

CURRICULUM VITAE

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PROFESSOR

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EDUCATION:

Doctor of Philosophy (Ph.D.), Engineering - Civil Engineering.

Major: Structural, Continuum and Computational Mechanics.

Minors: Earthquake Engineering-Structural Dynamics and Mathematics.

University of California, Berkeley, U.S.A., 1992.

Dissertation: *“Rate Effects in the Constitutive Modeling of Concrete and Geomaterials Including Plasticity and Damage”*.

Dissertation Advisors: Professors J. Lubliner and P.J.M. Monteiro.

Master of Arts (M.A.), Mathematics, Department of Mathematics.

University of California, Berkeley, U.S.A., 1992.

Master of Science (M.S.), Structural Engineering and Structural Mechanics,
Department of Civil Engineering.

University of California, Berkeley, U.S.A., 1983.

Diploma in Civil Engineering.

Aristotle University of Thessaloniki, Greece, 1978.

Diploma Thesis: *“Theory of Nonlinear Elasticity: Application to Membranes”*.

Thesis Advisor: Professor G. Lianis.

DISTINCTIONS:

A) HONORS AND AWARDS:

- 1. Outstanding New Mechanics Educator Award, American Society for Engineering Education (ASEE), 1998.** (This award is presented annually by the American Society for Engineering Education to two U.S. University faculty members.)
- 2. Member of the Editorial Board of the International Journal on Road Materials and Pavement Design (IJ-RMPD),** since October, 1998.
- 3. Learning Fellow Scholarship, University Center for Innovation in Teaching and Education (UCITE), CASE, Spring 2004.**
- 4. Scholarship to participate in the ‘Faculty Workshop on Failure Case Studies in the Civil Engineering Curriculum’,** sponsored by the American Society of Civil Engineers (ASCE), Cleveland State University, September 2004.
- 5. Board of Directors of the American Society of Civil Engineers (ASCE) (Cleveland Section),** nominated and elected on August 1998; 1998-2000.
- 6. Invited Lecturer at the International Center for Mechanical Sciences (Centre International des Sciences Mecaniques, (CISM)),** Udine, Italy, September 1997.
- 7. Faculty Summer Fellowship, NASA-OAI (Ohio Aerospace Institute)-ASEE (American Society for Engineering Education),** Collaborative Aerospace Research and Fellowship Program, Summer 1997.
- 8. Glennan Fellowship,** Case Western Reserve University, July 1995-June 1996. A Fellowship after competition between faculty members of CASE. [*T. Keith Glennan Fellowship Award: An Award to pretenured faculty members at Case Western Reserve University who have made outstanding starts towards balanced academic careers as “teachers – scholars”.*]
This Fellowship helps untenured faculty members to develop educational programs and courses at the undergraduate and graduate levels.

9. **Scholarship** to participate in the summer school “The Mechanics-Materials Linkage”, organized by the Institute of Mechanics and Materials (which is located at U.C. San Diego and supported by NSF) at Northwestern University, July 10-21, 1995.
10. **Scholarship** to attend the advanced course on “Non-Equilibrium Thermodynamics with Application to Solids,” at the International Center for Mechanical Sciences (CISM), Udine, Italy, 28 September-2 October, 1992.
11. **Tuition Scholarship**, University of California, Berkeley, August 1985-December 1988 and Spring 1991.
12. **Fulbright Scholarship**, 1982-1986.
13. **William H. and Helena Popert Fellowship**, University of California, Berkeley, August 1984- May 1985.
14. **International House Scholarship**, University of California, Berkeley, August 1983-May 1986.

B) NOMINATIONS:

1. **Nominated for the Carl F. Wittke Award for Distinguished Undergraduate Teaching**, CASE, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2005.
2. **Nominated for the John S. Diekhoff Award for Distinguished Graduate Teaching**, CASE, 2000, 2003, 2006. (A faculty member can be nominated for this award every three years.)

C) INVITATIONS AND MEMBERSHIPS TO INTERNATIONAL SCIENTIFIC MEETINGS AND COMMITTEES:

1. **Invited by the “Sichuan University -The Hong Kong Polytechnic University, Institute for Disaster Management and Reconstruction (IDMR)”**, to participate and present a lecture in the “Belt and Road Forum for Education Cooperation”, in December 2018, in Chengdu, CHINA. A limited number of scholars worldwide were invited –with all expenses covered- in this prestigious event.
2. **Invited and presented a keynote lecture in the session “Unconventional Plasticity for Coupled Modeling”** at the “Coupled Problems in Science and Engineering” International Conference in Ibiza, Spain, June 17-19, 2013.

3. **Invited and gave a keynote lecture at the 18th ASCE International Engineering Mechanics Conference** at Virginia Tech, Blacksburg, Virginia, June 3-6, 2007.
4. **Invited to present a keynote lecture at the International Conference “Plasticity, Damage & Fracture 2014”**, in Freeport, Bahamas, January 3-8, 2014.
5. **Invited to present a keynote lecture at the International Conference “International Symposium on Plasticity and its Current Applications”**, in Nassau, Bahamas, January 3-8, 2013.
6. **Invited to present a keynote lecture at the International Conference “Plasticity 2012”**, in Rio Mar, Puerto Rico, January 3-8, 2012.
7. **Invited and presented a lecture at the 4th Serbian-Greek Symposium “Recent Advances in Mechanics”**, at Vlasina Lake, Serbia, July 9-10 2011.
8. **Invited to present a keynote lecture at the International Conference “Plasticity 2010”**, at St. Kitts, January 3-8, 2010.
9. **Invited to present a keynote lecture at the International Conference “Plasticity 09”**, at St. Thomas, January 3-8, 2009.
10. **Member of the Scientific Committee of the 16th Hellenic Conference on Concrete** (organized by the **Technical Chamber of Greece**), Pafos, Cyprus, 21-23 October, 2009.
11. **Invited to present a keynote lecture at the International Conference “Plasticity 08”**, at Kona, Hawaii, January 3-8, 2008.
12. **Invited by the Indian Association for Computational Mechanics and the Indian Institute of Technology Bombay, to present a keynote lecture at the “3rd International Congress on Computational Mechanics and Simulation (ICCMS09)”**, at the Indian Institute of Technology Bombay (IIT – Bombay), Mumbai, India, 1-5 December, 2009.
13. **Member of the International Advisory Committee of the 3rd International Congress on Computational Mechanics and Simulation (ICCMS09)**, at the Indian Institute of Technology Bombay (IIT – Bombay), Mumbai, India, 1-5 December, 2009.
14. **Invited by the Indian Association for Computational Mechanics to present a lecture at the “2nd International Congress on Computational Mechanics and Simulation (ICCMS06)”**, at the Indian Institute of Technology Guwahati (IIT- Guwahati), India, 9-12 December, 2006.

- 15. Member of the International Scientific Committee of the International Conference “Advanced Characterization of Pavement and Soil Engineering Materials”, 20-22 June, 2007, National Technical University of Athens, Athens, Greece.**
- 16. Member of the International Scientific Committee of the 16th European Conference of Fracture Mechanics (ECF16), Alexandroupolis, Greece, 3-7 July, 2006.**
- 17. Member of the International Scientific Committee of the “1st International Congress on Computational Mechanics and Simulation (ICCMS-04)”, 9-12 December, 2004, IIT-Kanpur, India. Invited by the Indian Association for Computational Mechanics.**
- 18. Member of the International Scientific Committee of the 10th International Conference on “Computer Methods and Advances in Geomechanics”, Tucson, Arizona, U.S.A., January, 2001.**

PROFESSIONAL EXPERIENCE AND RESEARCH:

- 1. Professor, Demokritos University of Thrace, Department of Civil Engineering, (12/2013 - present).**

Scope of Research:

- Constitutive modeling of frictional materials (concrete materials and geomaterials). Reinforced concrete.
- Theories of Plasticity. Finite Plasticity. Viscoelasticity, creep. Viscoplasticity, damage mechanics, temperature effects. Thermomechanics of solids with internal variables.
- Constitutive modeling of asphalt concrete. Pavements.
- Analytical, Computational and Experimental Geomechanics. Earthquake Engineering and Nonlinear Dynamics.
- Material Metric.
- Shape memory alloys - smart materials.
- Integration of the derived constitutive equations and implementation. Computational mechanics..

- Analytical and numerical study of the heat and moisture transfer in subterranean heritage structures and regulation of the conditions for protection and sustainability. Energy in structures. Building Physics.
 - Constitutive modeling of ceramic materials.
 - Covariant framework of finite elastoplasticity.
 - Constitutive modeling of high density polyethylene.
 - Fatigue theories and analysis.
 - Biomechanics.
 - Rubber elasticity and viscoelasticity. Damping. Applications to earthquake engineering.
 - Structural mechanics.
 - Educational aspects in mechanics and engineering.
2. **Tenured Associate Professor, Demokritos University of Thrace, Department of Civil Engineering, (11/2007 – 11/2013).**
 3. **Tenured Associate Professor, CASE (Case Western Reserve University), Department of Civil Engineering, (6/99 – 11/2007).**
 4. **Assistant Professor, CASE (Case Western Reserve University), Department of Civil Engineering, (8/93-6/99).**
 5. **Invited Lecturer, for the Advanced Course “High-Cycle Metal Fatigue in the Context of Mechanical Design,” International Center for Mechanical Sciences (Centre International des Sciences Mecaniques, (CISM)), Udine, Italy, September 8-12, 1997.**
 6. **Faculty Summer Fellow, NASA-OAI-ASEE, “Development of a Finite Theory of Viscoelasticity, Constructed from Thermodynamics Using Internal State Variable Theory,” Summer, 1997.**
 7. **Invited Visiting Scientist Applied Mechanics Unit, Safety Technology Institute, Joint Research Center, Commission of the European Union, Ispra, Italy, (Summer, 1994).** Implementation of engineering material models within the CASTEM 2000 Finite Element environment. Gradient Theories.

