

CURRICULUM VITAE of NICOS MAKRIS, Ph.D.**Professor**

Department of Civil Engineering, Division of Structures

University of Patras

Telephone +30 2610 996538 – Fax +30 2610 996565, e-mail: nmakris@upatras.gr**PERSONAL INFORMATION**

Born: July 11, 1964, Athens, Greece

EDUCATION**Doctorate** in Civil Engineering, State University of New York at Buffalo, January 1992Ph.D. Dissertation: *Theoretical and Experimental Investigation of Viscous Dampers in Applications of Seismic and Vibration Isolation***Master of Science** in Civil Engineering, State University of New York at Buffalo, January 1990Master Thesis: *Analysis of Motion of Practical Sliding Isolation Systems***Diploma** in Civil Engineering, National Technical University, Athens, Greece, June 1988Diploma Thesis: *Dynamic Impedance of Pile Groups in Nonhomogeneous Soil Deposits***Languages:** Greek, English, French**PROFESSIONAL LICENSE**

Professional Engineer, License obtained from the Technical Chamber of Greece, June 1989

ACADEMIC EXPERIENCEProfessor, University of Patras, May 2003-presentProfessor, University of California at Berkeley, July 2002-June 2005Associate Professor, University of California at Berkeley, July 1998-June 2002Assistant Professor, University of California at Berkeley, July 1996-June 1998Assistant Professor, University of Notre Dame, August 1992-June 1996Senior Research Scientist, State University of New York at Buffalo, February 1992-August 1992Instructor, State University of New York at Buffalo, Summer 1991Research Assistant, State University of New York at Buffalo, September 1988-January 1992**RESEARCH IMPACT**

Citation Index > 3100, H-index = 32

Sources: Google Scholar, Scopus and personal record

PROFESSIONAL EXPERIENCE

Director of Reconstruction of the Temple of Zeus at Nemea, Greece. January 2004 – December 2009.

Consultant, Terna Construction Company, Vibration Control of the Canopy of the Stavros Niarchos Cultural Center. January 2013 – present.

Consultant, California Department of Transportation (CALTRANS), In-situ Monitoring of Seismic Protection Devices. August 2008 – December 2010.

Consultant, Ferrovial Construction Company, Optimization in the Design of Freeway Overcrossings. January 2009 – December 2009.

Consultant, Terna Construction Company, System Identification and Health Monitoring of Railway Bridges. March 2009 – December 2010.

Consultant, AKTOR – Construction Company, System Identification and Health Monitoring of Railway Bridges. January 2008 – December 2010.

Consultant, Brown and Caldwell, 9620 S.W. Barbur Blvd., Portland, Oregon. Project: Seismic response of the Ukiah, CA Digester. Spring 2004.

Consultant, American School of Classical Studies in Athens. Project: Static and dynamic analysis of the NE corner of the Temple of Zeus at Nemea. Fall 2003.

Consultant, Simpson Gumpertz & Heger, Inc., 222 Sutter Street, Suite 300, San Francisco, CA. Project: Seismic stability of electrical equipment. Spring 2003.

Consultant, California Department of Transportation (CALTRANS). Project: Experimental testing and mechanical evaluation of hydraulic dampers for the seismic protection of bridges. 2001-2003.

Consultant, Brown and Caldwell, 9620 S.W. Barbur Blvd., Portland, Oregon. Project: Earthquake stability and retrofit of liquid storage tank. Spring 2001.

Consultant, Pacific Gas & Electric (PG&E), USA. Project: Rocking and overturning of electrical transformer under strong ground shaking. 1998-2001.

Consultant, California Department of Transportation (CALTRANS). Project: Seismic retrofit of highway overcrossings. 1997-2000.

Consultant, Taylor Devices, Inc., 90 Taylor Drive, North Tonawanda, New York. Project: Electrorheological fluid damper for control and damage reduction of earthquake motion in buildings and bridges. Phase I: 1995-1996; Phase II: 1996-1998.

Engineer, Consulting Office, C. Makris, 27 Robertou Galli Str., Athens, Greece. Project: Dynamic and thermal analysis of a natatorium. Summer 1987.

ACHIEVEMENTS AND AWARDS

- Member of the Academia Europaea “The Academy of Europe”.
- The Walter L. Huber Civil Engineering Research Prize from the American Society of Civil Engineers, for his research on developing and characterizing energy dissipation devices and clarifying the role of damping for seismic protection of structures, May 2001.
- The Shah Family Innovation Prize from the Earthquake Engineering Research Institute, February 1999.
- The T.K. Hsieh Award from the Institution of Civil Engineers, London, U.K., for the best paper published by the Institution in the field of Structural and Soil Vibration, November 1997.
- The Henry Pusey Award from the Program Committee for the 67th Shock and Vibration Symposium (best paper out of 151 papers presented), 1997.

- NSF CAREER Award from the National Science Foundation, USA, July 1996.
- Fellowship from the Japan Society for the Promotion of Science (JSPS) under the JSPS Invitation Fellowship Program for Research in Japan, Spring 1996.
- Research Assistant Scholarship, Department of Civil Engineering, University at Buffalo, September 1988-January 1992.
- Scholarship for excellent academic performance, Institute of State Scholarships, Greece, 1984-1988.

PROFESSIONAL SOCIETIES AND GRADE

Technical Chamber of Greece – Member

American Society of Civil Engineers – Member

The Society of Earthquake and Civil Engineering Dynamics – Member

The Society of Rheology – Member

The Society of Industrial and Applied Mathematics – Member

Earthquake Engineering Research Institute – Member

Greek Society of Theoretical and Applied Mechanics (EEΘEM) – Member

Greek Society of Earthquake Engineering (ETAM) – Member

Metal Structures Research Society of Greece – Member

SCHOLARLY EXPERIENCE

1) Aseismic Base and Rocking Isolation, Energy Dissipation Devices, Passive and Active Control

- i) Seismic protection and response analysis of bridges and freeway overcrossings. Effects of base isolation, rocking isolation and damping mechanisms on the response of earthquake resistant structures. Evaluation of the efficiency of seismic protection systems accounting for soil-structure-interaction.
- ii) Controllable Fluid-Dampers: Testing, modeling and application in seismic protection of buildings and bridges. Development of a promising electrorheological (ER) damper for seismic protection applications. The damper is a compact device which can generate large forces and is suitable for civil engineering applications. Modeling of the ER damper response for design and control applications. Shake table testing of structures equipped with controllable fluid damper and other protective systems.
- iii) Spring-viscoelastic damper isolation systems: Constitutive modeling of viscoelastic fluid dampers. Application of fractional and complex-order derivatives in modeling frequency dependent mechanical properties. Development of numerical algorithms to integrate fractional and complex-order differential equations. Applications of viscous dampers in seismic and vibration isolation. Development of simplified methods for design applications. Experimental validation of models.
- iv) Development of a boundary element formulation for dynamic analysis and design of viscoelastic dampers consisting of materials that are described by generalized-derivative constitutive models. Development of three-dimensional constitutive laws with fractional order time derivatives.
- v) Sliding isolation systems: Study of practical sliding isolation systems with velocity dependent coefficient of friction. Investigation of nonlinear effects at resonance, and at low frequency motions (multiple stops).

