

## CURRICULUM VITAE

**Name:** ARAVAS Nikolaos  
**Position:** Professor and Dean of Engineering  
University of Thessaly  
Department of Mechanical and Industrial Engineering  
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### Education

- Mechanical Engineering Diploma  
Aristotelian University of Thessaloniki, GREECE, 1980
- M.Sc. in Department of Theoretical and Applied Mechanics,  
University of Illinois at Urbana Champaign, USA, 1982
- Ph.D. in Department of Theoretical and Applied Mechanics,  
University of Illinois at Urbana Champaign, USA, 1984

### Administrative Experience

Experience in the establishment and development of new University Departments, University Administration, Principal Investigator of Research and Development Projects

### Research Interests

Mechanics of Materials, Computational Mechanics, Finite Element Methods, Plasticity, Continuum Mechanics, Fracture Mechanics, Metal Forming, Biomechanics, Applied Mathematics

### Professional Experience

6/2004-present Dean of Engineering, University of Thessaly  
1/2006-present Director of Mechatronics Institute, Center for Research and Technology – Thessaly (CE.RE.TE.TH.), Greece  
1996-present Professor of Computational Mechanics of Structures, Department of Mechanical and Industrial Engineering, University of Thessaly, Greece  
1999-8/2002 Rector for Research and Development, University of Thessaly, Greece  
1999-8/2002 Chairman of the Research Committee, University of Thessaly, Greece  
10/1998-3/1999 Chairman, of Mechanical and Industrial Engineering, University of Thessaly, Greece  
10/2000-6/2002 Acting Chairman, Department of Computer and Communication Engineering, University of Thessaly, Greece

12/2000-12/2001	Acting Chairman, Department of Civil Engineering, University of Thessaly, Greece
1996-1998	Vice Chairman of the Research Committee, University of Thessaly, Greece
1992-1996	Associate Professor (tenured), Dept. of Mechanical Engineering and Applied Mechanics, University of Pennsylvania, USA (secondary appointment in the Department of Materials Science and Engineering)
1986-1992	Assistant Professor, Dept. of Mechanical Engineering and Applied Mechanics, University of Pennsylvania, USA (secondary appointment in the Department of Materials Science and Engineering)
1985	Senior Engineer, Hibbitt, Karlsson and Sorensen, Inc. (ABAQUS), Providence RI,

### Awards

- Presidential Young Investigator Award, USA
- J. O. Smith Award for Teaching Excellence  
University of Illinois at Urbana-Champaign  
Department of Theoretical and Applied Mechanics

### Publications/Citations

- Papers in referred journals: 43
- Papers in Conference Proceedings: 17
- Citations in SCI (self citations not included) SCI: more than 700
- Reviewer for more than 20 international scientific journals

### Recent Publications

#### Books

«Cartesian Tensors» (in Greek), University of Thessaly Press, 2005.

#### Journal Papers

- A. E. Giannakopoulos, E. Amanatidou and N. Aravas, "A reciprocity theorem in linear gradient elasticity and the corresponding Saint-Venant theorem," *International Journal of Solids and Structures*, Vol. **43**, pp. 3875-3894, 2006.
- I. Papatriantafillou, M. Agoras, N. Aravas and G. N. Haidemenopoulos, "Constitutive modeling and finite element methods for TRIP," *Computer Methods in Applied Mechanics and Engineering*, Vol. **195**, pp. 5094-5114, 2006.
- I. Papatriantafillou, N. Aravas and G. N. Haidemenopoulos, "Finite element modeling of TRIP steels," *Steel Research*, Vol. **75**, pp. 732-738, 2004.
- N. Aravas and P. Ponte Castañeda, "Numerical methods for porous metals with deformation induced anisotropy," *Computer Methods in Applied Mechanics and Engineering*, Vol. **193**, pp. 3767-3805, 2004.
- Y. Liang, P. Sofronis and N. Aravas, "On the effect of hydrogen on plastic instabilities in metals," *Acta Materialia*, Vol. **51**, pp. 2717-2730, 2003.
- G. Pontikakis, A. Stamatelos, K. Bakasis and N. Aravas, "3-D catalytic regeneration and stress modelling of diesel particulate filters by ABAQUS FEM software", *Journal of Fuels and Lubricants (SAE 2002 Transactions)*, pp. 458-470, 2002.
- E. Amanatidou and N. Aravas, "Mixed finite element formulations of strain-

gradient elasticity problems,” *Computer Methods in Applied Mechanics and Engineering*, Vol. **191**, pp. 1723-1751, 2002.

- D. Boussaa and N. Aravas, “A numeric-symbolic approach to the problem of localization of plastic flow”, *Computational Mechanics*, Vol. **27**, 324-331, 2001.
- M. Kailasam, N. Aravas and P. Ponte Castañeda, “Porous metals with developing anisotropy: Constitutive models, computational issues and application to deformation processing,” *Computer Modeling in Engineering and Sciences*, Vol. **1**, 105-118, 2000.