structures, Part 2: Validation with Shake-table Tests." *Journal of Earthquake*

- [3] Stavridis, Andreas; Ahmadi, Farhad; Mavros, Marios; Shing, Benson; Klingner, Richard; and McLean, David; (2015). "Shake-table Tests of a Full-scale Three-story Reinforced Masonry Shear Wall Structure." *ASCE Journal of Structural Engineering*, DOI: 10.1061/(ASCE)ST.1943-541X.0001527.
- [4] Mavros, Marios; Ahmadi, Farhad; Shing, Benson; Klingner, Richard; McLean, David; and Stavridis, Andreas; (2015). "Shake-table Tests of a Full-scale Two-story Shear-dominated Reinforced Masonry Wall Structure." *ASCE Journal of Structural Engineering*, DOI: 10.1061/(ASCE)ST.1943-541X.0001528.
- [5] Kottari, Alexandra; Mavros, Marios; Murcia-Delso, Juan; and Shing, Benson; (2017). "Interface model for bond-slip and dowel-action behavior" *ACI Structural Journal*, DOI: 114. 10.14359/51689870.
- [6] Mavros, Marios; Panagiotou, Marios; Koutromannos, Ioannis; Alvarez, Rodolfo; Restrepo, Jose I. (2022). "Seismic Analysis of a Modern 14-story RC Core Wall Building System Using the BTM-shell Methodology" *Earthquake Engineering and Structural Dynamics*, DOI: 10.1002/eqe.3627.

CONFERENCE  
PUBLICATIONS

- [1] Stavridis, Andreas; Mavros, Marios; Ahmadi, Farhad; Shing, Benson; Klingner, Richard; and McLean, David. "Shake-Table testing of a 3-story, full-scale reinforced masonry wall system." In: *15th International Brick and Block Masonry Conference*, June 03-06, 2012.
- [2] Mavros, Marios; Ahmadi, Farhad; Shing, Benson; Klingner, Richard; and McLean, David. "Seismic Performance of a Two-Story Reinforced Masonry Building Designed with a Displacement-Based Method." In: *10th National Conference on Earthquake Engineering*, July 21-25, 2014.
- [3] Mavros, Marios; Koutromannos, Ioannis and Shing, Benson. "Nonlinear finite element analysis of reinforced masonry structures subjected to earthquake forces." In: *12th North American Masonry Conference*, May 17-20, 2015.
- [4] Kottari, Alexandra; Mavros, Marios; Murcia-Delso, Juan; and Shing, Benson. "Interface model for bond-slip and dowel-action behavior" In: *Engineering Mechanics Institute 2017*, June 4-7, 2017.
- [5] Mavros, Marios; Panagiotou, Marios; Koutromannos, Ioannis; Alvarez, Rodolfo; Restrepo, Jose I. (2021). "Seismic Analysis of a Modern 14-story RC Core Wall Building System Using the BTM-shell Methodology" In: *Engineering Mechanics Institute 2021*, May 25-28, 2021.
- [6] Panagiotou, Marios; Koutromannos, Ioannis; Mavros, Marios; Deng, Xianjue; Alvarez, Rodolfo; Restrepo, Jose I.; Murcia-Delso, Juan; Acero, Gabriel (2021). "Nonlinear Beam-Truss Model (BTM) for Seismic Performance Evaluation of Reinforced Concrete Wall Buildings" In: *SEAOC Convention 2021*, September 22-25, 2021.
- [7] Mavros, Marios; Panagiotou, Marios; Koutromannos, Ioannis; Alvarez, Rodolfo; Restrepo, Jose I. (2022). "Computational Fully Nonlinear Seismic Performance Investigation of a Modern 14-story Core Wall Building in Los Angeles" In: *12th National Conference on Earthquake Engineering 2022*, June 22 - July 1, 2022.

- [8] Mavros, Marios; Panagiotou, Marios; Koutromannos, Ioannis; Alvarez, Rodolfo; Restrepo, Jose I. (2022). "Computational performance assessment and failure analysis of reinforced concrete wall buildings under seismic loads" In: *Numerical Modeling Strategies for Sustainable Concrete Structures 2022*, July 4-6, 2022.

TEACHING  
EXPERIENCE

**Lecturer**

*University of Cyprus, Nicosia, Cyprus*

- CEE 341 Design of Reinforced Concrete Structures **January 2020 - Present**
- CEE 400 Earthquake Engineering **September 2020 - Present**
- CEE 540 - Behavior and Design of Reinforced Concrete Structures **January 2020 - Present**
- CEE 545 - Nonlinear Analysis of Structures **September 2020 - Present**

**Teaching assistant**

*University of California, San Diego*

- SE 211 - Advanced RC/PC **January - March 2013**
- SE 221 - Earthquake Engineering **April - June 2013-2014**
- SE 201A - Advanced Structural Analysis **September - December 2014**

HONORS AND  
AWARDS

**University of California, San Diego**, Department of Structural Engineering

- Englekirk Fellowship, 2010-2011

**Foundation of State Scholarships Greece**

- Fellowship of State Scholarships Greece, granted to the top 3 undergraduate students of each school every year, 2005-2008
- Award of State Scholarships Greece, granted to the top undergraduate student of each school every year, 2005-2008

**National Technical University of Athens**

- Mathematics Award "Christos Papakyriakou", Mathematics Department of National Technical University of Athens, 2005 and 2006
- Mathematics Award "Nikolaou Kritikou", Mathematics Department of National Technical University of Athens, 2006

**A.G. Leventis Foundation**

- A.G. Leventis Foundation educational grant, 2010 - 2013

**Other**

- Representative of Cyprus in the International Physics Olympiad in Taiwan, Selected at regional and then national level, 2003
- Silver Medal, Pan Cyprian Mathematical Olympiad, 2002

LEADERSHIP  
SKILLS

- **Second Lieutenant of the Cyprus Army**, leader and coordinating officer for small army unit (selected through exams), during compulsory military service, 2003-2005
- **Founder of the Hellenic Student Association at UC San Diego**, Treasurer, 2013-2015
- **Member of organizing committee of the Educational Trip 2015**, [www.edutrip.gr](http://www.edutrip.gr), 2015

COMPUTER  
SKILLS

**Programming Languages**

- Python, Matlab, Fortran

**Softwares**

- ABAQUS, FEMAP, ANSYS Workbench, FEAP, LS-DYNA
- Mathematica, MathCad
- Microsoft Office (Word, Excel, Power Point)
- Autocad 2D (AutoCAD 2006 LEVEL I, Certificate No 2324487), Autocad 3D (AutoCAD 2007 LEVEL II, Certificate No 2356107), 3D Studio Max (Autodesk VIZ 2007 Level I, Certificate No 2375130)