

# Curriculum Vitae

**Name:** Dr. Panayiotis Polycarpou

**Address:** **Office:** Room RTB37  
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**Personal:** **Birthday:** 21/11/1979  
**Marital status:** Married with 4 Children  
(optional)

**Education:** **Undergraduate work:**  
(Degree, Date received)  
BSc in Civil Engineering (5-year program) / Aristotle  
University of Thessaloniki, Greece / March, 2004.

**Graduate work:**  
(Degree, Date received)

1. Master of Science (MSc) in *Earthquake Resistant Design of Structures* (One-year program) / Aristotle University of Thessaloniki, Greece, November 2005.
2. Phd in Civil Engineering / University of Cyprus, September, 2009

**Postgraduate work:**  
(post-doc)

Full-time postdoctoral research fellow at the UCY  
(*Three-dimensional numerical investigation of earthquake-induced poundings of buildings*)

**Positions Held:**  
(reverse chronological order)

10/2015 – now: Assistant Professor – University of Nicosia. Coordinator of the Civil and Environmental engineering program.  
10/2013 – 06/2015: Part-time teaching faculty – University of Nicosia  
12/2014 – 01/2015: Special Scientist – University of Cyprus  
10/2014 – 12/2014: Research Associate–University of Nicosia Research Foundation  
12/2010 – 02/2014: Post-doc Researcher (Full time) – University of Cyprus  
09/2010 – 12/2010: Part-time teaching faculty – Cyprus University of Technology  
12/2009 – 11/2010: Self-employed structural engineer  
01/2008 – 06/2009: Teaching Assistant (Part-time) – University of Cyprus  
01/2006 – 12/2007: Post-graduate researcher (Full time) – University of Cyprus

### **Areas of Concentration/ Research Interests:**

- Computational Methods in Structural Dynamics
- Structural impact problems and impact modeling
- Numerical methods in Engineering
- Computer-aided Structural Engineering
- Modern programming methods in Engineering
- Earthquake Engineering
- Computational dynamics
- Finite Element Analysis
- Discrete Element Method

## **Research & Publications**

### **Chapters in Books (2)**

1. **P. Polycarpou** and P. Komodromos, (2015) “*Rubber Shock-Absorbers as a Mitigation Technique for Earthquake Induced Pounding*”, Encyclopedia of Earthquake Engineering, Editors: Michael Beer, Edoardo Patelli, Ioannis Kougoumtzoglou and Ivan Siu-Kui Au, Springer-Verlag Berlin Heidelberg, DOI 10.1007/978-3-642-36197-5\_311-1.
2. **P. Polycarpou** and P. Komodromos (2013) “*Numerical Investigation of the effectiveness of rubber shock absorbers as a mitigation measure for earthquake-induced structural poundings*”, Computational Methods in Applied Sciences, Computational Methods in Earthquake Engineering, pp. 417-436, Vol. 2, ISBN: 978-94-007-6572-6, Springer.

### **Journal Articles (14)**

1. E. Mavronicola, **P. Polycarpou** and P. Komodromos (2017) *Spatial seismic modeling of base-isolated buildings pounding against moat walls: effects of ground motion directionality and mass eccentricity*. Journal of Earthquake Engineering and Structural Dynamics, Vol. 46, Issue 7, pp. 1161-1179, doi:10.1002/eqe.2850.
2. E. Mavronicola, **P. Polycarpou** and P. Komodromos (2016) *Effect of Planar Impact Modeling on the Pounding Response of Base-Isolated Buildings*. Frontiers in Built Environment, 2:11. doi: 10.3389/fbuil.2016.00011.
3. L. Papaloizou, **P. Polycarpou**, P. Komodromos, G.D Hatzigeorgiou and D.E. Beskos (2016) “*Two-dimensional numerical investigation of the effects of multiple sequential earthquake excitations on ancient multidrum columns*”, Journal of Earthquakes and Structures, Vol. 10, No. 3, pp. 495-521, DOI: <http://dx.doi.org/10.12989/eas.2016.10.3.495>.
4. E. Mavronicola, **P. Polycarpou**, L. Papaloizou and P. Komodromos (2015), “*Computer-aided investigation of special issues of the response of seismically isolated buildings*” International Journal of Computational Methods and Experimental Measurements, Vol. 3, No. 1, pp. 21–32, DOI: 10.2495/CMEM-V3-N1-21-32.