- vi) Rocking response of free standing and anchored rigid bodies. Investigation of the uplifting and overturning of slender structures in association with the kinematic characteristics of the ground motion. Assessment of the earthquake resistance of classical multidrum columns, electrical equipment, wine storage barrels and tanks. Investigation of the role of negative stiffness.
- vii) Dimensional analysis and investigation of the physical similarities of structural systems.

2. Soil-Structure-Interaction and Soil Dynamics

- i) Seismic response analysis of earth dams and embankments. Development of practical methodologies to compute the kinematic response functions and dynamic stiffness of bridge embankments.
- ii) Soil-pile-group superstructure interaction in applications of seismic analysis of bridges. Dynamic response of piles and pile groups: Development of approximate method to compute the dynamic response of single piles and pile groups for: (a) homogeneous, nonhomogeneous and layered soil deposits, (b) inertia loading and (c) seismic loading under vertical, obliquely incident and Rayleigh waves.
- iii) Development of approximate methods in the time-domain accounting for nonlinear pile-soil interaction, abutment-embankment interaction, and nonlinear response of the superstructure.

3. Ground Motions, Signal Processing, Structural Modeling and System Identification

- i) Investigation of the coherence of ground motions using wavelet analysis. Extraction of time scales and length scales of coherent signals.
- ii) Investigation of the causal behavior of material and structural models. Applications to viscoelasticity.
- iii) Modeling the nonlinear dynamic response of bridges with emphasis on system identification studies.

4. Seismic Protection and Preservation of Cultural Heritage

- i) Seismic response and stability analysis of multidrum classical columns.
- ii) Stability and limit analysis of stone arches, tunnels and buttresses.
- iii) Reconstruction of ancient monuments.

EDUCATIONAL WORKSHOPS ATTENDED

New Developments in Teaching Structural Steel-Design and Practice, October 28-29, 1994. American Institute of Steel Construction

Cooperative Learning Workshop, May 3, 1993. Presented by D. W. Johnson, University of Minnesota

SHORT COURSES AND WORKSHOPS OFFERED

Seismic Response Analysis of Freeway Overcrossing Including Soil-Structure Interaction, 2000 US-Japan Workshop on Bridge Engineering, Lake Tahoe, Nevada, USA. Organized by the Federal Highway Administration (FHWA), USA and the Public Works Research Institute (PWRI), Japan

Seismic Protection of Structures with Semiactive Fluid Dampers, Second International Workshop on Structural Control, Hong Kong, December 18-21, 1996. Organized by the National Science Foundation (NSF), USA

Seismic Protection of Bridges with Fluid Dampers, 1996 US-Japan Workshop on Earthquake Protective Systems for Bridges, Osaka, Japan, December 8-11, 1996. Organized by the Federal Highway Administration (FHWA), USA and the Public Works Research Institute (PWRI), Japan

Liquid Dampers for Seismic Protection Applications, Workshop on Applications of Various Protective Systems to Bridge Structures, Taipei, Taiwan, January 15-16, 1996. Organized by the Taiwan Area National Expressway Engineering Bureau and the NCEER of Taiwan and USA

INVITED KEYNOTE LECTURES

From Hooke's "Hanging Chain" and Milankovitch's "Druckkurven" to a Variational Formulation: The Adventure of the Thrust-Line of Masonry Arches, MechAM 2012 – International Conference on Contemporary Problems of Mechanics and Applied Mathematics, Novi Sad, Serbia, September 3-6, 2012.

Evaluation of the Coherence of Strong Ground Motions Using Wavelet Analysis, 1st ACES Workshop on Advances in Performance Based Earthquake Engineering, Corfu, Greece, July 3-6, 2009.

Dimensional Response Analysis of Yielding Structures, 17th AIMETA Congress of Theoretical and Applied Mechanics, Florence, Italy, September 11-15, 2005

COURSES TAUGHT

Undergraduate: Engineering Mechanics
 Structural Engineering
 Structural Steel Design
 Experimental Methods in Structural Engineering

Graduate: Structural Dynamics
 Constitutive Modeling in Structural Mechanics
 Earthquake Engineering
 Seismic Protection of Structures with Modern Technologies
 Advanced Strength of Materials

UNIVERSITY ACTIVITIES

- Chair, Graduate Seminal Committee, Department of Civil Engineering, University of Patras, 2011 – present
- Chair, Outreach Committee, Department of Civil and Environmental Engineering, University of California, Berkeley, 2002-2003
- Member, Graduate Seminars Committee, Department of Civil and Environmental Engineering, University of California, Berkeley, 2001-2003
- Member, Academic Program Committee, Department of Civil and Environmental Engineering, University of California, Berkeley, 1997-2003

- Member of the Ad-Hoc Committee of the T. Y. Lin Structural Engineering Demonstration Laboratory (502 Davis), 1997-2003
- Member, Committee on Technical Services, Department of Civil and Environmental Engineering, University of California, Berkeley, 1997-2003
- Member, Undergraduate Studies Committee, Department of Civil and Environmental Engineering, University of California, Berkeley, 1997-2000
- Member, Undergraduate Admissions Committee, Department of Civil and Environmental Engineering, University of California, Berkeley, 1996-1998
- Faculty Advisor for the Earthquake Engineering Research Institute (EERI) Student Chapter, 1996-2002
- Faculty Advisor of the American Society of Civil Engineers Notre Dame Student Chapter, 1993-1996
- Member, Committee on the Role of Materials Science and Engineering in the College of Engineering, University of Notre Dame, 1994-1996
- Member, Committee on Undergraduate Curricula and Programs, University of Notre Dame, 1994-1996
- Member, Committee on Technical Support, University of Notre Dame, 1993-1996

TECHNICAL ACTIVITIES

- Vice Chairman of the Hellenic Society of Theoretical and Applied Mechanics (HSTAM), May 2013-present.
- Member of the Congress Committee and the General Assembly of the International Union of Theoretical and Applied Mechanics (IUTAM), September 2012-present
- Associate Member of the Technical Advisory Council of the Athens Academy, April 2010-present
- Member of the Academic Council of the Athens College, January 1996-present
- Associate Editor of the Journal of Engineering Mechanics, ASCE, 2002-2008
- Chair of the Dynamics Committee of the Engineering Mechanics Division, ASCE, 2002-2005
- Chair of several sessions in National and International Conferences
- Participant in the Fifth NSF Coordination Meeting on Structural Control Research, Reno, NV, August 1997
- Participant in the Fourth NSF Coordination Meeting on Structural Control Research, Notre Dame, IN, October 1996
- Member, Standards Committee on Testing of Base Isolation Systems, ASCE, 1995-2005
- Member, Dynamics Committee, ASCE Engineering Mechanics Division, 1995-present
- Secretary and Treasurer, American Society of Civil Engineers (ASCE), Indiana North-Central Branch, 1995-96
- Secretary, Committee on Structural Control, ASCE Structures Division, 1994-96
- Secretary and Treasurer of the Wind Engineering Research Council, 1994-95
- Participant in the four consecutive NSF Coordination Meetings on Structural Control Research: 1: Ann Arbor, MI, June 1993, 2: Pasadena, CA, August 1994, 3: Buffalo, NY, September 1995, 4: Notre Dame, August 1996.