8. Invited Visiting Scientist, Centre National De La Recherche Scientifique (CNRS), at the University of Bourgogne, Dijon, France, (10/92-1/93 and 5/93-8/93). Failure theories of engineering materials. Shear bands. **Also taught a graduate Mechanics of Continuous Media course at the University of Bourgogne.**

9. Research Engineer, U.C. Berkeley, Department of Civil Engineering, (5/92-10/92 and 1/93-5/93.) Failure theories of engineering materials.

10. Invited Researcher, Universitat Politecnica de Catalunya, International Center for Numerical Methods in Engineering, Barcelona, Spain (Summer 1991). Nonlinear finite element implementations of rate-dependent plasticity and damage mechanics models for quasi-brittle materials.

11. Research Assistant, U.C. Berkeley, Department of Civil Engineering, 12/84-8/85 and 8/88-12/91.

a. Theoretical, experimental and numerical work related to my doctoral research.

b. I assisted Professor J. Lubliner with his “**Plasticity Theory**” book (MacMillan 1990, Dover 2008) providing editing, comments, suggestions and sample computations.

12. Junior Specialist, U.C. Berkeley, Department of Space Sciences, Ten-Meter Telescope Project, Lawrence Berkeley Laboratory, 1/87-1/88. Analyzed the question of controlling the deflections of the Keck Telescope primary mirror segments against warping due to cutting and polishing, by means of a system of leaf springs attached to the whiffletrees supporting the mirror segments. Used finite element analysis of the mirror segment and optimization techniques.

13. Teaching Assistant (8/84-12/84) and Teaching Associate (8/85-5/87 and Spring 1991), U.C. Berkeley, Department of Civil Engineering.

14. Teaching Assistant Training Project Coordinator, U.C. Berkeley, Graduate Division. 7/87-6/89.

15. Lecturer, Aristotle University of Thessaloniki, College of Engineering, Department of Civil Engineering, Division of Applied Mechanics, 11/80-8/82.

16. Design Engineer for “C. Kalogirou and Associates,” a Structural Design firm in Athens, Greece, 1/79-12/80. (This employment was during part of the period I spent for my military service. Since I had the opportunity to serve as an officer in the Greek Navy, I was able to work in the Structural Engineering firm during evenings, nights, holidays and most weekends.)

17. Officer Engineer, Greek Navy, Directorate of Infrastructure, in the course of required military service, 7/78-11/80: Responsible for the design and inspection of civil engineering projects. Coordination between the Departments of Planning and Design.

RESEARCH AND SCHOLARLY CONTRIBUTIONS:

I consider the following to be major accomplishments of mine

(i.e., New ideas in the Mechanics of deformable bodies, Structural and Computational Mechanics):

- Professor K. Valanis and I have very recently explained rigorously **the kinematics of finite plasticity theory, for the first time**. We have given a proper definition of the elastic strains and we have proved the additive decomposition of the strain tensor in elastic and plastic components, that was presumed by Green and Naghdi.

We have also explained why the additive decomposition is in accord with the multiplicative decomposition (proposed by E.H. Lee), explaining Lee's and his followers deficiencies.

We have proved that the **single map** theory of continuum mechanics of the "Truesdellian" school **is not always adequate** and that in the case of plasticity **two deformation maps are needed**.

- I (with Prof. J. Lubliner) have developed a new powerful multidimensional **model for linear and nonlinear viscoelasticity in a continuous and a discrete (internal variable) form**; this was named by us the "**Modified Kuhn Model of Viscoelasticity**". I, with my students, have very recently further generalized and improved this model into what I have called "**The Generalized Kuhn Model of Viscoelasticity**".
- I (with Prof. J. Lubliner) have introduced for the first time, to the best of my knowledge, in the literature, the notion of the **algorithmic moduli for viscoelasticity**. This is very important not only for the preservation of the quadratic rate of convergence of Newton's method used in the finite-element solution, *but even more importantly, because in the case of viscoelasticity continuous moduli do not exist*.
- I have been able to develop (with Dr. I. V. Papadopoulos) **the first multiaxial gradient-dependent high cycle fatigue criterion (on the critical plane and also in an invariant formulation) with remarkable predictive capabilities**. Although our development falls within the general framework of "weak" non-local theories it is quite distinct from the gradient theories of plasticity and is without their shortcomings.
- I, with my students, have been the first to derive a nonlinear multiaxial elasto-plastic constitutive model for **asphalt materials that can correctly describe and predict the evolution of permanent strains under repeated loading**.
- I (with Prof. K. C. Valanis) have further developed and extended the concept of the "**material metric**"; this is a *novel* concept, that considers the fact that materials are, in general, not Euclidean.

- In the important area of finite-deformation theories of elastoplasticity I, with my students, have been recently able to provide a **covariant formulation**, which is superior to the classical “invariance under superimposed rigid body motion” or “material frame indifference” theories.
- I, with my students, have been the first in the literature **to correctly implement numerically the “Generalized Theory of Plasticity”** and take full advantage of the lack of the constraint of the yield function and therefore of the lack of a consistency condition. For this purpose, we have introduced for the first time in the literature the notion of *the algorithmic loading-unloading criteria*.
- I have introduced the theme **“Mechanics of Asphalt and Pavements” in the ASCE Engineering Mechanics community** and its annual conferences, starting in May 1998. The relevant Symposia have been organized annually with an increasing rate of success, since then.
- I have had the unique opportunity to be invited as a Lecturer to the **International Center for Mechanical Sciences (CISM)** in Udine, Italy, in order to participate in the teaching of the course **“High-Cycle Metal Fatigue in the Context of Mechanical Design,” in September 1997**. The audience of the course included faculty members, researchers and Ph.D. students. (The **CISM** courses have served as a model to the **IMM** (Institute for Mechanics and Materials of U.S., funded by NSF and based at U.C. San Diego) courses, which have started in the U.S.)
- My research has been funded by the **National Science Foundation (NSF), NASA, Federal Highway Administration (FHWA), the Asphalt Institute, DOW Chemical (Department of Building and Construction), the Ohio Board of Regents (OBR), the University Center of Innovation in Teaching and Education (UCITE) of Case Western Reserve University, the Office of the Vice President for Information Services of Case Western Reserve University and the SHRP Corporation (of Walnut Creek, California).**

PUBLICATIONS:

Books Edited:

E. Masad, V.P. Panoskaltzis, and L. Wang, “Asphalt Concrete, (Simulation, Modeling and Experimental Characterization)”, Geotechnical Special Publication, No. 146, ASCE 2006, ISBN: 0-7844-0825-4.

REFEREED PUBLICATIONS:

A) PUBLICATIONS IN REFEREED JOURNALS:

(Please, note that the names of graduate students are with bold italic letters.)

1. K.C. Valanis, and V.P. Panoskaltzis, “Serial Deformation Maps and Elasto-Plastic Continua”, *Acta Mechanica*, Vol. 230, **Issue 10**, pp. 3555–3570, <https://doi.org/10.1007/s00707-019-02463-2>, 2019.
2. **V. Kyriakou** and V.P. Panoskaltzis, “Sustainable Management Approaches for Underground Heritage Structures Threatened by the Environment and the Human Presence”, to appear in *World Review of Science, Technology and Sustainable Development*.
3. **L. Katsenis**, C. Stamatopoulos, V.P. Panoskaltzis and B. Di, “Prediction of large seismic sliding movement of slopes using a 2-body non-linear dynamic model with a rotating stick-slip element”, to appear in *Soil Dynamics and Earthquake Engineering*.
4. **V. Kyriakou** and V.P. Panoskaltzis, “Hygrothermal Performance in Underground Heritage Structures and Issues Related to their Conservation”, *International journal of scientific and technical research in engineering (IJSTRE)*, Vol. 4, Issue 5, pp. 42-50, September- October 2019.
5. **T. Chrysanidis** and V.P. Panoskaltzis, "Experimental Study on Cracking Mechanical Characteristics for RC Members under Uniaxial Tension", to appear.
6. V.P. Panoskaltzis, L.C., Polymenakos, **D. Soldatos**, “On Infinitesimal and Finite Deformations in Shape Memory Alloys”, *Acta Mechanica*, Vol. 229, **Issue 5**, pp. 2041–2061, <https://doi.org/10.1007/s00707-017-1969-2>, 2018.
7. **D. Soldatos**, S.P. Triantafyllou, V.P. Panoskaltzis, “Thermomechanical Couplings in Shape Memory Alloy Materials”, *Continuum Mechanics and Thermodynamics*, Vol. 29, Issue 3, pp. 805–834, <https://doi.org/10.1007/s00161-017-0559-9>, 2017.

8. V.P. Panoskaltsis, and **D. Soldatos**, “Material Covariant Constitutive Laws for Continua with Internal Structure”, *Acta Mechanica*, Vol. 227, Issue 3, pp. 881-898, DOI 10.1007/s00707-015-1436-x, 2016.
9. **T. Chrysanidis**, V.P. Panoskaltsis, and I. Tegos, “Parametrical Cost Analysis of an Ultra High-Rise Building: Detailed Design”, *International Journal of Applied Engineering Research (IJAER)*, Vol. 11, Issue 18, pp. 9644-9650, September 2016.
10. **T. Chrysanidis**, V.P. Panoskaltsis, and I. Tegos, “Preliminary Design and Analysis of Cost Parameters of a High-Rise Building: Braced Shear Wall V Core System”, *International Journal of Civil Engineering and Technology (IJCIET)*, Vol. 7, Issue 5, pp. 137-152, September-October 2016.
11. V.P. Panoskaltsis, **D. Soldatos**, and **S.P. Triantafyllou**, “Invariance in Non – Isothermal Generalized Plasticity”, *Acta Mechanica*, Vol. 226, [Issue 3](#), pp. 931–954, DOI 10.1007/s00707-013-1003-2, 2015.
12. V.P. Panoskaltsis, L. C. Polymenakos and **D. Soldatos**, “Large Deformation Constitutive Theory for a Two-Phase Shape Memory Alloy”, *ENGINEERING TRANSACTIONS , Engng. Trans.*, **62**, 4, 355–380, 2014.
13. V.P. Panoskaltsis and **D. Soldatos**, “On Spatial Covariance, Second Law of Thermodynamics and Configurational Forces in Continua”, *Entropy*, Vol. 16 (6) pp. 3234-3256, Doi:10.3390/e16063234, 2014.
14. V.P. Panoskaltsis, **D. Soldatos** and **S. P. Triantafyllou**, “On Phase Transformations in Shape Memory Alloy Materials and Large Deformation Generalized Plasticity” *Continuum Mechanics and Thermodynamics* Vol. 26, Issue 6, pp. 811-831, <https://doi.org/10.1007/s00161-013-0312-y>, 2014.
15. V.P. Panoskaltsis, and **D. Soldatos**, “A Phenomenological Constitutive Model of Non-Conventional Elastic Response”, *International Journal of Applied Mechanics*, Vol. 05, Number 04, DOI: 10.1142/S1758825113500361, 2013.
16. V.P. Panoskaltsis, L.C. Polymenakos, **D. Soldatos**, “A Finite Strain Model of Combined Viscoplasticity and Rate – Independent Plasticity Without a Yield Surface”, *Acta Mechanica*, Vol. 224, Issue 9, pp. 2107-2125, DOI 10.1007/s00707-012-0767-0, 2013.
17. V.P. Panoskaltsis, L.C. Polymenakos, **D. Soldatos**, “The Concept of Physical Metric in the Thermomechanical Modeling of Phase Transformations with Emphasis on Shape Memory Alloy Materials”, *ASME Journal of Engineering Materials and Technology*, Vol. 135, Issue 2, Doi: 10.1115/1.4023780, April 2013.