5. **P. Polycarpou**, P. Komodromos, D.C. Charmpis and L. Papaloizou (2015), “*Effect of the seismic excitation angle on the dynamic response of adjacent buildings during pounding*”. Journal of Earthquakes and Structures, Vol. 8, No. 5, pp. 1127-1146.
6. **P. Polycarpou**, L. Papaloizou and P. Komodromos (2014) “*An efficient methodology for simulating earthquake-induced 3D pounding of buildings*”, Earthquake Engineering and Structural Dynamics; Vol. 43, pp. 985-1003. DOI: 10.1002/eqe.2383
7. **P. Polycarpou**, P. Komodromos and A. Polycarpou (2013) “*A nonlinear impact model for simulating the use of rubber shock absorbers for mitigating the effects of structural pounding during earthquakes*”, Earthquake Engineering and Structural Dynamics; Vol 42 . pp. 81-100. DOI: 10.1002/eqe.2194.
8. P. Komodromos, **P. Polycarpou** (2013) “*Utilization of Object-Oriented Programming, Design Patterns and Java for simulating earthquake-induced poundings of base isolated buildings*”, Journal of Computational Methods and Experimental Measurements, Vol. 1(1), pp. 37–54.
9. A.C. Polycarpou, A. Dimitriou, A. Bletsas, **P. Polycarpou**, L. Papaloizou, G. Gregoriou, and J.N. Sahalos (2012) “*On the Design, Installation, and Evaluation of a Radio-Frequency Identification System for Healthcare Applications*”, IEEE Antennas and Propagation Magazine, Vol. 54, No. 4, pp. 255-271.
10. **P. Polycarpou** and P. Komodromos (2011) “*Numerical investigation of potential mitigation measures for poundings of seismically isolated buildings*”, Journal of Earthquakes and Structures, 2(1), pp. 1-24.
11. **P. Polycarpou** and P. Komodromos (2010) “*Earthquake-induced poundings of a seismically isolated building with adjacent structures*”, Engineering Structures, Special Issue: Learning from structural failures, Vol. 32, pp.1937 – 1951, [DOI:10.1016/j.engstruct.2010.03.011].
12. **P. Polycarpou** and P. Komodromos (2009) “*On poundings of a seismically isolated building with adjacent structures during strong earthquakes*”, Earthquake Engineering and Structural Dynamics, Vol. 39, pp. 933–940, DOI: 10.1002/eqe.975.
13. P. Komodromos, **P. Polycarpou**, L. Papaloizou and M.C. Phocas (2007) “*Response of Seismically Isolated Buildings Considering Poundings*”, Earthquake Engineering and Structural Dynamics Journal, Vol. 36, pp. 1605-1622.
14. P. Komodromos, L. Papaloizou and **P. Polycarpou** (2007) “*Simulation of the Response of Ancient Columns under Harmonic and Earthquake Excitations*”, Engineering Structures Journal, Vol. 30, pp. 2154-2164.

#### Conference Proceedings (34)

1. **P. Polycarpou**, P. Komodromos, L. Papaloizou and E. Mavronicola (2018) “*A Parametric Study Of The Effects Of The Seismic Incidence Angle On The Response Of Adjacent Buildings Considering Pounding*”16<sup>th</sup> European Conference on Earthquake Engineering (ECEE 2018), Thessaloniki, Greece, June 18-21, 2018.