Reviewer for the following journals:

Bulletin of the Seismological Society of America, 2011-present, *Earthquakes and Structures*, 2010-present, *Bulletin of Earthquake Engineering*, 2009-present, *Tall Building Journal*, 1998-present, *ISET Journal of Earthquake Technology*, 1998-present, *Journal of Wind Engineering and Industrial Aerodynamics*, 1997-present, *Journal of Vibration and Control*, 1997-present, *Journal of Bridge Engineering*, ASCE, 1997-present, *Journal of Smart Materials and Structures*, 1996-present, *Journal of Rheology*, 1996-present, *Rheologica Acta*, 2009-present, *Journal of Vibration and Acoustics*, ASME, 1995-present, *Earthquake Spectra*, 1995-present, *Journal of Earthquake Engineering and Structural Dynamics*, 1995-present, *Computers and Structures*, 1994-present, *Structural Engineering Review*, 1994-present, *IEEE Transactions on Automatic Control*, 1993-present, *Journal of Structural Engineering*, ASCE, 1993-present, *Journal of Engineering Mechanics*, ASCE, 1993-present, *Journal of Soil Dynamics and Earthquake Engineering*, 1992-present, *International Journal of Architectural Heritage*, 2011-present

GRADUATE STUDENTS

Ph.D. - D. Badoni, Analysis of Pile-Supported Structures in the Time Domain, April 1997, University of Notre Dame.

Ph.D. - Shih-Po Chang, Effect of Damping Mechanisms on the Seismic Response of Isolated Structures, May 2000, University of California Berkeley.

Ph.D. - Mehrdad Sasani, Reliability and Performance-Based Design Assessment and Rehabilitation for RC Structures Located Near Active Faults, May 2001 (Co-Advised with Professors V. V. Bertero and A. Der Kiureghian), University of California Berkeley.

Ph.D. - J. Zhang, Seismic Response Analysis and Protection of Highway Overcrossings Including Soil-Structure Interactions, August 2002, University of California Berkeley.

Ph.D. - C. Black, Seismic Evaluation of Energy Dissipation Devices, May 2004, University of California Berkeley.

Ph.D. - D. Konstantinidis, Seismic Response of Free Standing and Anchored Rigid Blocks, May 2008, University of California Berkeley.

Ph.D. – I. Dimitrakopoulos, Seismic Response Analysis of R.C. Bridges with Unilateral Contract, January 2009, (Co-Advised with Professor A. Kappos), University of Thessaloniki.

Ph.D. – M. Vassiliou, Dynamic Response of two Free-Standing Columns Capped with an Epistyle and the Effect of Seismic Isolation on Rocking Structures, November 2010, University of Patras.

Ph.D. – G. Kampas, Monitoring and System Identification of Seismic Isolated Bridges, April 2012, University of Patras.

Ph.D. – C. Alexakis, Limit-State Analysis and Seismic Resistance of Masonry Arches (February 2013), University of Patras.

Ph.D. – E. Katsanou, Monitoring and System Identification of Earth Dams (in progress), University of Patras.

Ph.D. – C. Kolonas, Seismic Response of a Segment from the Peristyle of Ancient Greek Temples (in progress), University of Patras.

M.S. - D. Badoni, Nonlinear Analysis of Pile Foundations Under Strong Inertia and Seismic Loading, January 1995, University of Notre Dame.

M.S. - S. Burton, Design and Analysis of an Electrorheological Fluid Damper for Seismic Protection of Structures, April 1996, University of Notre Dame.

M.S. - X. Yun, Current Practice in Retrofit and Renewal Engineering for Bridges and Buildings, April 1996, University of Notre Dame.

M.S. - T.S. McMahon, Testing and Modeling of Full Size ER-Damper, April 1997, University of Notre Dame.

M.S. - I. Iliadis, Seismic Response of a Two-span Overcrossing Equipped with Fluid Dampers, January 1997, University of California Berkeley.

M.S. - C. Nelson, Retrofit of an Office Building with Supplemental Dampers, December 1998, University of California Berkeley.

M.S. - A. H. Newell, The Implementation of Seismic Isolation in New and Retrofitted Buildings in the San Francisco-Bay Area, May 1999, University of California Berkeley.

M.Eng. - V. Prabis, Seismic Protection of Bridges Using Serap Tires: Testing Modeling and Implementation, May 1998, University of California Berkeley.

M.Eng. - C.J. Sullivan, Component Testing of Strawbale Walls, May 1998, University of California Berkeley.

M.Eng. - Y. Roussos, Rocking Response and Overturning of Equipment under Seismic Excitation, December 1998, University of California Berkeley.

M.Eng. - C. Mibelli, Evaluation of the Basic Time Response Functions for Pile Groups, December 1998, University of California Berkeley.

M. Eng. - S. Yuen, Seismic Retrofit of Flat-Plate Structures with Buckling Restrained Braces, June 2003, University of California Berkeley.

M.S. - Joshua M. Marrow, Experimental Studies on the Earthquake Performance of Wine-Barrel Stacks, May 2001, University of California Berkeley.

M.S. - D. Konstandinidis, The Rocking Spectrum and the Shortcomings of Design Guidelines, August 2001, University of California Berkeley.

M. S. - T. Psychogios, Dimensional Analysis of the Inelastic Response of Structures, June 2003.

M.S. - M. Constantinides, Seismic Response of Plaster Cast Sculptures on the U.C. Berkeley Campus.

M.S. – G. Kampas, Basic Transfer and Time-Response Functions of the Three-Parameter Fluid and Solid Viscoelastic Model, October 2007, MEEES Program, University of Patras.

M.S. – S. Jeong, Response Analysis of a Seismic Isolated Railway Bridge under Service and Earthquake Loading, November 2008, MEEES Program, University of Patras.

M.S. – K. Bakatselos, Assessment of the Seismic Capacity of a Hospital and its Upgrade with Buckling Restrained Braces, January 2009, University of Patras.

M.S. – D. Angelopoulou, Eigenvalue and Response Analysis of an Isolated Bridge with Transverse Restraints of the End-Abutments, May 2009, MEEES Program – University of Patras.

M.S. – E. Katsanou, Seismic Response Analysis of Long Prestressed Seismic Isolated Bridges, September 2009, MEEES Program – University of Patras.

M.S. – V. Christou, Mathematical Modeling of the Triple Concave Spherical Sliding Bearing, June 2011, University of Patras.