- 18. M. Petre**, A. Erdemir, V.P. Panoskaltsis, T.A. Spirka and P.R. Cavanagh, “Foot Tissue Material Properties Determined from an MRI Deformation Experiment”, *ASME Journal of Biomechanical Engineering*, Volume 135, Issue 6, June 2013.
- 19.** V.P. Panoskaltsis, **D. Soldatos**, and **S.P. Triantafyllou**, “The Concept of Physical Metric in Rate –Independent Generalized Plasticity”, *Acta Mechanica*, Vol. 221, Numbers 1-2, pp. 49-64, 2011.
- 20.** K.D. Papoulia, V.P. Panoskaltsis, **I. Korovajchuk** and **N.V. Kurup**, “Rheological Representation of Fractional Derivative Models in Linear Viscoelasticity”, *Rheologica Acta*, 49 pp. 381-400, 2010.
- 21.** V.P. Panoskaltsis and **D. Panneerselvam**, “Theoretical Aspects in Modeling Asphalt Concrete and Pavements”, *ASCE Geotechnical Special Publication, No. 182, (Innovations in the Characterization, Modeling and Simulation of Pavements and Materials)*, pp. 1-15, 2008.
- 22.** V.P. Panoskaltsis, L.C. Polymenakos, **D. Soldatos**, “On Large Deformation Generalized Plasticity”, *Journal of Mechanics of Materials and Structures*, V. 3, No. 3, pp. 441-457, 2008.
- 23.** V.P. Panoskaltsis, L.C. Polymenakos, **D. Soldatos**, “Eulerian Structure of Generalized Plasticity: Theoretical and Computational Aspects”, *Journal of Engineering Mechanics, ASCE*, V. 134, No. 5, pp. 354-361, 2008.
- 24. I. Kang**, **D. Panneerselvam** , V.P. Panoskaltsis, S.J. Eppell, R.E. Marchant and C.M. Doerschuk, “Changes in the Hyperelastic Properties of Endothelial Cells Induced by Tumor Necrosis Factor-alpha ”, *Biophysical Journal*, V. 94 (8), pp. 3273-3285, 2008.
- 25.** V.P. Panoskaltsis, “The Temperature Dependent Generalized Kuhn Model for Asphalt Concrete”, *ASCE Geotechnical Special Publication, No. 176, (Analysis of Asphalt Pavement Materials and Systems, Emerging Methods,)* pp. 73-86, 2007.
- 26.** V.P. Panoskaltsis, K.D. Papoulia, **S. Bahuguna** and **I. Korovajchuk**, “The Generalized Kuhn Model of Linear Viscoelasticity”, *Mechanics of Time-Dependent Materials*, V. 11 (3-4), pp. 217-230, 2007.
- 27. S. Bahuguna**, V.P. Panoskaltsis and K.D. Papoulia, “Identification and Modeling of Permanent Deformations of Asphalt Concrete”, *Journal of Engineering Mechanics, ASCE*, V. 132, No. 3, pp. 231-239, March 2006.
- 28. L.M. Powers**, V.P. Panoskaltsis and D. Gasparini, “A Nonlinear Viscoelastic Model for Ceramics at High Temperatures”, *International Journal of Non-Linear Mechanics*, V. 41, pp. 200-212, 2006.
- 29.** K.C. Valanis and V.P. Panoskaltsis, “Material Metric and Connectivity in Continua”, *Acta Mechanica*, V. 175, pp. 77-103, 2005.

30. D. Panneerselvam and V.P. Panoskaltsis, “Numerical Implementation of a Hyperelastic-Viscoplastic-Damage Model for Asphalt Concrete Materials and Pavements”, *ASCE Geotechnical Special Publication No. 146, (Asphalt Concrete, Simulation, Modeling and Experimental Characterization)*, pp. 61-72, 2005.

31. V.P. Panoskaltsis, **S. Bahuguna and D. Soldatos**, “On the Thermomechanical Modeling of Shape Memory Alloys “*International Journal of Non-Linear Mechanics*”, V. 39, pp. 709-722, 2004.

32. V.P. Panoskaltsis, **S. Bahuguna and D. Soldatos**, “On the Description of Mechanisms with Different Characteristic Times in Solid Materials: A Non-Conventional Approach”, *Mechanics Research Communications*, V. 25, No. 2, pp. 155-164, 1998.

33. V.P. Panoskaltsis and **S. Bahuguna**, “Micro and Macromechanical Aspects of the Behavior of Concrete Materials with Special Emphasis on Energy Dissipation and on Cyclic Creep,” *Journal of the Mechanical Behavior of Materials*, V. 6, No. 2, pp. 119-134, 1996.

34. I.V. Papadopoulos and V.P. Panoskaltsis, “Invariant Formulation of a Gradient-Dependent Multiaxial High-Cycle Fatigue Criterion,” *Engineering Fracture Mechanics*, V. 55, No. 4, pp. 513-528, 1996.

35. N. Banai, V.P. Panoskaltsis, J.M. Salazar, and L. Brenig, “An Analysis of the High Temperature Deformations of Niobium,” *Mechanics Research Communications*, V. 23, No. 5, pp. 483-493, 1996.

36. V.P. Panoskaltsis, J. Lubliner and P.J.M. Monteiro, “Rate Dependent Plasticity and Damage for Concrete,” in *Cement Manufacture and Use*, pp. 27-40, *ASCE Special Publication*, P. W. Brown, editor, ASCE, N.Y., 1994.

37. J. Lubliner and V.P. Panoskaltsis, “The Modified Kuhn Model of Linear Viscoelasticity,” *International Journal of Solids and Structures*, v. 29, no. 24, pp. 3099-3112, 1992.

B) REFEREED PUBLICATIONS IN VOLUMES/REFEREED BOOK CHAPTERS:

38. V.P. Panoskaltsis, “Mechanics of Shape Memory Alloy Materials - Constitutive Modeling and Numerical Implications”, a (refereed) chapter in the book “*Shape Memory Alloys – Processing, Characterization and Applications*”, F.M.B. Fernandes, Ed., INTECH Publications, ISBN 978-953-51-1084-2, , *In Tech, DOI 10.5772/52228 (2013)*, pp. 131-166, 2013.

39. V.P. Panoskaltsis, “Stress Gradient Effect on High-Cycle Fatigue Strength Under Uniaxial and Multiaxial Conditions”, a (refereed) chapter in the book “*High-Cycle Metal Fatigue in the Context of Mechanical Design*”, K. Dang Van and I.V. Papadopoulos, eds., Chapter 6, pp. 189-209, Springer-Verlag, Wien-New York, 1999.

- 40.** V.P. Panoskaltsis, *S. Bahuguna and D. Soldatos*, “A General Consistent Integration Scheme for Rate-Independent Generalized Plasticity,” in *Computational Plasticity: Fundamentals and Applications*, a compendium of refereed papers, pp. 540-547, D.R.J. Owen, E. Onate, and E. Hinton, eds., International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, March, 1997.
- 41.** I.V. Papadopoulos and V.P. Panoskaltsis, “Gradient-Dependent Multiaxial High-Cycle Fatigue Criterion”, in *Multiaxial Fatigue and Design*, a refereed compendium of selected papers, European Structural Integrity Society (ESIS) 21, pp. 349-364, Mechanical Engineering Publications (MEP), (Edited by A. Pineau, G. Cailletaud and T.C. Lindley), London, 1996.
- 42.** V.P. Panoskaltsis, K.D. Papoulia and *S. Bahuguna*, “Effect of Rate on Strength and Energy Dissipation of Concrete Materials” in *Earthquake Resistant Engineering Structures*, a compendium of refereed papers, pp. 419-429, Computational Mechanics Publications, G.D. Manolis, D.E. Beskos, and C.A. Brebbia eds., London, 1996.

REFEREED CONFERENCE PROCEEDINGS:

- 1. T. Chrysanidis**, V.P. Panoskaltsis, “Evaluation of Cracking Behavior of R/C Vertical Components Reinforced with Varying Longitudinal Reinforcement Ratios”, XI International Conference on Structural Dynamics, *European Association for Structural Dynamics*, Athens, Greece, 22-24 June 2020.
- 2. P. Sidiropoulos**, C. Stamatopoulos, V.P. Panoskaltsis, “Experimental and numerical study of grain crushing of sands and its effect at landslide triggering’, XI International Conference on Structural Dynamics, *European Association for Structural Dynamics*, Athens, Greece, 22-24 June 2020.
- 3. T. Chrysanidis**, V.P. Panoskaltsis, “Experimental Investigation of the Influence of Tensile Strain on the Cracking of R/C Vertical Structural Elements”, XI International Conference on Structural Dynamics, *European Association for Structural Dynamics*, Athens, Greece, 22-24 June 2020.
- 4. L. Katsenis**, C. Stamatopoulos, V.P. Panoskaltsis, “Phenomenological Expression Predicting Seismic Displacement of Sandy Slopes in Greece in terms of Soil Profile Type Using Nonlinear Dynamic Stick-Slip Analysis”, XI International Conference on Structural Dynamics, *European Association for Structural Dynamics*, Athens, Greece, 22-24 June 2020.