2. E. Mavronicola, **P. Polycarpou** and P. Komodromos (2018) "*Influence of the Seismic Incidence Angle on the Peak Response of Base-Isolated Buildings: 3D Investigation of Pounding*" 16<sup>th</sup> European Conference on Earthquake Engineering (ECEE 2018), Thessaloniki, Greece, June 18-21, 2018.
3. E. Mavronicola, **P. Polycarpou** and P. Komodromos (2016) "*Effect of the seismic excitation's incidence angle on the nonlinear behavior of base isolated buildings considering pounding to adjacent moat walls*". 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECOMAS2016) Crete, Greece, June 5-10, 2016.
4. **P. Polycarpou**, E. Mavronicola and P. Komodromos (2015), "*Planar and spatial numerical investigation of the effects of earthquake-induced pounding of base isolated buildings*", Proceedings of the 14th World Conference on Seismic Isolation (14 WCSI), 9-11 September 2015, San Diego, USA.
5. E. Mavronicola, **P. Polycarpou** and P. Komodromos (2015), "*The effect of modified linear viscoelastic impact models on the pounding response of a base-isolated building with adjacent structures*", Proceedings of the 5th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2015), Greece 25-27 May 2015.
6. **P. Polycarpou**, P. Komodromos, L. Papaloizou, D. Charmpis (2014), "*Investigation of the effects of the angle of seismic incidence on the dynamic response of buildings during pounding*", Proceedings of the 12th International Conference on Computational Structures (CST2014), Naples, Italy 2-5 September 2014.
7. L. Papaloizou, P. Komodromos, **P. Polycarpou** (2014), "*The effect of friction type seismic isolation on ancient multi-drum columns*", Proceedings of the 12th International Conference on Computational Structures (CST2014), Naples, Italy 2-5 September 2014.
8. **P. Polycarpou**, P. Komodromos, L. Papaloizou, D. Charmpis (2013), "*Numerical investigation of the effects of earthquake-induced pounding of seismically isolated buildings in 3D*", Proceedings of the 14th International Conference on Civil, Structural and Environmental Engineering Computing (CC2013), 3-6 September, Cagliari, Sardinia, Italy.
9. **P. Polycarpou** and P. Komodromos (2013) "*On the numerical simulation of structural pounding in three dimensions*", International Conference on Earthquakes and Structures (ICEAS13), Part of the 2nd World Congress on Advances in Structural Engineering and Mechanics (ASEM13), 8-12 September, Jeju, Korea.
10. **P. Polycarpou** and P. Komodromos (2013) "*An efficient numerical approach for the parametric investigation of the effects of pounding on the 3D dynamic response of buildings during earthquakes*", 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN2013), 12-14 June, Kos Island, Greece
11. **P. Polycarpou** and P. Komodromos (2012) "*A methodology for an efficient 3D numerical simulation of earthquake-induced pounding of buildings*" 15th World Conference on Earthquake Engineering (15WCEE), 24-28 September, Lisbon, Portugal.
12. P. Komodromos, **P. Polycarpou** (2011) "*Research On Seismic Pounding Of Base Isolated Buildings*" 12<sup>th</sup> World Conference On Seismic Isolation Energy

Dissipation And Active Vibration Control Of Structures (12WCSI), 20-23 September, Sochi, Russia.

13. **P. Polycarpou** and P. Komodromos (2011) "*A parametric study for the investigation of the effectiveness of rubber shock-absorbers as a mitigation measure for earthquake-induced structural poundings*", 3<sup>rd</sup> International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2011), 25-28 May, Corfu, Greece.
14. **P. Polycarpou** and P. Komodromos (2011) "*Numerical investigation of structural pounding of seismically isolated buildings during strong earthquakes*", Structural Engineer World Congress, 4-6 April 2011, Como, Italy.
15. A.C. Polycarpou, G. Gregoriou, L. Papaloizou, **P. Polycarpou**, A. Dimitriou, A. Bletsas and I.N. Sahalos (2011) "*A Healthcare Application Based on Passive UHF RFID Technology*", 5<sup>th</sup> European Conference on Antennas and Propagation, 11-15 April 2011, Rome, Italy.
16. A.C. Polycarpou, G. Gregoriou, **P. Polycarpou**, L. Papaloizou, A. Bletsas, A. Dimitriou and I.N. Sahalos (2010) "*A UHF Radio Frequency Identification (RFID) System for Healthcare: Design and Implementation*", International ICST Conference on Wireless Mobile Communication and Healthcare - MobiHealth 2010, 18-20 October, Ayia Napa, Cyprus.
17. **P. Polycarpou** and P. Komodromos (2010) "*On the numerical simulation of impacts for the investigation of earthquake-induced pounding of buildings*", The Tenth International Conference on Computational Structures Technology, 14 - 17 Sep., Valencia, Spain.
18. **P. Polycarpou** and P. Komodromos (2010) "*Simulating seismically isolated buildings under earthquake-induced pounding incidences*", 11th International Conference on Structures under Shock and Impact, 28 - 30 July, Tallinn, Estonia.
19. A.C. Polycarpou, G. Gregoriou, A. Dimitriou, A. Bletsas, I.N. Sahalos, L. Papaloizou and **P. Polycarpou** (2010) "*Design and Implementation of a Radio Frequency Identification (RFID) System for Healthcare Applications*", 12th Mediterranean Conference on Medical and Biological Engineering and Computing (MEDICON 2010), 27-30 May, Chalkidiki, Greece.
20. **P. Polycarpou** and P. Komodromos (2009) "*Poundings of seismically isolated buildings with adjacent structures*", The Twelfth International Conference on Civil, Structural and Environmental Engineering Computing, Madeira, Portugal.
21. **P. Polycarpou** and P. Komodromos (2009) "*Simulating the use of rubber shock absorbers for mitigating poundings of seismically isolated buildings during strong earthquakes*", 2<sup>nd</sup> International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2009), Rhodes, Greece.
22. **P. Polycarpou**, L. Papaloizou, E. Mavronicola and P. Komodromos (2008) "*Numerical Simulations of seismically isolated buildings considering poundings with adjacent structures*", Proceedings of the 14th World Conference on Earthquake Engineering (14WCEE), Beijing, China.
23. E. Mavronicola, **P. Polycarpou**, L. Papaloizou, M.C. Phocas and P. Komodromos (2008) "*On the linearization of the seismic behavior of seismic isolation systems*", Proceedings of the 14th World Conference on Earthquake Engineering (14WCEE), Beijing, China.