DIPLOMA THESIS STUDENTS

Georgia Dosti, March 2013
 George Tsatsos, March 2012
 Sotiris Konstantopoulos, June 2011
 Andreas Anninos, September 2010
 Gregory Miralis, September 2010
 Eleni Plachoura, June 2010
 Fani Koutrouvelli, March 2010
 Georgia Paisiou, September 2009
 Angelos Dimitrakopoulos, June 2009
 Grigorios Antonellis, June 2009
 Dimitris Golfopoulos, September 2008

Barbopoulos, October 2007
 Nikiforos Atsikpasis, October 2007
 George Maltidis, October 2007
 Konstantinos Rotsetis, October 2007
 Dimitra Angelopoulou, March 2007
 Agapi Koletsi, March 2007
 Maria Lekka, October 2005
 Ioannis Dallas, June 2005
 Athanasios Kiourtis, June 2005
 Aikaterini Konakli, June 2005
 George Apostolakis, June 2004

REU STUDENTS (Research Experience for Undergraduates)

Svetlana Khaykina, Spring 1997
 Christina Preciado, Spring 1997
 Timothy Retford, Summer 1995

Christina Hard, Summer 1995
 Ana Fill, Summer 1994
 John Cardosa, Summer 1993

PUBLICATIONS

A. Archival Journals	Total No of Citations (Scopus + Google scholar)
1. Gazetas, G. and N. Makris ‘Dynamic Pile-Soil-Pile Interaction, Part I: Analysis of Axial Vibration’ <i>Earthquake Engineering and Structural Dynamics</i> , Vol. 20. No 2. 1991, pp. 115-132.	89
2. Makris N. and M.C. Constantinou ‘Analysis of Motion Resisted by Friction I. Contact Coulomb and Linear/ Coulomb Friction’ <i>Mechanics of Structures and Machines</i> , Vol. 19 No 4 1991 pp. 477-500.	41
3. Makris N. and M.C. Constantinou ‘Analysis of Motion Resisted by Friction II. Velocity – Dependent Friction’ <i>Mechanics of Structures and Machines</i> , Vol. 19 No 4 1991 pp 501-526.	23
4. Makris N. and M.C. Constantinou ‘Fractional Derivative Maxwell Model for Viscous – Dampers’ <i>Journal of Structural Engineering</i> , ASCE Vol 117 No 9. September 1991. Pp. 2708-2724.	135
5. Makris N. and G. Gazetas ‘Dynamic Pile-Soil- Pile Interaction Part II. Lateral and Seismic Response’ <i>Earthquake Engineering & Structural Dynamics</i> Vol 21 No 2 1992 pp. 145-162.	214
6. Shaw R.P and N. Makris ‘ Green’s Function of Helmholtz and Laplace Equations in Heterogeneous Media’ <i>Engineering Analysis with Boundary Elements</i> Vol. 10, 1992 pp. 179-183.	30
7. Makris N. and M.C. Constantinou ‘Spring-Viscous Damper Systems for Combined Seismic and Vibration Isolation’ <i>Earthquake Engineering & Structural Dynamics</i> Vol. 21 No 6 1992 pp. 649-664.	51
8. Makris N. and G. Gazetas ‘Displacement Phase Differences in a Harmonically Oscillating Pile’ <i>Geotechnique</i> Vol 43 No 1. 1993 pp. 135-150.	31
9. Makris N., and M.C. Constantinou ‘Models of Viscoelasticity with Complex-Order Derivatives’ <i>Journal of Engineering Mechanics</i> , ASCE Vol. 119 No 7 July 1993 pp. 1453-1464.	27
10. Makris N., G.F. Dargush and M.C. Constantinou ‘Dynamic Analysis of Generalized Viscoelastic Fluids’ <i>Journal of Engineering Mechanics</i> ASCE Vol. 119 No 8. August 1993 pp. 1663-1679.	63
11. Makris N., and M.C. Constantinou and G.F. Dargush ‘Analytical Model of Viscoelastic Fluid Dampers’ <i>Journal of Structural Engineering Mechanics</i> , ASCE Vol 119, No, 11, November 1993 pp. 3310-3325.	49
12. Makris N., ‘Soil-Pile Interaction During the Passage of Rayleigh Waves: An Analytical Solution’ <i>Earthquake Engineering & Structural Dynamics</i> . Vol 23. 1994 pp. 153-167.	44
13. Makris N. ‘Complex-Parameter Kelvin Model for Elastic Foundations’ <i>Earthquake Engineering & Structural Dynamics</i> . Vol 23 1994 pp. 251-264.	13
14. Makris N. ‘The Imaginary Counterpart of Recorded Motions’ <i>Earthquake Engineering & Structural Dynamics</i> Vol 23. 1994 pp 265-273.	9
15. Makris N. ‘Generalized Differentiation and the Complex Memory of Structures’ <i>Fractals</i> Vol 2 No 6 1994 pp. 277-282.	1

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| 16. Makris N. D. Badoni E. Delis and G. Gazetas ‘Prediction of Observed Bridge Response with Soil-Pile-Structure Interaction’ <i>Journal of Structural Engineering</i> ASCE Vol 120 No 10 October 1994. pp. 2992-3011. | 42 |
| 17. Makris N. D. Badoni ‘Seismic Response of Pile Groups under Oblique – Shear and Rayleigh Waves’ <i>Earthquake Engineering & Structural Dynamics</i> Vol 24. 1995. pp. 517-532. | 29 |
| 18. Makris N. G.F. Dargush and M.C. Constantinou ‘Dynamic Analysis of Viscoelastic – Fluid Dampers’ <i>Journal of Engineering Mechanics</i> ASCE Vol 121 October 1995 pp. 1114-1121. | 29 |
| 19. Makris N. ‘Time Domain Analysis of Generalized Viscoelastic Models’ <i>Soil Dynamics and Earthquake Engineering</i> Vol. 14. 1995 pp. 375-386. | 5 |
| 20. Makris N. G. Gazetas and E. Delis ‘Dynamic Soil-Pile-Foundation-Structure Interaction: Records and Prediction’ <i>Geotechnique</i> Vol. 46. No 1 1996 pp. 33-50. | 15 |
| 21. Badoni D. and N. Makris ‘Nonlinear Response of Single Piles under Lateral inertial and Seismic Loads’ <i>Soil Dynamics and Earthquake Engineering</i> Vol. 15 1996. Pp. 29-43. | 65 |
| 22. Makris N. and H. Deoskar ‘Prediction of Observed Response of a Base-Isolated Structure’ <i>Journal of Structural Engineering</i> . ASCE Vol. 122 May 1996 pp. 485-493. | 15 |
| 23. Makris N. J.A. Inaudi and J.M. Kelly ‘Macroscopic Models with Complex coefficients and Causality’ <i>Journal of Engineering Mechanics</i> ASCE Vol. 122. June 1996 pp. 566-573. | 8 |
| 24. Inaudi J.A. and N. Makris ‘Time-Domain Analysis of Linear Hysteretic Damping’ <i>Earthquake Engineering and Structural Dynamics</i> vol 25. 1996 pp. 529-545. | 30 |
| 25. Burton S.A., N. Makris, I. Konstantopoulos and P.J. Antsaklis ‘Modeling the Response of an Electrorheological Damper: Phenomenology and Emulation’ <i>Journal of Engineering Mechanics</i> ASCE Vol. 122, Vol 9. 1996 pp. 897-906. | 43 |
| 26. N. Makris, S.A. Burton, D. Hill and M. Jordan ‘Analysis and Design of an Electrorheological Damper for Seismic Protection of Structures’ <i>Journal of Engineering Mechanics</i> ASCE Vol. 122. No. 10 October 1996, p.p. 1003-1011. | 107 |
| 27. Makris N. S.A. Burton and D.P. Taylor ‘Electrorheological Damper with Annular Ducts for Seismic Protection Applications’ <i>Smart Materials and Structures</i> , Vol. 5, December 1996, pp. 551-564. | 39 |
| 28. Burton S.A., N. Makris, I. Konstantopoulos and P.J. Antsaklis ‘Modeling the Response of an Electrorheological Damper: Constitutive Models and Neural Networks’ <i>Int. Journal of Intelligent Automation and Soft Computing</i> , Vol. 2, No. 4, December 1996, pp. 339-354. | 18 |
| 29. Makris N. T. Tazoh X. Yun and A.C. Fill ‘Prediction of the Measured Response of a Scaled Soil-Pile Superstructure System’ <i>Soil Dynamics and Earthquake Engineering</i> Vol. 16, No. 2, February 1997, pp. 113-124. | 7 |
| 30. Makris N. ‘Rigidity-Plasticity-Viscosity: Can Electrorheological Dampers Protect Base-Isolated Structures from Near Source Ground Motions?’ <i>Earthquake Engineering and Structural Dynamics</i> , Vol. 26, No. 5, May 1997, pp. 571-591. | 143 |