5. **V. Kyriakou**, V.P. Panoskaltsis, “Shelters for Monuments: Contribution to Sustainable Management and Future Heritage Preservation”, 8th International Conference “**ENERGY in BUILDINGS 2019**”, *ASHRAE Hellenic Chapter*, Athens, Greece, September 2019.
6. **P. Sidiropoulos**, C. Stamatopoulos, V.P. Panoskaltsis, “Laboratory Tests for the Study of Grain Crushing of Sands under Shear Stress and the Demonstration of its Consequences at Triggering Landslides through proper Numerical Modeling”, 4th Hellenic Conference on Antiseismic Mechanics and Technical Seismology, ETAM-TEE, Athens, Greece, 5-7 September 2019.
7. **L. Katsenis**, C. Stamatopoulos, V.P. Panoskaltsis, “Seismic Sliding Displacement of Slopes in Terms of Soil Profile Type and Slip Surface Length”, 4th Hellenic Conference on Antiseismic Mechanics and Technical Seismology, ETAM-TEE, Athens, Greece, 5-7 September 2019.
8. **L. Katsenis**, C. Stamatopoulos, V.P. Panoskaltsis, “Non-linear Dynamic Seismic Sliding Movement of Dry Slopes”, **COMPDYN 2019**, 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, *an ECCOMAS and IACM Special Interest Conference*, Crete, Greece, June 2019.
9. **L. Katsenis**, C. Stamatopoulos, V.P. Panoskaltsis, “Seismic Sliding Displacement of Slopes in terms of Soil Profile Type”, **COMPDYN 2019**, 7th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, *an ECCOMAS and IACM Special Interest Conference*, Crete, Greece, June 2019.
10. **V. Kyriakou**, V.P. Panoskaltsis, “Energy Efficiency in Heritage Buildings”, “**ENERGY in BUILDINGS 2018**”, 7th International Conference, *ASHRAE Hellenic Chapter*, Athens, Greece, November 2018.
11. **V. Kyriakou**, V.P. Panoskaltsis, “Impact of the Tumulus on the Stability of Microclimate in Underground Heritage Structures”, “Protection and Restoration of the Environment XIV”, International Conference,, Thessaloniki, Greece, July 3-6, 2018.
12. **T. Chrysanidis**, V.P. Panoskaltsis, **K. Psarras** and I. Tegos, “Economic Design of Superstructure and Foundation of Multi-Story R/C Buildings”, Proceedings of the Academics era – 17th International Conference on Civil and Environmental Engineering (ICCEE), Milan, Italy, December 6-7, 2017.
13. **A. Panidis**, V.P. Panoskaltsis, “Internal Energy Dissipation in Structures and Modeling Techniques”, Proceedings of the 17th PanHellenic Concrete Conference (in Greek), Hellenic Society for Concrete Research (EPES), Technical Chamber of Greece (TEE), Thessaloniki, Greece, November 10-12, 2016.

- 14. T. Chrysanidis**, V.P. Panoskaltsis, **K. Psarras**, I. Tegos, “Economic Aspects Regarding Structural Elements in the Design of Multi-Story Buildings”, Proceedings of the 17th PanHellenic Concrete Conference (in Greek), Hellenic Society for Concrete Research (EPES), Technical Chamber of Greece (TEE), Thessaloniki, Greece, November 10-12, 2016.
- 15.** V. P. Panoskaltsis, “Decompositions of the Stress and the Rate of Deformation Tensors for Materials Undergoing Phase Transformations”, **Invited KEYNOTE Lecture**, V International Conference on Computational Methods for Coupled Problems in Science and Engineering “COUPLED PROBLEMS 2013”, S. Idelsohn, M. Papadrakakis and B. Schrefler eds., **Ibiza, Spain, 17-19, June 2013**, (Proceedings in CDROM form, 13 pages).
- 16.** V.P. Panoskaltsis and **D. Soldatos**, “A Metric Theory of Rate Independent and Rate Dependent Plasticity: Theoretical and Computational Aspects”, in 3rd South-East European Conference on Computational Mechanics, (SEECCM III), *an ECCOMAS and IACM Special Interest Conference*, M. Papadrakakis, M. Kojic, I. Tuncer eds. Kos, Greece, 12–14, June 2013, (Proceedings in CDROM form, 24 pages).
- 17.** I.A. Tegos, V. P. Panoskaltsis, **S.D. Tegou**, “*Analysis and Design of Staircases Against Seismic Loadings*”, in COMPDYN 2013, 4th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering M. Papadrakakis, V. Papadopoulos, V. Plevris eds. Kos, Greece, 12–14, June 2013, (Proceedings in CDROM form, 19 pages).
- 18.** I.A. Tegos, **S.D. Tegou**, V. P. Panoskaltsis, **M. Tsitotas**, “Reduction in Seismic Actions of Bridges by Utilizing the Sidewalks as Restrainers” in the 15th World Conference on Earthquake Engineering, C.S. Oliveira, ed., 24-28 September 2012, Lisbon, Portugal.
- 19.** I.A. Tegos, V. P. Panoskaltsis, **S.D. Tegou**, **M. Papadopoulos**, “Comparison of Seismic Behavior of Multi-Storey Reinforced Concrete Buildings with and without Internal Beams”, in the 15th World Conference on Earthquake Engineering, C.S. Oliveira, ed., 24-28 September 2012, Lisbon, Portugal.
- 20.** V.P. Panoskaltsis, “Recent Advances in Modeling Asphalt Concrete and Pavements”, **Invited Lecture** in the 4th Serbian-Greek Symposium “Recent Advances in Mechanics” **Vlasina Lake, Serbia**, July 9-10 2011.
- 21.** V.P. Panoskaltsis, **D. Soldatos and S.P. Triantafyllou**, “A New Model for Shape Memory Alloy Materials under General States of Deformation and Temperature Conditions”, in 7th GRACM International Congress on Computational Mechanics, A.G. Boudouvis and G.E. Stavroulakis eds., 30 June-2 July 2011, Athens, Greece (Proceedings in CDROM form, 6 pages).

- 22.** V.P. Panoskaltsis, **D. Soldatos and S.P. Triantafyllou**, “A Geometric Theory of Plasticity”, In IVth International Conference on Computational Methods for Coupled Problems in Science and Engineering “*COUPLED PROBLEMS 2011*”, M. Papadrakakis, E. Oñate and B. Schrefler eds., Kos, Greece, 20-22 June 2011, (Proceedings in CDROM form, 16 pages).
- 23.** V.P. Panoskaltsis, **D. Soldatos and S.P. Triantafyllou**, “Generalized Plasticity Theory for Phase Transformations”, *11th International Conference on the Mechanical Behavior of Materials* M. Guagliano ed., Milano, Italy, June 5-9, 2011, (Proceedings in CDROM form by Science Direct, Procedia Engineering, 6 pages).
- 24.** G. Papakaliatakis, V.P. Panoskaltsis, **and A. Liontas**, “Computational Aspects of Crack Growth in Sandwich Plates from Reinforced Concrete and Foam”, *8th International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2010)*, 3-8 October 2010, Kos, Greece, in “Computational Methods in Sciences and Engineering”, T.E. Simos and G. Maroulis eds., American Institute of Physics (AIP) Conference Proceedings, 1504, pp. 1227-1230, 2012.
- 25.** V.P. Panoskaltsis, **D. Soldatos and S.P. Triantafyllou**, “A New Model of Large Deformation Generalized Plasticity”, *10th International Conference on Computational Plasticity – Fundamentals and Applications (COMPLAS X)*, E. Onate, D.R.J. Owen, B. Suarez, eds., 2-4 September, 2009, Barcelona, Spain, (Proceedings in CDROM form, 4 pages).
- 26.** G. Papakaliatakis, V.P. Panoskaltsis and L. Vasileiadis, “Analysis and Design of Sandwich Plates Composed of Reinforced Concrete and a Foam Material”, *16th Hellenic Conference on Concrete*, Technical Chambers of Greece and Cyprus, 21-23 October, 2009, Pafos, Cyprus. In Conference Book of Abstracts (p. 40) and in Conference Proceedings in CDROM form, 12 pages.
- 27.** V.P. Panoskaltsis, **L.C. Polymenakos and D. Soldatos**, “Time Integration Algorithm for Large Deformation Generalized Plasticity”, *6th GRACM International Congress on Computational Mechanics*, D.G. Talaslidis and G.D. Manolis eds., 19-21 June, 2008, Thessaloniki, Greece, (Proceedings in CDROM form, 10 pages).
- 28.** V.P. Panoskaltsis, **D. Panneerselvam**, “An Anisotropic Hyperelastic-Viscoplastic Damage Model for Asphalt Concrete Materials and its Numerical Implementation”, *Proceedings of the 5th GRACM International Congress on Computational Mechanics*, pp. 463-470, G. Georgiou, P. Papanastasiou and M. Papadrakakis eds., 29 June – 1 July, 2005, University of Cyprus, Limassol, Cyprus.
- 29.** V.P. Panoskaltsis, **D. Panneerselvam**, “A Model for the Viscoelastic Behavior and Creep Damage of Concrete Materials”, *Proceedings of the 2005 Joint ASCE-ASME-SES Engineering Mechanics Conference, (McMAT 2005, Mechanics and Materials Conference)* G. Voyiadjis editor, June 1-3, 2005, Louisiana State University, Baton Rouge, Louisiana, (Proceedings in CDROM form, 6 pages).