24. L. Papaloizou, **P. Polycarpou** and P. Komodromos (2008) “*Numerical analysis of ancient multi-drum columns with epistyles under dynamic loadings*”, Proceedings of the 14th World Conference on Earthquake Engineering (14WCEE), Beijing, China.
25. **P. Polycarpou**, L. Papaloizou and P. Komodromos (2008) “*Investigation of pounding effects on the response of seismically isolated buildings*”, Proceedings of The 3rd Panhellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, Greece [In Greek].
26. E. Mavronicola, **P. Polycarpou**, L. Papaloizou, M.C. Phocas and P. Komodromos (2008) “*Investigation of the suitability of using equivalent linear models to simulate seismic isolation systems*”, Proceedings of The 3rd Panhellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, Greece [In Greek].
27. L. Papaloizou, **P. Polycarpou** and P. Komodromos (2008) “*Seismic response of ancient columns and colonnades*”, Proceedings of The 3rd Panhellenic Conference on Earthquake Engineering and Engineering Seismology, Athens, Greece [In Greek].
28. **P. Polycarpou**, L. Papaloizou, E. Mavronicola, P. Komodromos and M.C. Phocas (2008) “*Earthquake induced poundings of seismically isolated buildings: The effect of the vertical location of impacts*”, Proceedings of The Tenth Pan American Congress of Applied Mechanics (PACAM X), Cancun, Mexico
29. L. Papaloizou, **P. Polycarpou** and P. Komodromos (2008) “*Effect of harmonic excitation frequency on the dynamic response of ancient multi-drum columns with epistyles*”, Proceedings of The Tenth Pan American Congress of Applied Mechanics (PACAM X), Cancun, Mexico.
30. P. Komodromos, L. Papaloizou, **P. Polycarpou** and E. Mavronicola (2007) “*Modern Object-Oriented Design of Structural Engineering Software*”, Proceedings of The Eleventh International Conference on Civil, Structural and Environmental Engineering Computing, St. Julians, Malta.
31. L. Papaloizou, **P. Polycarpou** and P. Komodromos (2007) “*Investigation of the response of ancient columns under seismic excitations*”, Proceedings of The 8th HSTAM International Congress on Mechanics, Patras, Greece.
32. **P. Polycarpou**, L. Papaloizou and P. Komodromos and M. C. Phocas (2007) “*Modeling of Structural Impact of Seismically Isolated Buildings*”. Proceedings of The Sixth International Conference on Earthquake Resistant Engineering Structures (ERES 2007), Bologna, Italy
33. **P. Polycarpou**, L. Papaloizou and P. Komodromos and M. C. Phocas (2007) “*Effects of earthquake induced poundings on the response of seismically isolated buildings*”. Papadrakakis, M., Charmpis, D.C., Lagaros, N.D., Tsompanakis Y., (eds.), Proceedings of The Computational Methods in Structural Dynamics and Earthquake Engineering, COMPDYN 2007, Proceedings, Rethymno, Crete, Greece.
34. L. Papaloizou, **P. Polycarpou** and P. Komodromos (2007), “*Ancient columns and collonades under harmonic and earthquake excitations*”. Papadrakakis, M., Charmpis, D.C., Lagaros, N.D., Tsompanakis Y., (eds.), Proceedings of The Computational Methods in Structural Dynamics and Earthquake Engineering, COMPDYN 2007, Proceedings, Rethymno, Crete, Greece.

## Bulletins or Reports (2)

1. **P. Polycarpou**, L. Papaloizou and P. Komodromos (2007) "*Seismic isolation of buildings - Investigation of the consequences of potential poundings during strong earthquakes*", Workshop organized by the Network of Interstate Collaboration Between Greece and Cyprus addressing the Earthquake Consequences on the Built Environment, Thessaloniki, Greece, [In Greek].
2. L. Papaloizou, **P. Polycarpou**, and P. Komodromos (2007) "*Response of ancient multi-drum columns under earthquake excitations*", Workshop of the Network of Interstate Collaboration Between Greece and Cyprus addressing the Earthquake Consequences on the Built Environment, Thessaloniki, Greece, [In Greek].