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| 31. Jordan M. A. Sshwendt D.A. Hill, Burton and N. Makris ‘Zeolite-Based Electorheological Fluids: Testing, Modelling and Instrumental Artifacts’ <i>Journal of Rheology</i> , Vol. 41, No. 1, January / February 1997, pp. 75-91. | 17 |
| 32. Badoni D. and N. Makris ‘Pile-to-Pile interaction in the Time Domain – Nonlinear Axial Group Response’ <i>Geotechnique</i> No 47, No. 2, June 1997, pp. 299-317. | 6 |
| 33. Makris, N. "Three Dimensional Constitutive Laws with Fractional Order Time Derivatives", <i>Journal of Rheology</i> , Vol. 41, No. 5, September/October 1997, pp. 1007-1020. | 17 |
| 34. Makris N. ‘Dynamic Stiffness Flexibility Impedance, Mobility and the Hidden Delta Function’ <i>Journal of Engineering Mechanics ASCE</i> , Vol. 123 No. 11, November 1997, pp. 1202-1208. | 11 |
| 35. Makris N. ‘The Causal Hysteretic Element’ <i>Journal of Engineering Mechanics ASCE</i> Vol. 123, No. 11, November 1997, pp. 1209-1214. | 30 |
| 36. Makris N., "Viscous Heating of Fluid Dampers I: Small Amplitude Motions," <i>Journal of Engineering Mechanics</i> , ASCE, Vol. 124, No. 11, November 1998, pp. 1210-1216. | 19 |
| 37. Makris N., Y. Roussos, A.S. Whittaker, and J.M. Kelly, "Viscous Heating of Fluid Dampers II: Large-Amplitude Motions", <i>Journal of Engineering Mechanics</i> , ASCE, Vol. 124, No. 11, November 1998, pp. 1217-1223. | 18 |
| 38. Makris, and S.P. Chang, "Response of Damped Oscillators to Cyclical Pulses," <i>Journal of Engineering Mechanics ASCE</i> Vol. 126, No. 2, February 2000, pp. 123-131. | 23 |
| 39. Makris, N. and S.P. Chang, "Effect of Viscous, Viscoplastic and Friction Damping on the Response of Seismic Isolated Structures," <i>Earthquake Engineering and Structural Dynamics</i> , Vol. 29, 2000 in pp. 85-107. | 159 |
| 40. Makris, N. and Y. Roussos, "Rocking Response of Rigid Blocks under Near Source Ground Motions", <i>Geotechnique</i> , Vol 50, 2000, in pp. 243-262. | 90 |
| 41. Makris, N. and J. Zhang, "Time Domain Viscoelastic Analysis of Earth Structures", <i>Earthquake Engineering and Structure Dynamics</i> , Vol. 29, 2000, pp. 745-768. | 31 |
| 42. Zhang, J. and N. Makris, "Rocking Response and Overturning of Free-Standing Blocks under Cycloidal Pulses", <i>Journal of Engineering Mechanics</i> , ASCE, Vol. 127, No. 5, May 2001, pp. 473-483. | 98 |
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63.	Black C. and N. Makris, "Viscous Heating of Fluid Dampers under Small and Large Amplitude Motions", Caltrans Bridge Research Conference, Sacramento, California, October 31 – November 01, 2005.	
64.	Makris N. and T. Psychogios, "Dimensional Response Analysis of Yielding Structures", 8 th US National Conference on Earthquake Engineering, San Francisco, California, April 17 – 21, 2006.	