30. V.P. Panoskaltsis, **D. Panneerselvam**, K.D. Papoulia and **S. Bahuguna**, “A Temperature Dependent Viscoelastic Model for Asphalt Description”, *Proceedings of the 17th ASCE Engineering Mechanics Conference*, V. Kaliakin et al. eds., June 13-16, 2004, University of Delaware, Newark, Delaware, (Proceedings in CDROM form), 10 pages.
31. **D. Panneerselvam**, V.P. Panoskaltsis, “Modeling and Predicting the Permanent Deformations and Damage of Asphalt Concrete: Analytical and Computational Aspects”, *Proceedings of the 17th ASCE Engineering Mechanics Conference*, V. Kaliakin et al. eds., June 13-16, 2004, University of Delaware, Newark, Delaware, (Proceedings in CDROM form), 8 pages.
32. V.P. Panoskaltsis and **D. Panneerselvam**, “Viscoelastic Regularization of Solutions in Strain Softening Materials,” *Proceedings of the 16th ASCE Engineering Mechanics Conference*, G. Turkiyyah Editor, July 16-18, 2003, University of Washington, Seattle, (Proceedings in CDROM form), 10 pages.
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34. **D. Panneerselvam** and V.P. Panoskaltsis, “A Nonlinear Viscoelastic Model for Concrete’s Creep and Creep Failure” *Proceedings of the 15th ASCE Engineering Mechanics Conference*, A. Smyth, Editor, June 2-5, 2002, Columbia University, N.Y., N.Y., (Proceedings in CDROM form), 8 pages.
35. **G. Ramanathan**, V.P. Panoskaltsis, R. Mullen and G. Welsch, “Experimental and Computational Methods for Shape Memory Alloys”, *Proceedings of the 15th ASCE Engineering Mechanics Conference*, A. Smyth, Editor, June 2-5, 2002, Columbia University, N.Y., N.Y., (Proceedings in CDROM form), 12 pages.
36. **L. M. Powers**, V.P. Panoskaltsis, D.A. Gasparini and S.R. Choi, “A Nonlinear Viscoelastic Model for Ceramics at High Temperatures”, in *Proceedings of the Fifth World Congress on Computational Mechanics, WCCM V*, 7-12 July, 2002, Vienna, Austria, H.A. Mang, F.G. Rammerstorfer, J. Eberhardsteiner Eds., Volume II, pp. 586-595, Vienna, Austria, 2002.

- 37.** K.D. Papoulia, V.P. Panoskaltsis and **I. Korovajchuk**, “Some Equivalences in the Theory of Linear Viscoelasticity and their Implications in the Modeling and Simulation of 3D Viscoelastic Behavior at Finite Strains”, in *Recent Trends in Constitutive Modeling of Advanced Materials, AMD- Vol. 239*, pp. 1-11, M. K. Khrousheh, T.A. Godfrey and K.J. Willam, eds., published by the American Society of Mechanical Engineers (ASME), N.Y., N.Y., U.S.A. 2000. Presented at the 2000 ASME International Mechanical Engineering Congress and Exposition, November 5-10, 2000, Orlando, Florida.
- 38.** **S.P. Joshi** and V.P. Panoskaltsis, “Gradient-Dependent Generalized Plasticity: Formulation and Algorithmic Implementation”, *Proceedings of the European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2000, (Incorporating the VI International Conference on Computational Plasticity (COMPLAS VI))*, E. Onate et al. eds., (Proceedings in CDROM form). 8 pages. *Book of Abstracts*, E. Onate et al. eds., p. 506, 11-14 September 2000, Barcelona, Spain.
- 39.** **S. Bahuguna**, V. P. Panoskaltsis and K.D. Papoulia, “Characterization and Modeling of Permanent Deformation of Asphalt Pavements”, *Proceedings of the 14th ASCE Engineering Mechanics Conference*, J. Tassoulas, editor, May 21-24, 2000, Austin, Texas, (Proceedings in CDROM form), 6 pages.
- 40.** K.D. Papoulia, V. P. Panoskaltsis and **I. Korovajchuk**, “A Class of Models of 3D Finite Viscoelasticity”, *Proceedings of the 14th ASCE Engineering Mechanics Conference*, J. Tassoulas, editor, May 21-24, 2000, Austin, Texas, (Proceedings in CDROM form), 6 pages.
- 41.** V. P. Panoskaltsis, **S. Bahuguna**, K.D. Papoulia and J. Lubliner, “Finite Element Analysis of Rate Dependence and Failure of Concrete,” *Proceedings of the European Conference on Computational Mechanics, (Solids, Structures and Coupled Problems in Engineering)*, H.A. Mang et al. eds., 31 August - 3 September, 1999, Munich, Germany. (Proceedings in CDROM form), 20 pages.
- 42.** **S. Bahuguna**, K.D. Papoulia and V.P. Panoskaltsis, “Mesh Sensitivity of Finite Element Solutions Using a Viscoelastic-Plastic Cohesive Model”, *Proceedings of the 3rd GRACM International Congress on Computational Mechanics*, pp.179-187, N.Aravas and J.T. Katsikadelis, eds., 24-26, June 1999, Volos, Greece.
- 43.** V.P. Panoskaltsis, **S. Bahuguna** and K.D. Papoulia, “Modeling the Asphalt Concrete Behavior Under Repetitive Simple Shear Loading at Constant Height”, *Proceedings of the 12th ASCE Engineering Mechanics Conference (Engineering Mechanics: A Force for the 21st Century)*, H. Murakami and E. Luco, eds., May 17-20, 1998, La Jolla, California, (Proceedings in CDROM form), 4 pages.

44. D.A. Gasparini, V.P. Panoskaltsis and **L. Powers**, “Simulation of Creep Rupture of Ceramics at High Temperatures”, *Proceedings of the 12th ASCE Engineering Mechanics Conference* (Engineering Mechanics: A Force for the 21st Century), H. Murakami and E. Luco, eds., May 17-20, 1998, La Jolla, California, (Proceedings in CDROM form), 4 pages.
45. V.P. Panoskaltsis, **S. Bahuguna and D. Soldatos**, “Energy Dissipation in Concrete Materials due to Viscoelastic and Damage Mechanisms,” *Proceedings of the ASCE 11th Engineering Mechanics Specialty Conference*, pp. 857-860, Y.K. Lin and T.C Su eds., May 19-22, 1996, Fort Lauderdale, Florida.
46. I.V. Papadopoulos and V.P. Panoskaltsis, “Gradient-Dependent Multiaxial High-Cycle Fatigue Criterion,” *Proceedings of the Fourth International Conference on Biaxial/Multiaxial Fatigue*, 31 May –3 June, 1994, Paris, European Structural Integrity Society (ESIS) Vol. I, pp. 461-476, Paris, France, 1994.
47. V.P. Panoskaltsis and J. Lubliner, “Integration Algorithm for Frictional Materials Including Plasticity, Damage and Rate Effects,” in *Anisotropy and Localization of Plastic Deformation*, J.-P. Boehler and A.S. Khan eds., Elsevier, 1991, pp. 651-654. **Invited paper**, presented at the Third International Conference on Plasticity and Its Current Applications. Grenoble, France, August 12-16, 1991.
48. V.P. Panoskaltsis, J. Lubliner and P.J.M. Monteiro, “A Viscoelastic-Plastic-Damage Model for Concrete,” in *Constitutive Laws for Engineering Materials*, pp. 317-320, C.S. Desai et al. eds., ASME Press, N.Y., N.Y., 1991.

INVITED and KEYNOTE LECTURES, CONFERENCE PROCEEDINGS AND PRESENTATIONS:

1. V.P. Panoskaltsis and C. Stamatopoulos, “National Disaster Prevention and Mitigation: The Case of Greece”, **Invited Lecture** at the **Institute for Disaster Management and Reconstruction of the Sichuan University -The Hong Kong Polytechnic University, in the “Belt and Road Forum for Education Cooperation”, 16-18 December 2018, Chengdu, CHINA.**
2. V.P. Panoskaltsis, **D. Soldatos and S.P. Triantafyllou**, “A Metric Theory of Large Deformation Generalized Plasticity”, The 2009 Joint ASCE-ASME-SES Conference on Mechanics and Materials, I.K. Puri and M.R. Hajj, eds., June 24-27, 2009, Virginia Tech, Blacksburg, Virginia, (Proceedings in CDROM form).

3. V.P. Panoskaltsis, “Theoretical and Computational Aspects of Modeling Asphalt Concrete and Pavements: An Internal Variable Approach”, **Invited Keynote Lecture** at the *18th ASCE International Engineering Mechanics Conference*, **June 3-6, 2007, Virginia Tech, Blacksburg, Virginia.**

4. V.P. Panoskaltsis, **L.M. Powers**, and D.A. Gasparini, “A Viscoelastic - Damage Model for Ceramics Failure at High Temperatures”, in *Fracture of Nano and Engineering Materials and Structures. Proceedings of the 16th European Conference of Fracture (ECF16)*, p. 343. E. E. Gdoutos, editor, Springer 2006. July 3-7, 2006, Alexandroupolis, Greece.

5. V.P. Panoskaltsis, “The Temperature Dependent Generalized Kuhn Model for Asphalt Concrete”, *15th U.S. National Congress of Theoretical and Applied Mechanics (15th USNCTAM)*, June 25-30 2006, University of Colorado, Boulder, Colorado.

6. K.D. Papoulia, V. P. Panoskaltsis and **I. Korovajchuk**, “Rheological Representation of Fractional and Logarithmic Models of Linear Viscoelasticity”, *Third Annual European Rheology Conference*, April 27-29, 2006, Hersonisos, Greece.

7. **D. Panneerselvam** and V.P. Panoskaltsis, “Numerical Implementation of a Hyperelastic-Viscoplastic-Damage Model for Asphalt Concrete Materials and Pavements”, *McMat 2005, Mechanics and Materials Conference, The 2005 Joint ASME/ASCE/SES Conference on Mechanics and Materials*, June 1-3 2005, LSU, Baton Rouge, Louisiana.

8. **L.M. Powers**, V.P. Panoskaltsis and D. Gasparini, “A Nonlinear Viscoelastic Model for Ceramic Materials”, *29th International Conference on Advanced Ceramics and Composites*, January 23-28, 2005, Cocoa Beach, Florida,

9. K.D. Papoulia, V.P. Panoskaltsis and **N. Kurup**, “Rheological Representation of Fractional Derivative Models”, *ECCMR 2003, Third European Conference on Constitutive Models for Rubber*, University of London, London, 15-17 September 2003.

