

**Professor Spyros A. Karamanos** 



From: Daniel Vasilikis and Spyros A. Karamanos"Buckling Design of Confined Steel Cylinders Under External Pressure", Journal of Pressure Vessel Technology, Vol. 133, No. 1, 2010,

#### See:

http://www.mie.uth.gr/labs/mex-lab/cv-en.html http://www.mie.uth.gr/labs/mex-lab/index.html http://www.mie.uth.gr/labs/mex-lab/current4.html http://journalogy.net/Author/12979522/spyros-a-karamanos http://www.worldcat.org/title/stability-of-tubes-under-external-pressure-and-structural-loads/oclc/463340862

Department of Mechanical Engineering University of Thessaly, Greece

#### **Research Interests:**

Structural Mechanics, Stability and Buckling, Numerical Methods and Finite elements, Inelastic Analysis of Materials and Structures, Analysis of Plates and Shells, Design & Analysis of Steel Structures, Design & Analysis of Pipelines and Industrial Structures, Structural Dynamics & Earthquake Engineering.

#### **Education:**

1993 Ph.D. in Structural Mechanics, Department of Civil Engineering, The University of Texas at Austin, USA. 1991 Master of Science in Engineering (\_ú.Sc.) in Structural Engineering, Department of Civil Engineering, The University of Texas at Austin, USA.

1989 Diploma (5-year degree) in Civil Engineering, National Technical University of Athens, Greece (Highest Honors, 1st out of 350 students).

#### Academic & Professional Experience:

08/2009 - Present Associate Professor, Department of Mechanical Engineering, University of Thessaly, Volos, Greece

05/2003 - 08/2009 Assistant Professor, Department of Mechanical Engineering, University of Thessaly, Volos,

Greece

05/1999 - 05/2003 Lecturer, Department of Mechanical Engineering, University of Thessaly, Volos, Greece 10/1996 - 05/1999 Design Engineer, EGNATIA ODOS AE., Thessaloniki, Greece.

01/1996 - 10/1996 Post-Doctoral Fellow, Steel Structures Lab, Faculty of Civil Engineering, Delft University of Technology, The Netherlands

01/1994 - 12/1995 Military Service (Mandatory), Naval Works Department, Hellenic Navy General Staff - duration: 23 months

09/1993 - 01/1994 Graduate Teaching Assistant in Steel Structures & Structural Analysis, Department of Civil Engineering, The Univ. of Texas at Austin, USA.

09/1991 - 09/1993 Graduate Research Assistant, Dept. of Civil Engineering, The Univ. of Texas at Austin, Sponsored by Shell Oil Company, Houston, Texas, USA.

09/1989 - 05/1991 Graduate Research Assistant, Dept. of Civil Engineering, The Univ. of Texas at Austin, Sponsored by the Offshore Technology Research Center (OTRC), Austin, Texas, USA.

### Associate Editor in Peer-Review Journals:

ASME Journal of Pressure Vessel Technology (2008 - present) ASCE Journal of Pipeline Systems, Engineering & Practice (2009 – present)

### **Teaching Experience:**

(1999 - present):
Mechanics – Statics (Undergraduate course)
Finite Elements (Undergraduate course)
Structural Mechanics (Undergraduate course)
Advanced Finite Element Methods (Post-Graduate course)
Nonlinear Structural Mechanics – Stability (Post-Graduate course)
Continuum Mechanics (Post-Graduate course)

# Academic Awards:

09/1984 Ranked First (1st) in the Nationwide General University Entrance Examination

07/1989 First Honor Graduate (1st out of 350 students)

1985 – 1989 Fifteen (15) Awards and Merit-Based Scholarships from the National Technical University, the National Scholarship Foundation of Greece and the Technical Chamber of Greece for excellent academic performance

1989 – 1993 Full Academic Merit-Based Assistantship and two Merit-Based Departmental Fellowships for excellent academic performance, Dept. of Civil Engineering, The University of Texas, Austin, USA. 2004, 2005 Awards from the Hellenic Society of Theoretical & Applied Mechanics and the Greek Society of Computational Mechanics, for excellent theses of his students.

2006 Best Paper Award 2006 \_ Pipeline Technology Symposium for paper OMAE2006-92208, Andreadakis, K. P., and Karamanos S. A., "Pipe Response Under Concentrated Lateral Loads and External Pressure.", Offshore Mechanics and Arctic Engineering Conference, American Society of Mechanical Engineering, ASME, Hamburg, Germany, June 2006.