## Abstracts – in print or accepted (3)

1. **P. Polycarpou**, L. Papaloizou and P. Komodromos (2006) "*Consequences of Earthquake-Induced Poundings of Seismically Isolated Buildings*", The First European Conference on Earthquake Engineering and Seismology (1st ECEES), Geneva, Switzerland.
2. L. Papaloizou, **P. Polycarpou** and P. Komodromos (2006) "*Seismic response and behavior of ancient columns*", The First European Conference on Earthquake Engineering and Seismology (1st ECEES), Geneva, Switzerland.
3. P. Komodromos, L. Papaloizou, **P. Polycarpou** and M. C. Phocas (2006) "*Utilization of Object-oriented technologies and design patterns in the development of software for structural dynamics*", The First European Conference on Earthquake Engineering and Seismology (1st ECEES), Geneva, Switzerland

## Official Reviewer

- Engineering Structures (Elsevier)
- Soil Dynamics and Earthquake Engineering (Elsevier)
- Earthquake Engineering and Engineering Vibration (Springer)
- Advances in Engineering Software (Elsevier)
- Computers & Structures (Elsevier)
- Bulletin of Earthquake Engineering (Springer)

## Funding (grants, contracts, research awards)

### Grants

Dec 2010 – Feb 2014, "*Three-dimensional numerical investigation of earthquake-induced poundings of buildings*", Co-Funded by the European Union and the Research Promotion Foundation of Cyprus (Action DIDACTOR), 146,200 Euros

### Contracts

Jan 2006 – Dec 2007, Primary Research Assistant, "*Earthquake-Induced Poundings of Seismically Isolated Structures*". Funded by the European Commission (Marie-Curie Action), 77,000 Euros.

## Experience

### Administrative

Oct 2015 – Now: *Program coordinator:* BSc in Civil and Environmental Engineering, University of Nicosia (Scheduling of classes, student transfers assessment, scheduling of budget, etc).

*Director of Laboratory:* Laboratory of Civil and Environmental Engineering (~90,000 Euro Equipment)

*Member of the Department's Quality Assurance Committee*

Dec 2010–Feb 2014: Post-doc Researcher at the University of Cyprus: Participating in project management (composing project reports, preparing deliverables, etc)

Jan 2006–Dec 2007: Post-graduate researcher at the University of Cyprus: Participating in project management (composing project reports, preparing deliverables, etc)

### Teaching

Undergraduate course taught at the University of Nicosia:

<u>Code</u>	<u>Course</u>	<u>Hours/week</u>	<u>Semester(s)</u>
CVVEE101	Introduction to Civil and Environmental Engineering	2	Fall 2013 Fall 2014 Fall 2015 Fall 2016 Fall 2017
CVVEE152	Construction Materials	3 + 1	Spring 2014 Spring 2015 Spring 2016
MENG250	Engineering Mechanics: Statics	3	Fall 2014 Fall 2015 Fall 2016 Fall 2017
CVVEE220	Structural Analysis I	3	Spring 2015 Spring 2016 Spring 2017
CVVEE320	Structural Analysis II	3	Fall 2015 Fall 2016 Fall 2017
CVVEE321	Structural Dynamics	3	Spring 2016 Spring 2017
MATH180	Algebra and Trigonometry	3	Fall 2015 Spring 2016 Fall 2016

CEE 422	Computer-aided Structural Analysis and Design	3	Spring 2017
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Undergraduate course taught at the Cyprus University of Technology (CUT):

<u>Code</u>	<u>Course</u>	<u>Hours/week</u>	<u>Semester(s)</u>
CEG452	Numerical Methods in Structural Analysis	4	Fall 2010

### **Thesis supervised/reviewed**

Jul 2017: Supervisor of the Final Year Project of Mr Georgia Eleni, entitled: “*Project Management: The Case Study of Eastown Project*”, a dissertation submitted to the Department Engineering at the University of Nicosia for the purposes of the undergraduate program in Civil and Environmental Engineering.

Jan 2016: Member of the Examination Committee of the MSc Thesis of Ms Georgia Eleni, entitled: “*Seismic response of a base isolated building under near-fault ground motions at varying excitation angles*”, a dissertation submitted to the Department of Civil and Environmental Engineering at the University of Cyprus.