<p>65. Palmeri A. and N. Makris, "Seismic Response of Rigid Structures Stepping on Viscoelastic Foundation", 2nd Japan – Greece Workshop: Seismic Design, Observation and Retrofit of Foundation, Tokyo, Japan, April 3 – 4, 2007.</p> <p>66. Makris N. and T. Psychogios, "Dimensional Response Analysis of Yielding Structures", COMPDYN 2007, Crete, Greece, June 12-14, 2007.</p> <p>67. Palmeri A. and N. Makris, "Response Analysis of Rigid Structures Rocking on Yielding Foundations", 4th International Conference on Earthquake Geotechnical Engineering, Thessaloniki, Greece, June 25-28, 2007.</p> <p>68. Konstantinidis D. and N. Makris, "The Dynamics of a Rocking Block in Three Dimensions", 8th HSTAM International Congress on Mechanics, Patras, Greece, July 12-14, 2007.</p> <p>69. Makris N. and T. Psychogios, "Dimensional Response Analysis of Inelastic Structures", IV Geotechnical Earthquake Engineering and Soil Dynamics, ASCE Conference, Sacramento, CA, May 18-22, 2008.</p> <p>70. Makris N. and T. Psychogios, "Dimensional Response Analysis of Yielding Structures Subjected to Mean Fault Ground Motions", 3rd Greek Conference on Earthquake Engineering and Engineering Seismology, Athens, Greece, November 5-7, 2008.</p> <p>71. Makris N., G. Kampas and D. Angelopoulou, "Modal Analysis of Isolated Bridges with Transverse Restraints at the End-Abutments", ACES Workshop: Advances in Performance-Based Earthquake Engineering, Corfu, Greece, July 4-7, 2009.</p> <p>72. Vassiliou M. and N. Makris, "Evaluation of the Coherence of Strong Ground motions Using Wavelet Analysis", ACES Workshop: Advances in Performance-Based Earthquake Engineering, Corfu, Greece, July 4-7, 2009.</p> <p>73. N. Makris, "The Reconstruction of the North-East Corner of the Temple of Zeus at Nemea, Greece", 3rd Greece-Japan Workshop, Santorini, Greece, September 22-23, 2009.</p> <p>74. Konstantinidis D., N. Makris and M. Kelly, "In-Situ Monitoring of the Force-Output of Fluid Dampers: Experimental Investigation", 3rd International Conference on Advances in Experimental Structural Engineering, San Francisco, CA, October 15-16, 2009.</p> <p>75. Makris N. and G. Kampas, "Analyticity and Causality of the Three-Parameter Rheological Models", 9th HSTAM International Congress on Mechanics, Limassol, Cyprus, July 12-14, 2010.</p> <p>76. Makris N., G. Kampas and D. Angelopoulou, "Modal Analysis of Isolated Bridges with Transverse Restraints at the end Abutments", 9th HSTAM International Congress on Mechanics, Limassol, Cyprus, July 12-14, 2010.</p> <p>77. Makris N. and M.F. Vassiliou, "Complete Similarities in the Response of Seismic Isolated Structures", 9th HSTAM International Congress on Mechanics, Limassol, Cyprus, July 12-14, 2010.</p> <p>78. Vassiliou, M. and N. Makris, "The Rocking Response of Seismically Isolated, Free-Standing Rigid Blocks", 3rd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, COMPDYN 2011, Corfu, Greece, May 25-28, 2011.</p> <p>79. Konstantinidis, D., N. Makris and J.M. Kelly, "In-situ Monitoring of Fluid Dampers for Vibration Control of Structures: Experimental Investigation", 4th Workshop on Advances on Experimental Structural Engineering, Ispra, Italy,</p>	6
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<p>June 29-30, 2011.</p> <p>80. Makris, N. and M.F. Vassiliou, "Rocking Response of Rigid Blocks Standing Free on a Seismically Isolated Base", 4th Serbian-Greek Symposium on Recent Advances in Mechanics, Vlasina Lake, Serbia, July 9-10, 2011.</p> <p>81. Makris, N. and M.F. Vassiliou, "The Rocking Response of Seismically Isolated Free-Standing Rigid Blocks", ICCES MM'11, Zonguldak, Turkey, September 6-10, 2011.</p> <p>82. Alexakis, H. and N. Makris, "Structural Stability and Bearing Capacity Analysis of the Tunnel-Entrance to the Stadium of Ancient Nemea", 4th Japan-Greece Workshop on Seismic Design and Protection of Cultural Heritage, Kobe, Japan, October 6-7, 2011.</p> <p>83. Makris, N. and M.F. Vassiliou, "Complete Similarities in the Response of Seismic Isolated Bridges", International Conference on Innovations on Bridges and Soil-Bridge Interaction, Athens, Greece, October 13-15, 2011.</p> <p>84. Makris, N. "Seismic Response of Free-Standing Monolithic and Multidrum Columns of Ancient Temples", Seminar on the Protection of the Integrity of Monuments under Seismic Actions, Thessaloniki, Greece, November 3-5, 2011.</p> <p>85. Makris, N. and M.F. Vassiliou, "Seismic Stability of Free-Standing Rocking Blocks", International Conference on Computational & Experimental Engineering and Sciences, ICCES 2012, Chania, Greece, April 30 – May 4, 2012.</p> <p>86. Makris, N. "Rocking Isolation and the Advantages of Negative Stiffness", ICCES 2012, Chania, Greece, April 30 – May 4, 2012.</p> <p>87. Makris, N. and M. Vassiliou, "Complete Similarities in the Response of Seismic Isolated Bridges", 5th EACS 2012, Genova, Italy, June 18-20, 2012.</p> <p>88. Makris, N. and G. Kampas, "Analyticity and Causality of Rheological Models", ICTAM 2012 – 23rd International Congress of Theoretical and Applied Mechanics, Beijing, China, August 19-24, 2012.</p> <p>89. Makris, N. and H. Alexakis, "From Hooke's "Hanging Chain" and Milankovitch's "Druckkurven" to a Variational Formulation: The Adventure of the Thrust-Line of Masonry Arches", MechAM 2012 – International Conference on Contemporary Problems of Mechanics and Applied Mathematics, Novi Sad, Serbia, September 3-6, 2012.</p> <p>90. Makris, N. and H. Alexakis, "The Effect of Stereotomy on the Minimum Thickness of Masonry Arches: A Variational Formulation Approach", UACEG12: Science & Practice – International Jubilee Conference, Sofia, Bulgaria, November 15-17, 2012.</p> <p>91. Makris, N. and M.F. Vassiliou, "Rocking Response and Stability Analysis of an Array of Free-Standing Columns Capped with a Free-Standing Rigid Beam", 10th HSTAM International Congress on Mechanics, Chania, Crete, Greece, May 25-27, 2013.</p>	
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<p>E. Technical Reports</p>	<p>Total No of Citations (Scopus + Google scholar)</p>
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1.	Makris N. and M.C. Constantinou, "Viscous Dampers: Testing Modeling and Application in Vibration and Seismic Isolation" Report No. I NCEER – 90 – 0028, National Center for Earthquake Engineering, State University of New York at Buffalo, December 20, 1990, 119 pp	36
2.	Makris N. and G. Gazetas, "Phase Wave Velocities and Displacement Phase Differences in a Harmonically Oscillating Pile" Report No. NCEER – 91 – 0010, National Center for Earthquake Engineering, State University of New York at Buffalo, July 8, 1991, 57 pp.	2
3.	Makris N., J. Cardosa, D. Badoni and E. Delis, "Soil – Pile Group – Superstructure interaction in Applications of Seismic Analysis of Bridges" Report No. NDCE – 93 –001, Department of Civil Engineering and Geological Sciences University of Notre Dame, July 1993, 104 pp.	
4.	Makris N. and D. Badoni, "Nonlinear Response of Single Piles Under inertial and Seismic Loading" Report No. NDCE –94 – 001 to Shimizu Corporation Department of Civil Engineering and Geological Sciences, University of Notre Dame, October 1994, 114 pp.	
5.	Makris N., "The Causal Hysteretic Element" Report No. UCB/SEMM – 96/11 Department of Civil and Environmental Engineering, University of California Berkeley , December 1996.	
6.	Badoni D. and N. Makris, "Analysis of the Nonlinear Response of Structures Supported on Pile Foundations," Report No. UCB/EERC-97/07, Earthquake Engineering Research Center, University of California, Berkeley, July 1997, 175 pp.	2
7.	Makris N., Y. Roussos, A.S. Whittaker and J. M. Kelly, "Viscous heating of Fluid Dampers During Seismic and Wind Excitations: Analytical Solutions and Design Formulae," Report No. UCB/EERC-97/11, Earthquake Engineering Research Center, University of California, Berkeley, November 1997, 55 pp.	5
8.	Makris N. and Y. Roussos, "Rocking Response and Overturning of Equipment Under Horizontal Pulse-Type Motions," Report No. PEER-98/05, Pacific Earthquakes, Engineering Research Center, October 1998, 76 pp.	40
9.	Makris N. and S.P. Chang, "Effect of Damping Mechanisms on the Response of seismically Isolated structures, "Report No PEER -98/06, Pacific Earthquake Engineering Research Center; November 1998, 60 pp.	39
10.	Makris N. and J. Zhang, "Rocking Response and Overturning of Anchored Equipment under Seismic Excitations, "Report No. PEER - 99/06, Pacific Earthquake Engineering Research Center, November 1999, 76 p.p.	8
11.	Zhang J. and N. Makris, "Seismic Response Analysis of Highway Overcrossings Including Soil-Structure Interaction", Report No PEER -01/02, Pacific Earthquake Engineering Research Center, May 2001, 135 pp.	29
12.	Makris N. and D. Konstandinidis, "The Rocking Spectrum and the Shortcomings of Design Guidelines", Report No PEER - 01/07, Pacific Earthquake Engineering Research Center, October 2001, 61 pp.	11
13.	Makris N. and C. J. Black, "Rocking Response of Equipment Anchored to a Base Foundation", Report No PEER-02/09, Pacific Earthquake Engineering Research Center, November 2001, 135 pp.	1
14.	Black C., Makris, N., and Aiken I.D., "Component Testing, Stability Analysis and Characterization of Buckling-Restrained Unbounded Braces TM ", Report No PEER-08/2002 Pacific Earthquake Engineering Research Center, September	111