2007 Sam Y. Zamrik Literature Award 2006, American Society of Mechanical Engineering, Pressure Vessels & Piping Division - for paper Karamanos, S. A., Tsouvalas, D. and Gresnigt, A. M., "Ultimate Bending Capacity and Buckling of Pressurized 90 deg Steel Elbows.", Journal of Pressure Vessel Technology, ASME, Vol. 128, No. 3, pp. 348-356, August 2006.

2010 Outstanding Technical Paper Award from Design & Analysis Committee (2009), American Society of

Mechanical Engineering, Pressure Vessels & Piping Division – for paper Houliara, S. and Karamanos, S. A., "Buckling of Thin-Walled Long Steel Cylinders Under Bending.", Pressure Vessels & Piping Conference, American Society of Mechanical Engineering, ASME, Prague, Czech Republic, July 2009.

# **Other Professional Experience:**

1989 – present Professional Engineer in Greece, member of Technical Camber of Greece 1989 – 1996 Engineering Consultant in special design and analysis issues on metal tubular structures, steel pipelines and seismic engineering (TRITON Engineers & Consultants, A. S. Karamanos & Associates).

# **Professional and Scientific Societies:**

Member of Seismic Engineering Committee, Pressure Vessels & Piping Division, ASME (2005 – present). Technical Program Representative, Seismic Engineering Track, Pressure Vessels & Piping Conference, ASME (2008 and 2009).

Member of Stability Committee, Engineering Mechanics Division, ASCE (2005 – present).

Member of Offshore Pipelines Committee, Offshore Mechanics and Arctic Engineering Division, ASME (2005 – present).

Member of Flexible Steel Pipe Committee, Pipeline Division, ASCE (2004 – present).

Secretary, Greek Association for Computational Mechanics (2005 – 2009).

Member of ECCS, TWG 8.4 Stability of Shells (2004 – present). Secretary of ECCS, TWG 8.4 (2008 – present).

Member of ASME, ASCE, Hellenic Society of Th. & Appl. Mechanics, Metal Structures Research Society, Greek Association for Computational Mechanics

# Member of Scientific Committees in International Conferences

Seismic Engineering Committee, ASME Pressure Vessels and Piping Conference (PVP), annually, since 2004. Pipeline Technology Committee, ASME International Conference on Offshore Mechanics and Arctic Engineering (OMAE), annually, since 2004.

ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (a) COMPDYN 2007, Rethymno, Crete, Greece, 13–16 June 2007 and (b) COMPDYN 2009, Rhodos, Greece, June 22-24, 2009.

GRACM Congress on Computational Mechanics, (a) 4th GRACM Patras, Greece, 2002 (b) 5th GRACM Limasol, Cyprus, 2005, (c) 6th GRACM Thessaloniki, Greece, 2008..

SEECCM South-East European Conference on Computational Mechanics, (a) 1st SEECCM Kragujevac, Serbia, 2006 and (b) 2nd SEECCM Rhodes, Greece, 2009.

# **Representative Recent Publications:**

Karamanos, S. A., "Bending Instabilities of Elastic Tubes.", International Journal of Solids & Structures, Vol. 39, No. 8, pp.

2059-2085, April 2002.

Dama, E., Karamanos, S. A. and Gresnigt, A. M., "Failure of Locally Buckled Pipelines.", Journal of Pressure Vessel Technology, ASME, 129, 272-279, 2007.

Patkas, L. A. and Karamanos, S. A., "Variational Solutions of Liquid Sloshing in Horizontal-Cylindrical and Spherical Containers.", Journal of Engineering Mechanics, ASCE, 133, 641-655, 2007.

Vasilikis, D. and Karamanos, S. A., "Stability of Confined Thin-Walled Steel Cylinders under External Pressure.", International Journal of Mechanical Sciences, Vol. 51, No. 1, pp. 21-32, January 2009.

Karamanos, S. A., Papaprokopiou, D., and Platyrrachos, M. A., "Finite Element Analysis of Externally-Induced Sloshing in Horizontal- Cylindrical and Axisymmetric Industrial Vessels.", Journal of Pressure Vessel Technology, ASME, Vol. 131, No. 5, Article Number: 051301, October 2009.

Houliara, S. and Karamanos, S. A., "Stability of Long Transversely-Isotropic Elastic Cylinders Under Bending.", International Journal of Solids and Structures, Vol. 47, No. 1, pp. 10–24, January 2010.

Vazouras, P., Karamanos, S.A., and Dakoulas, P., "Finite Element Analysis of Buried Steel Pipelines Under Strike - Slip Fault Displacements", Soil Dynamics ans Earthquake Engineering, Vol. 30, No. 11, pp. 1361-1376, November 2010.