10. V.P. Panoskaltsis and K.D. Papoulia, “Rheological Representation of Fractional and Logarithmic Linear Models and Their Extension to Finite Strains”, **Invited Participation** in EUROMECH Colloquium 438 and Workshop on *Constitutive Equations for Polymer Microcomposites and Inelasticity and Viscoelasticity of Rubber*, 15-19 July, 2002, Vienna, Austria.

11. V.P. Panoskaltsis, "Teaching Statics and Strength of Materials at the Undergraduate Level: Quantity versus Quality", *American Society of Engineering Education (ASCE) Specialty Conference*, April 20, 2000, Ohio Aerospace Institute, Cleveland, Ohio.
12. V.P. Panoskaltsis, "Constitutive Modeling and Numerical Aspects of Non Simple Materials: Application to Asphalt and Smart Materials", *Seventh International Symposium on Plasticity and Its Current Applications, "Plasticity 99"*, January 5-13, 1999, Cancun, Mexico.
13. **L.M. Powers**, S.R. Choi, D.A. Gasparini, V.P. Panoskaltsis, "Creep Life Prediction of a Silicon Nitride with Multiple Specimen Configurations", *23rd Annual Conference and Exposition on Composites, Advanced Ceramics, Materials and Structures*, January 25-29, 1999, Cocoa Beach, Florida.
14. V.P. Panoskaltsis, K.D. Papoulia, J. Lubliner and **S. Bahuguna**, "Finite Element Analysis of Rate Dependence and Failure of Concrete," *Fourth World Congress on Computational Mechanics*, 29 June –2 July, 1998, Buenos Aires, Argentina.
15. V.P. Panoskaltsis and **S. Bahuguna**, "Stability of Generalized Plasticity Theory", *Thirteenth U.S. National Congress of Applied Mechanics*, June 21-26, 1998, University of Florida, Gainesville, Florida.
16. V.P. Panoskaltsis, "A Conventional Method for the Description of Unconventional Materials: Theoretical, Computational and Experimental Aspects," *International Mechanical Engineering Congress and Exposition (ASME Winter Meeting), Applied Mechanics Division*, November 16-21, 1997, Dallas, Texas.
17. V.P. Panoskaltsis and **S. Bahuguna**, "Enhancing the Understanding of Strength of Materials and Reinforcing the Fundamentals via Computational Methods," *Proceedings of the 1997 Joint American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME) and Society of Engineering Science (SES), Summer Meeting*. 1 page in the book of abstracts. June 29-July 2, 1997, Northwestern University, Evanston, Illinois.
18. **D. Soldatos**, **S. Bahuguna** and V.P. Panoskaltsis, "A New Model of Combined Viscoplasticity and Rate-Independent Plasticity Without a Yield Surface: Theoretical and Computational Aspects," *Proceedings of the 1997 Joint American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME) and Society of Engineering Science (SES), Summer Meeting*. 1 page in the book of abstracts. June 29-July 2, 1997, Northwestern University, Evanston, Illinois.

19. V.P. Panoskaltsis and I.V. Papadopoulos, "Gradient-Dependent Multiaxial High-Cycle Fatigue Theory: Invariant Formulation," *Proceedings of the 32nd Annual Technical Meeting of the Society of Engineering Science*, p. 421, October 29-November 1, 1995, New Orleans, Louisiana.
20. V.P. Panoskaltsis, "A Unified Constitutive Model for Concrete and Geomaterials in Compression and Tension Including Rate Effects," *10th ASCE Engineering Mechanics Specialty Conference*, May 21-24, 1995, University of Colorado at Boulder, Boulder, Colorado.
21. I.V. Papadopoulos and V.P. Panoskaltsis, "A New Approach to the Multiaxial High-Cycle Fatigue: A Gradient-Dependent Theory," *Recent Advances in Engineering Science, Proceedings of the 31st Annual Technical Meeting of the Society of Engineering Science*, p. 303, October 10-12, 1994, Texas A&M University, College Station, Texas.

RESEARCH REPORTS:

1. V.P. Panoskaltsis and **M. Ravi**, "A Non-Linear Discrete Modified Kuhn Model for Modeling the Creep Behavior of a Polyethylene Composite", Submitted to DOW Chemical Company, Department of Civil Engineering, Case Western Reserve University, Cleveland, Ohio, June 2007, 65 pages.
2. V.P. Panoskaltsis and **V. Gandhewar**, "A Unified Approach to Linear Damping Models Based on the use of Viscoelastic Constitutive Equations", Department of Civil Engineering, Case Western Reserve University, Cleveland, Ohio, June 2007, 65 pages.
3. V.P. Panoskaltsis and **L.M. Powers**, "Mechanical Behavior of High -Temperature Materials for Engine Applications", Submitted to NASA Glenn Research Center, Department of Civil Engineering, Case Western Reserve University, Cleveland, Ohio, February 2006, 148 pages.
4. V.P. Panoskaltsis, D.A. Gasparini and **L.M. Powers**, "A Study of the Time-Dependent Response of Ceramic Materials", Submitted to NASA Glenn Research Center, Department of Civil Engineering, Case Western Reserve University, Cleveland, Ohio, October 2005, 104 pages.
5. V.P. Panoskaltsis, **S. Bahuguna and D. Soldatos**, "Overview of CASTEM 2000 with Emphasis on Model Implementation", Department of Civil Engineering, Center for Infrastructure Materials and Rehabilitation, Case Western Reserve University, Cleveland, Ohio, November 1996, 28 pages.

6. J. Lubliner and V.P. Panoskaltsis, "The Modified Kuhn Model of Linear Viscoelasticity," *SEMM Report UCB/SEMM 92-01*, Department of Civil Engineering, University of California, Berkeley, January 1992, 21 pages.
7. V.P. Panoskaltsis and K.D. Papoulia, "States of Strain and Stress in Triaxial Tests of Cylindrical Specimens", *Report to Professor C.L. Monismith, Director of the Soil Mechanics and Bituminous Materials Laboratory*, University of California, Berkeley, California, March, 1991, 10 pages.
8. *Report on Oral English Communication Competence of International Graduate Student Instructors*, member of the preparation and writing team, University of California, Berkeley, Berkeley, California, February 1988.
9. V.P. Panoskaltsis and K. Papoulia, "Differences in Educational Systems - An Engineering Student's Perspective", in *International Teaching Assistant Handbook: A Guide for Foreign Teaching Assistants at U.C. Berkeley*, pp. 57-59, V. Panoskaltsis and A. Rizvi, eds., The T.A. Training Project of U.C. Berkeley, Berkeley, CA, 1989.
10. V. Panoskaltsis and A. Rizvi, eds., *The T.A. Training Bulletin* of the T.A. Training Project of U.C. Berkeley, Berkeley, California, 1987-1989 (biannually), 8 pages.
11. A. Rizvi and V. Panoskaltsis, eds., *Learning to Teach: A Handbook for Teaching Assistants at U.C. Berkeley*, The T.A. Training Project of U.C. Berkeley, Berkeley, California, 1989, 110 pages.
12. V. Panoskaltsis and A. Rizvi, eds., *International Teaching Assistant Handbook: A Guide for Foreign Teaching Assistants at U.C. Berkeley*, The T.A. Training Project of U.C. Berkeley, Berkeley, California, 1989, 93 pages.
13. V. Panoskaltsis and J. Lubliner, "Investigations of Nonlinear Behavior of Concrete," *SEMM Report UCB/SEMM 87-11*, Department of Civil Engineering, University of California, Berkeley, Berkeley, California, December 1987, 25 pages.
14. K.D. Papoulia, V. Panoskaltsis and T.S. Mast, "Segment Figure Correction Using Leaf Springs on Whiffletrees," *Keck Observatory Report No. 163*, Lawrence Berkeley Laboratory, Berkeley, California, April 1987, 31 pages.

INVITED LECTURES:

1. ***“National Disaster Prevention and Mitigation: The Case of Greece”***, Invited Lecture at the Institute for Disaster Management and Reconstruction of the Sichuan University-The Hong Kong Polytechnic University, in the “Belt and Road Forum for Education Cooperation”, 16-18 December 2018, Chengdu, CHINA.
2. ***“Advising High School Students on their Careers’ Options”*** Invited Lecture at the Conference on Vocational Guidance, by Municipality of Kalamaria and Parents’ Association of the 1st High School of Kalamaria, 12 November 2018, Kalamaria, Greece.
3. ***“Vocational Guidance: Surviving Rules in an Unfriendly and Rigid Environment”***, Invited Lecture at the Conference on Vocational Guidance, by Municipality of Kalamaria (Directory of Education), 24 February 2016, Kalamaria, Greece.
4. ***“Decompositions of the Stress and the Rate of Deformation Tensors for Materials Undergoing Phase Transformations”***, Invited Keynote Lecture, “Coupled Problems 2013” Conference, Ibiza, Spain, 17-19 June 2013.
5. ***“Recent Advances in Modeling Asphalt Concrete and Pavements”***, Invited Lecture, “4th Serbian-Greek Symposium “Recent Advances in Mechanics”, Vlasina Lake, Serbia, July 9-10 2011.
6. ***“The Relation between the Teachings of the Three Hierarchs and the Greek Culture and Civilization”***. Invited Talk at the Hellenic School of the Church of the Annunciation of Cleveland, Ohio. Greek-Orthodox Church of the Annunciation of Cleveland, Ohio, Cleveland, 28 January 2006.
7. ***“Theoretical and Computational Aspects of Modeling Asphalt Concrete and Pavements: An Internal Variable Approach”***, Invited Keynote Lecture, 18th ASCE International Engineering Mechanics Conference, Virginia Tech, Blacksburg, Virginia, 5th June, 2007.
8. ***“Constitutive Modeling and Numerical Implementation of Building and Construction Materials”***, Invited Seminar, The DOW Chemical Company, Department of Building and Construction, Midland, Michigan, 27th April, 2005.
9. ***“An Overview of my Research Activities and Projects During my Tenure at CASE”***, A special invited seminar to a Technical Team from the Department of Building and Construction of DOW Chemical Company, Case Western Reserve University, 25th February, 2005.
10. ***“The Mechanics of Asphalt Materials”***, Invited Departmental Seminar, Department of Civil Engineering, University of Minnesota, 10th December, 2004.