	2002, 100pp.	
15.	Makris N. and J. Zhang, "Structural Characterization and Seismic Response Analysis of a Highway Overcrossing Equipped with Elastomeric Bearings and Fluid Dampers: A case study", Report No PEER-17/2002 Pacific Earthquake Engineering Research Center, November 2002	9
16.	Makris N. and C. J. Black, "Dimensional Analysis of Inelastic Structures Subjected to Near Fault Ground Motions", Report No EERC 2003-05, Earthquake Engineering Research Center, April 2003, 96 pp.	16
17.	Constantinides M., N. Makris and S. G. Miller, "Seismic Response Analysis of Plaster Cast Sculptures on the University of California, Berkeley Campus", Report No EERC 2003-07, Earthquake Engineering Research Center, June 2003, 101 pp.	
18.	Μακρής Ν. και Θ. Ψυχογιός, "Στατική και Δυναμική Ανάλυση των Κιόνων και Τμήματος του Θριγκού της ΒΑ Γωνίας του Ναού του Διός στην Νεμέα", Αμερικανική Σχολή Κλασικών Σπουδών στην Αθήνα, Ιανουάριος 2004, 127 σελίδες.	
19.	Comerio, M. C., J.C. Stallmeyer, R. Smith, N. Makris, D. Konstantinidis, K. Mosalam, T-H Lee, J.L. Beck, K.A. Porter, R. Shaikhutdinov, T. Hutchinson, S.R. Chaudhuri, S.E. Chang, A. Falit-Baiamonte, W.T. Holmes, and P. Somerville, "PEER Testbed Study on a Laboratory Building: Exercising Seismic Performance Assessment", PEER Report, 2005/1. Pacific Earthquake Engineering Research Center, Berkeley, CA.	8
20.	Konstantinidis, D. and N. Makris, "Experimental and Analytical Studies on the Seismic Response of Free Standing and Anchored Laboratory Equipment", Report No PEER 2005/07, Pacific Earthquake Engineering Research Center, July 2005.	13
21.	Black, C. and N. Makris, "Viscous Heating of Fluid Dampers Under Wind and Seismic Loading: Experimental Studies, Mathematical Modeling and Design Formulae", Earthquake Engineering Research Center, January 2006.	5
22.	Psychogios T. and N. Makris, "Dimensional Response Analysis of Yielding Structures", Report No EEAM 2005-01, Department of Civil Engineering, University of Patras, Greece, January 2005, 80 pp.	
23.	Palmeri A. and N. Makris, "Response Analysis of Rigid Structures Rocking on a Viscoelastic Foundation", Report No EEAM 2005-02, Department of Civil Engineering, University of Patras, Greece, July 2005, 69 pp.	
24.	Makris, N., C. Bakatselos, N. Atsikpasis, S. Barbopoulos, C. Rotsetis, "Evaluation of the Seismic Capacity of Four Existing Buildings in Greece and their Seismic Upgrade with Buckling Restrained Braces", Report No EEAM 2008-01, Department of Civil Engineering, University of Patras, Greece, January 2008, 348pp.	
25.	Konstantinidis D., J.M. Kelly and N. Makris, "Experimental Investigation on the Seismic Response of Bridge Bearings", Report No EERC 2008/04, Earthquake Engineering Research Center, October 2008.	10
26.	Vassiliou, M. and N. Makris, "Estimating Time Scales and Length Scales in Earthquake Acceleration Records with the Extended Wavelet Transform", Report No EEAM 2009-01, Department of Civil Engineering, University of Patras, Greece, June 2009.	3
27.	Konstantinidis D., N. Makris and J.M. Kelly, "In Situ Monitoring of the force	1

<p>output of Fluid Dampers: Experimental Investigation", Report No PEER 2011/03, Pacific Earthquake Engineering Research Center, April 2011, 109 pp.</p> <p>28. Kampas, G. and N. Makris, "The Eigenvalues of Seismic Isolated Bridges", Report No SEE 2010-01, Department of Civil Engineering, University of Patras, Greece, October 2010.</p> <p>29. Makris, N. and H. Alexakis, "From Hooke's "Hanging Chain" and Milankovitch's "Druckkurven" to a Variational Formulation: The Adventure of the Thrust-Line of Masonry Arches", Report No EEAM 2012-02, Department of Civil Engineering, University of Patras, Greece.</p>	
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IV. Invited Presentations

1. "Constitutive Models with Complex Parameters," Department of Civil Engineering, Seminar Series, University of California at Berkeley, CA, November 1994.
2. "Analysis and Design of Fluid Dampers for Seismic Protection of Structures," Seminar Series, Department of Mechanical and Industrial Engineering, University of Illinois at Urbana-Champaign, IL, March 1995.
3. "Nonlinear Response of Pile Foundations Under Inertial and Seismic Loading," Department of Civil Engineering, Seminar Series, University of Southern California, CA, April 1995.
4. "Analysis and Design of Fluid Dampers for Seismic Protection of Structures," Department of Civil Engineering and Applied Mechanics, Seminar Series, California Institute of Technology, CA, April 1995.
5. "An Electrorheological Fluid Damper for Seismic Protection," Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute, NY, December 1995.
6. Seismic Protection of Structures with ER-Dampers," Institute of Technology, Shimizu Corporation, Tokyo, Japan.
7. "Seismic Protection of Structures with ER-Dampers," Seminar, Mechanics and Structures, Department of Civil Engineering, University of Tokyo, Tokyo, Japan, March 1996.
8. "Nonlinear Response of Pile Foundations Under Lateral Inertial and Seismic Loads," Technology Research Center, Taisei Corporation, Tokyo, Japan, 1996.
9. "Seismic Protection of Structures with ER-Dampers, Seminar, Department of Civil Engineering, University of Kyoto, Kyoto, Japan, April 1996.
10. "Nonlinear Response of Pile Foundations Under Lateral Inertial and Seismic Loads," Seminar, Department of Environmental and Civil Engineering, Okayama University, Okayama-shi, Japan, April 1996.