11. ***“Modeling of Permanent Deformation and Mechanistic Design of Asphalt Pavements”***, *Invited Seminar at the Ohio Department of Transportation, (ODOT)*, Columbus, Ohio, 12th February, 2004.
12. ***“New Developments in Theoretical, Computational and Experimental Methods of Shape Memory Alloy Materials”***, *Invited Departmental Seminar*, Department of Mechanical Engineering, Worcester Polytechnic Institute (WPI), Worcester, MA, 15th March, 2001.
13. ***“Teaching Statics and Strength of Materials at the Undergraduate Level: Quantity versus Quality”***, *Invited Lecture, American Society of Engineering Education (ASEE) Specialty Conference, Ohio Aerospace Institute*, Cleveland, Ohio, April 20, 2000.
14. ***“International Teaching Assistants and Undergraduate Students at Case Western Reserve University: Educational and Cultural Aspects”***, Guest Speaker, Case Western Reserve University, October 30, 1998.
15. ***“Challenges Faced by International Teaching Assistants”***, *Invited presentation at the UNIV 400 Seminar “For International Teaching Assistants”*, Case Western Reserve University, October 10, 1997.
16. Invited to participate in the teaching of the ***Advanced Course “High-Cycle Fatigue in the Context of Mechanical Design,”*** 8-12 September 1997, at Udine, Italy. This is within the program of advanced courses offered by the **International Center for Mechanical Sciences (CISM)**; the audience of these courses is University faculty, researchers and Ph.D. students.
17. ***“Improving Teaching in Fundamental Courses for Civil Engineering: Virtual Reality Versus Virtual Work”***, presented at the *First Annual Glennan Fellows Program*, Case Western Reserve University, May 9, 1996.
18. ***“Rate Effects and Plastic Damage in the Constitutive Modeling of Frictional Materials”***, *Invited Departmental Seminar*, National Science Foundation Center for Advanced Cement-Based Materials and Department of Civil Engineering, The Technological Institute, Northwestern University, Evanston, Illinois, March 24, 1995.
19. ***“Gradient Dependent Multiaxial High-Cycle Fatigue”***, *Invited Seminar*, Frontiers in Materials, Structures and Mechanics, Spring 1994 Colloquium Series, The Case School of Engineering, Case Western Reserve University, April 11, 1994.
20. ***“Modeling of Concrete and Inelasticity”***, *Invited Seminar* at the Symposium “New Directions in Mechanics and Materials”, Aristotle University of Thessaloniki, School of Engineering, Department of Civil Engineering, Thessaloniki, Greece, December 17, 1992.

21. ***“Integration Algorithm for Frictional Materials Including Plasticity, Damage and Rate Effects”***, *Invited paper*, presented at the Third International Conference on Plasticity and Its Current Applications. Grenoble, France, August 12-16, 1991.
22. ***“Rate Effects in the Constitutive Modeling of Frictional Materials”***, *Invited Seminar*, Universitat Politecnica de Catalunya, International Center for Numerical Methods in Engineering, Barcelona, Spain, July 9, 1991.

RESEARCH SUPPORT:

Responsible for the Following Funded Research Programs:

1. “Structural Seathing Program: Study of the Effect of High Density Polyethylene on the Short and Long Term Structural Capacity of Buildings under Wind Loading and a Variety of Temperatures” **Principal Investigator, DOW Chemical, Department of Building and Construction**, \$48,010, June 2005-May 2006.
2. “A Study of the Time-Dependent Response of High-Temperature Materials” **Principal Investigator, NASA**, \$150000, October 2004-October 2005.
3. “A Study of the Time-Dependent Response of High-Temperature Materials” **Principal Investigator, NASA**, \$100000, October 2003-October 2004.
4. “A Study of the Time-Dependent Response of High-Temperature Materials” **Principal Investigator, NASA**, \$94,717, October 2002- October 2003.
5. “Development of a Complete Model for the Characterization and Modeling of Permanent Deformation of Asphalt Pavements”, **Principal Investigator**,

Federal Highway Administration - Asphalt Institute Research Center.
\$65,990, October 1998 -October 1999.

6. “Mechanics of Clays: Shear Banding and Anisotropy”, **Principal Investigator, National Science Foundation (NSF).** \$170,000, **3 year** project starting September 1998.
7. “Constitutive Modeling and Characterization of the Thermomechanical Behavior of Shape Memory Alloy Materials”, **Principal Investigator, National Science Foundation (NSF).** (with Professors G. Welsch and R.L. Mullen, as Co-PIs.) \$240,000, **3 year** project starting October 1997.
8. “A Study of the Time - Dependent Response of Ceramic Materials: Deterministic and Probabilistic Analysis and Design Methodologies for the Failure Prediction”, **Co-Principal Investigator, NASA** (with Professor D. Gasparini.), \$600,000, November 1996 - November 2002. (Renewed each year.)
9. “Permanent Deformation of Asphalt - Aggregate Mixes”. **Principal Investigator**, Graduate Fellowship provided by **SHRP Corporation**, Walnut Creek, California. \$10,000, July 1997 – August 1998.
10. “Development of a Unified Model for the Description of Rate Effects in Brittle Materials”. **Principal Investigator, Ohio Board of Regents.** \$5,000, February 1995– January 1996.
11. “Center for Infrastructure Materials and Rehabilitation at the Department of Civil Engineering of CWRU”, **Co - Principal Investigator with the colleagues of the Department of Civil Engineering, Ohio Board of Regents.** \$1,200,000, January 1997.

EDUCATIONAL RESEARCH PROGRAMS:

Responsible for the Following Funded Research Programs:

1. “Improvement of the Undergraduate Course ECIV 310 “Strength of Materials” and the Graduate Mechanics Program of the Civil Engineering Department”. **CWRU/UCITE (University Center of Innovation in Teaching and Education) Glennan Fellowship.** \$10,000, July 1995 -

June 1996.

2. “Development of Computational Tools for Graduate and Undergraduate Education”.
Office of the Vice President for Information Services at CWRU,
\$5,000, July 1996 - January 1997.

TEACHING - EDUCATIONAL:

A) TEACHING at the DEMOKRITOS UNIVERSITY of THRACE (DUTH):

Since 2008 I have been teaching the following courses at DUTH:

1) Undergraduate Courses:

- a) “Reinforced and Prestressed Concrete Bridges”
- b) “Reinforced Concrete Structures II”
- c) “Masonry Structures” (Co-teaching with Professor K. Chalioris and Lecturer T. Rousakis).
- d) “Design of Structural Systems with the aid of the Computer.”
- e) “Physics”.
- f) “Theory of Plasticity for Structural Engineering”. **(Introduced by me).**

2) Graduate Courses:

- a) “Finite Element Analysis” (Co-teaching with Professor A. Elenas and G. Papakaliatakis).
- b) “New Approaches and New Materials in the Design of Reinforced Concrete Structures” (Co-

teaching with Professor Ch. Karayiannis).

- c) “Theory of Plasticity and Damage Mechanics”. **(Introduced by me).**
- d) “Mechanics of Deformable Bodies”. **(Introduced by me).**

B) TEACHING AT CASE:

1) At Case I have taught the following undergraduate courses:

- a) ECIV 360 - Civil Engineering Systems: Optimization”.
- b) ECIV 110 - Statics
- c) “ENGR 200- Statics and Strength of Materials”.
- d) “ECIV 320 – Structural Analysis”.
- e) “ECIV 310 – Strength of Materials”.

2) At Case I have taught the following graduate courses:

- a) “ECIV 420- Finite Element Analysis”.
- b) “ECIV 405 - Solid Mechanics”. **(Introduced by me).**
- c) “ECIV 406 – Constitutive Modeling Theories”. **(Introduced by me).**

d) “ECIV 584 - Theory of Plasticity and Damage Mechanics”. (**Introduced by me**).

At CASE I have taught undergraduate and graduate courses. Furthermore, I have redesigned and made several modifications in the undergraduate course ECIV 310 (Strength of Materials) (among other things, I have introduced computational methods in this course) and I have proposed and developed THREE NEW graduate courses.

(Please, note that courses with numbers 400 and 500 are graduate, while numbers 100, 200 and 300 refer to undergraduate courses.)

C) NEW COURSES at CASE:

The graduate course **ECIV 406 (Constitutive Modeling Theories)** has been introduced and designed completely by me. This course provides the necessary background and framework for work in constitutive modeling of engineering materials. Models are treated as particular cases of a general theory as opposed to an ad hoc formulation. The general theory presented is the modern theory of *thermodynamics with internal variables*. The cases of thermoelastic solids (linear and nonlinear), of linear and nonlinear viscoelastic materials and of plastic and viscoplastic solids are covered. Also, numerical methods and algorithms for the implementation of the developed models within the context of the finite element method for the solution of boundary and initial value problems are presented. The developed models are applied to the simulation of the behavior of different materials such as concrete, asphalt, rubber, geomaterials, ceramics, shape memory alloys as well as biomaterials with applications in biomechanics.

The graduate course **ECIV 584 (Theory of Plasticity and Damage Mechanics)** has been also introduced and designed by me. This is a new course in two respects: First, the important and modern subject of **Damage Mechanics** has been added. Second, because of the impressive progress of numerical methods and computer power, the emphasis (in the course) has been shifted from analytical solution techniques of boundary and initial value problems to fundamental principles and formulations as well as to numerical methods. Beyond the classical theory of plasticity, modern aspects such as gradient and nonlocal theories, as well as the subject of localization of deformation are covered. Algorithms for the integration of the developed nonlinear equations are presented in detail.

For both **ECIV 406 and ECIV 584**, toolboxes within MATLAB have been developed, for the integration of constitutive equations and for the important problem of nonlinear parameter identification. Both courses are designed to address the needs of the students from several departments of the Case School of Engineering.