11. "Nonlinear Response of Pile Foundations Under Lateral Inertial and Seismic Loads," Seminar, Department of Civil and Environmental Engineering, Kumamoto University, Kumamoto, Japan, April 1996.
12. "Analysis and Design of an Electrorheological Damper for Seismic Protection Applications," Special Seminar, SEMM, Department of Civil and Environmental Engineering, University of California, Berkeley, CA, April 1996.
13. "Phenomenological Constitutive Models and Causality," Department of Civil Engineering, State University of New York at Buffalo, NY, March 1997.
14. "Time Domain Analysis of Nonlinear Viscoelastic Structures," Department of Civil Engineering and Applied Mechanics, Columbia University, NY, April 1997.
15. "Macroscopic Constitutive Models and Causality," Special Applied Mechanics Seminar, Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, MA, April 1998.
16. "Rocking Response of Free-Standing and Anchored Blocks under Seismic Excitation," Department of Civil Engineering and Geological Sciences, University of Notre Dame, IN, April 2000.
17. "Rocking Response and Overturning of Free-Standing and Anchored Structures," Department of Civil Engineering and Applied Mechanics, California Institute of Technology, CA, June 2000.
18. "Seismic Response Analysis of a Highway Overcrossing Equipped with Elastomeric Bearings and Fluid Dampers: A Case Study," University of California Davis, CA, February 2003.
19. "The Reconstruction of the Temple of Zeus at Nemea, Greece," Seminar Series, Department of Civil Engineering, University of Palermo, Italy, September 2005.
20. "Dimensional Response Analysis of Inelastic Structures," University of Pavia, December 2007.
21. "Estimating Time Scales and Length Scales in Earthquake Acceleration Records with Wavelet Analysis," University of California Berkeley, March 2010.
22. "Seismic Response Analysis of Yielding Structures," University of Thessaly, November 2011.
23. "Estimating Time and Length Scales in Pulse-like Earthquake Acceleration Records Using Wavelet Analysis," Department of Mathematics, University of Patras, November 2011.
24. "The Effect of Stereotomy on the shape of the Thrust-Line and the Minimum Thickness of Semicircular Masonry Arches," Department of Architecture, National Technical University, Athens, October 2012.

25. "From Hooke's "Hanging Chain" and Milankovitch's "Druckkurven" to a Variational Formulation: The Adventure of the Thrust-Line of Masonry Arches," Serbian Academy of Sciences and Arts, Belgrade, Serbia, November 2012.
26. "Seismic Response Analysis and Stability of Free-Standing, "Articulated" Columns and the Concept of Rocking Isolation", University of Illinois, Urbana-Champaign, May 2013.

FUNDED RESEARCH PROJECTS

	<u>Title and Sponsor</u>	<u>Funds</u>	<u>Matching Funds</u>	<u>Period</u>
(a)	<u>Principal Investigator</u>			
1.	Seismic Protection of Bridges via Rocking of their Piers which Re-center with Gravity Learning from Ancient Free-Standing Temples: Experimental and Theoretical Studies, ARISTEIA AWARD implemented under the NSRF and the EUROPEAN SOCIAL FUND	€ 350,000		9/12 – 8/15
2.	Seismic Response Analysis and Assessment of the Seismic Capacity of the Mornos Dam, GREEK WATER AND SEWAGE COMPANY	€ 40,000		4/11 – 3/12
3.	Monitoring and Estimation of the Response of Seismic Isolated Bridges with Wavelet Analysis, GREEK MINISTRY OF EDUCATION	€ 45,000		9/10 – 8/13
4.	In-Situ Monitoring of the Force Output of Fluid Dampers: Experimental Investigation, California Dept. of Transportation (CALTRANS)	\$300,000		1/08 – 6/10
5.	Performance of Service Bearings under Seismic Loading, California Dept. of Transportation (CALTRANS)	\$220,000		6/04 – 6/07
6.	Seismic Response of Slender Structures with Foundation Uplifting on Elastic and Inelastic Soil, GREEK MINISTRY OF EDUCATION	€ 80,000		1/05 - 12/06
7.	Dynamic Response Analysis of Seismic Isolated Curved Bridges, UNIVERSITY OF PATRAS (Karatheodoris)	€ 23,400		9/04 – 8/07

8.	Production Testing of Fluid Dampers for the Seismic Protection of the San Francisco-Oakland Bay Bridge, CALTRANS	\$125,500		1/03 - 12/31/03
9.	Performance Characteristics of Building Contents, PEER Year 6	\$79,000		4/01/03-3/31/04
10.	Performance Characteristics of Building Contents, PEER Year 5	\$80,000		10/01/01-3/31/03
11.	Seismic Response of Rigid-Block Assemblies: Experimental Studies and Validation of Discrete Element Numerical Tools, NSF	\$146,000		9/01/01-8/31/03
12.	Viscous Heating of Fluid Dampers: Experimental Investigation and Validation of Theoretical Developments, CALTRANS.	212,000		7/1/01-6/30/03
13.	Characterization of Unbounded Steel Braces, Nippon Steel Co.	\$37,955		10/15/00-4/30/01
14.	Assessment of Seismic Hazards of the Wine Industry	\$15,000		1/1/00-5/30/01
15.	Equipment Overturning Phase II, PG&E,	\$65,000		5/1/00-4/30/01
16.	Equipment Overturning from Strong Ground Motions, PG&E	\$50,000		8/1/98-8/31/99
17.	Equipment Overturning - Validation of Simplified Methods, PG&E	\$60,000		12/97-12/98
18.	Junior Faculty Research Grant, Committee on Research, U.C. Berkeley	\$2,000		12/96-12/97
19.	Junior Faculty Mentor Grant, Office of the Chancellor, U.C. Berkeley	\$1,000		12/96-12/97
20.	NSF Career Award for Nicos Makris, Seismic Protection of Structures with Semi-Active Dampers, NSF	\$300,000	\$100,000	6/96-5/2000
21.	Experimental Methods in Structural Engineering, NSF (ILI-IG)	\$30,000	\$30,000	9/94-8/97
22.	1996 REU Supplement for NSF Grant #BCS	\$10,000		6/96-7/96

- 9300827
23. Fellowships from the Japan Society for the Promotion of Science (JSPS) to visit Japan for two weeks \$8,000
 24. Supplement for grant #BCS 9300827, NSF \$20,000 9/95-8/96
 25. State-of-the-art and state-of-the practice for Retrofit, Maintenance and Renewal Engineering of Civil Structures, NCEER \$9,000 5/95-4/96
 26. 1995 REU Supplement for NSF Grant #BCS 9300827 \$10,000 6/95-7/95
 27. Electrorheological Fluid-Dampers: Testing, Modelling and Application in Vibration and Seismic Protection of Buildings and Bridges, NSF. Co-PI: D. Hill \$140,000 \$40,000 9/93-8/96
 28. Development of a Novel Nonlinear Method for Dynamic Analysis of Pile Foundations. Shimizu Co., Tokyo, Japan \$30,000 4/93-10/94
- (b) Co-Principal Investigator
29. Soil-Foundation-Structure System Beyond Conventional Seismic Failure Thesholds ERC Advanced Grant-Ideas Programme. PI: G. Gazetas € 2,500.000 1/08-12/13
 30. Coordinated Protective Systems Program, California Department of Transportation. PI: S.A. Mahin \$1,070,002 4/97-12/99
 31. Servo-Controlled Bi-Axial Test System for Geomechanics and Structural Engineering Applications, NSF (Expired). PI: L.J. Pyrak-Nolte \$116,943 \$116.942 11/95-10/97
 32. Engineering Research Equipment: Data Acquisition, Sensing and Control. NSF (Expired). PI: B.F. Spencer \$30,238 \$10,000 1/95-12/95