The graduate course **ECIV 405 (Solid Mechanics)** has been also designed and introduced by me. This is a fundamental and modern course in mechanics of solids and it is a required course for the graduate students of the mechanics and structures divisions of the Department of Civil Engineering.

D) GLENNAN FELLOWSHIP by the UNIVERSITY CENTER FOR INNOVATION IN TEACHING AND EDUCATION (UCITE) of CWRU

July 1995-June 1996:

- a) The **Glennan Fellowship** gave me the opportunity to develop and introduce two new graduate courses, **ECIV 406** and **ECIV 584**, as well as redesign and improve the undergraduate course **ECIV 310 “Strength of Materials”**.
- b) During my **Glennan Fellowship**, I have organized as well as led educational seminars and I have presented my work at the **First Annual Glennan Fellows Program**, on May 9, 1996. Moreover, I have been an active participant in UCITE activities.

E) GRADUATE TEACHING AT THE UNIVERSITE DE BOURGOGNE, (DIJON, FRANCE):

- α)** Mechanics of Continuous Media (Fall Semester, 1992).

F) LECTURER (Research Affiliate), ARISTOTLE UNIVERSITY OF THESSALONIKI, GREECE:

Presenting and analyzing problems and tutoring students for the course “Technical Mechanics I – Statics” during the academic years 1980-1981 and 1981-1982. Also, holding regular office hours.

G) TEACHING ASSISTANT AND TEACHING ASSOCIATE, UNIVERSITY OF CALIFORNIA AT BERKELEY, DEPARTMENT OF CIVIL ENGINEERING:

Presenting and analyzing problems and tutoring students for the **undergraduate courses** “Strength of Materials” and “Dynamics of Structures”, and for the **graduate courses** “Mechanics of Solids I”, “Mechanics of Solids II”, “Structural Mechanics”, “Structural Analysis” and “Non Linear Structural Analysis”. Also, holding regular office hours.

STUDENT AND POST-DOCTORAL FELLOWS SUPERVISION:

Both at Case and DUTH, I have supervised many Undergraduate (senior thesis projects, diploma theses) and Graduate students (Master and PhD), as well as Post Doctoral Fellows.

PROFESSIONAL ACTIVITIES:

A) BOOK REVIEWER :

1. “*Elementary Mechanics from an Advanced View Point*”, by Professor J. Papastavridis. To appear by Cambridge University Press, 2019.
2. “*Engineering Mechanics- Dynamics*” by Professors J.L. Meriam and L.G. Kraige,

Sixth Edition, John Wiley and Sons, 2007.

3. ***“Mechanics of Materials”*, by Professor J.M. Gere, 6th Edition, Brooks/Cole-Thomson Learning, 2004.**
4. ***“Engineering Mechanics of Solids,”* by Professors E.P. Popov and Balan, 2nd Edition, Prentice Hall, 1999.
*With a special recognition by the authors.***
5. ***“Plasticity Theory,”* by Professor J. Lubliner, Macmillan, 1990.
*With a special recognition by the author.***

B) REVIEWER FOR THE FOLLOWING TECHNICAL JOURNALS:

1. Journal of Engineering Mechanics of ASCE.
2. Mechanics Research Communications.
3. International Journal for Numerical and Analytical Methods in Geomechanics.
4. Journal of Engineering Materials and Technology.
5. International Journal of Non-Linear Mechanics.
6. International Journal of Solids and Structures.
7. International Journal of Plasticity.
8. Acta Mechanica.
9. Journal of Elasticity.

C) REVIEWER FOR RESEARCH AND EDUCATIONAL PROPOSALS:

1. Reviewer and panel member on numerous occasions for proposals submitted to **NSF (National Science Foundation)**.
2. Reviewer of research and educational proposals submitted by Greek Universities in order to be funded by the European Union. Invited by the Greek Ministry of Education, November 2002, Athens, Greece.

D) CONFERENCE SESSIONS CHAIRED/ORGANIZED:

1. I have introduced the theme (and the relevant symposia) “**Mechanics of Asphalt and Pavements**” into the ASCE Engineering Mechanics annual Conferences, starting on May 1998 and ongoing.
2. I co-organized the **Symposium “Mechanics of Flexible Pavements”**, which took place at the University of Colorado, Boulder (June 2006) as a part of the 15th US National Congress of Theoretical and Applied Mechanics (USNCTAM). I chaired several sessions of the Symposium.
3. I co-organized the **Symposium “Asphalt-Pavement Mechanics”**, which took place at Louisiana State University, in Baton Rouge, Louisiana as a part of the ASCE/ASME/SES Engineering Mechanics Conference (MacMAT '05, June 2005) and I chaired several sessions of the Symposium.
4. Member of the technical panel held during the **Symposium “Asphalt-Pavement Mechanics”** (MacMAT '05, June 2005) on the topic “*Constitutive Modeling of Asphalt and Pavements: Past, Present, Future*”.
5. I co-organized **the Symposium “Asphalt – Pavements Symposium”**, which took place, within the 17th ASCE Engineering Mechanics Conference, at the University of Delaware, Newark, Delaware, June 2004.
6. I co-organized and I chaired several sessions of **the Symposium “Asphalt – Pavements Symposium”**, which took place, within the 16th ASCE Engineering Mechanics Conference, at the University of Washington, in Seattle, July, 2003.
7. Co-organizer and sessions’ chair for the **International Symposium** to honor **Professor K. C. Valanis**, which took place within the 16th ASCE Engineering Mechanics Conference at the University of Washington, in Seattle, July, 2003.
8. I organized and chaired several sessions of **the Symposium “Mechanics of Pavements”**, which took place within the 14th ASCE Engineering Mechanics Conference at the

University of Texas Austin, May 2000.

9. I organized and chaired sessions of the **Symposium “Mechanics of Asphalt Concrete,”** which took place within the 12th ASCE Engineering Mechanics Conference at the University of California San Diego, La Jolla, California, May 1998.

This is the year I introduced for the first time the Symposia on “Mechanics of Asphalt and Pavements” to the ASCE Engineering Mechanics Conferences.

10. I co-organized the theme **“Interaction of Creep, Shrinkage and Fracturing of Concrete”**, and chaired it (with Professor Z.P. Bazant of Northwestern University) within the 11th ASCE Engineering Mechanics Conference, Fort Lauderdale, Florida, May 1996.
11. I chaired two sessions on **“Fracture Mechanics”** at the 32nd Annual Technical Meeting of the Society of Engineering Science (SES), New Orleans, Louisiana, October-November, 1995.
12. I co-organized the theme **“Recent Developments in Constitutive Modeling of Geomaterials”**, and chaired it (with Professor R. Liang of the University of Akron) within the 10th ASCE Engineering Mechanics Conference at the University of Colorado at Boulder, May 1995.

E) MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES:

1. Editorial Board of the International Journal on Road Materials and Pavement Design (IJRMPD), October 1998 October 2008.
2. American Society of Civil Engineers (ASCE).
3. American Society of Mechanical Engineers (ASME).
4. Society of Engineering Science (SES).
5. American Academy of Mechanics (AAM).
6. Hellenic Rheological Society.
7. American Society for Engineering Education (ASEE).
8. Technical Chamber of Greece.
9. Hellenic Society of Civil Engineers.

F) MEMBERSHIP IN TECHNICAL COMMITTEES:

1. **Properties of Materials Committee** of the *Engineering Mechanics Institute (EMI)* of the American Society of Civil Engineers (ASCE) (since 1994).
2. **Properties of Pavements Committee** of the *Engineering Mechanics Institute (EMI)* of the American Society of Civil Engineers (ASCE).
3. **Modeling Inelasticity & Multiscale Behavior (MIMB) Committee** (former name: **Inelasticity Committee**) of the *Engineering Mechanics Institute (EMI)* of the American Society of Civil Engineers (ASCE) (since 2002).
4. **Committee on Constitutive Equations** of the *Applied Mechanics Division* and the *Materials Division* of the American Society of Mechanical Engineers ASME (since 1995).

G) OTHER MEMBERSHIPS:

Member of the *Educational Committee* of the **Greek School of the Church of the Annunciation**, West 14th Street, Cleveland, Ohio, U.S.A., 2005-2007.

CIVIL ENGINEERING DEPARTMENT/SCHOOL OF ENGINEERING/UNIVERSITY SERVICE at CASE WESTERN RESERVE UNIVERSITY :

1. Member on numerous committees for Master Theses Defenses, Ph.D. Qualifying Examinations and Ph.D. Dissertation Defenses.
2. Executive Committee of the University Undergraduate Faculty (2005-2008).
3. Executive Committee of the Case School of Engineering (2005-2007).
4. Executive Committee of the Case School of Engineering (2001-2003).
5. Graduate Studies Committee of the Case School of Engineering (1999-2001).

6. Undergraduate Studies Committee of the Case School of Engineering (1997-1999).
7. Graduate Studies Committee of the Case School of Engineering (1995-1997).
8. ASCE Student Chapter Faculty Advisor (January 1995 to January 2002).
9. Responsible for the Civil Engineering Department Graduate Seminar Series for the Academic Years 1997-1998, 1999-2000 and 2000-2001.

CIVIL ENGINEERING DEPARTMENT at the DEMOKRITOS UNIVERSITY OF THRACE SERVICE:

1. Member on numerous committees for Diploma Theses, Master Theses and Doctoral Dissertation Examinations and Defenses.
2. Member of **external committees for many Doctoral Dissertation Examinations and Defenses.**
3. Member of the Undergraduate Studies Committee from October 2010 to September 2013. This committee has the important role to study the existing program of studies (courses, credits, prerequisites etc.), compare it to the other departments' of the country as well as to leading civil engineering programs world-wide and suggest changes to the department.
4. Member of the Graduate Studies Committee, academic year 2010-2011 and 2015-2016. (Μέλος της Διατμηματικής Επιτροπής Μεταπτυχιακών Σπουδών της Πολυτεχνικής Σχολής του προγράμματος «Νέα Υλικά και Τεχνολογίες στο Σχεδιασμό Έργων από Οπλισμένο Σκυρόδεμα».)
5. Academic Coordinator for the ERASMUS+ Program for Practical Training.
6. Introduced and responsible for the Civil Engineering Department Graduate Seminar Series.