

Athanasios E. Tzavaras – Curriculum Vitae

Address

Computer, Electrical and Mathematical Sciences and Engineering Division
King Abdullah University of Science and Technology (KAUST)
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Personal Data: Born in Athens, Greece; Citizenship: Greek

Research Interests: Partial Differential Equations, Continuum Physics, Kinetic Theory

Education

- 1985, May Ph.D. in Applied Mathematics, Brown University.
- 1983, May M.Sc. in Applied Mathematics, Brown University.
- 1981, Nov Diploma in Naval Architecture and Marine Engineering,
National Technical University of Athens, Greece.

Professional Appointments

Academic Positions

- 2014-present Professor, Computer, Electrical, Mathematical Sciences and Engineering,
King Abdullah University of Science and Technology (KAUST)
- 2008-14, 2002-04 Professor, Department of Applied Mathematics, University of Crete,
and Institute of Applied and Comp. Math., FO.R.T.H, Greece
- 2005-2010 Professor, Department of Mathematics, University of Maryland.
- 1987-2005 Department of Mathematics, University of Wisconsin-Madison.
 - Professor 1996-2005
 - Associate Professor 1992-96
 - Assistant Professor 1989-92
 - Van Vleck Assistant Professor 1987-89
- 1985-87 Research Assistant Professor, Department of Mathematics,
Purdue University.

Visiting Positions - long-term

- 2018-present Distinguished Member, Institute of Applied & Comp. Mathematics,
FO.R.T.H., Greece
- 1996-97 Visiting Professor, Centre Math. Appliquées, Ecole Polytechnique
and Laboratoire Analyse Numérique, Université Paris VI
- 1992-93 Visiting Associate Professor, Department of Mathematics,
Stanford University
- 1989, Jan-May Research Fellow, Institute for Mathematics and its Applications,
University of Minnesota

Administration

- 2014-17 Program Chair, Applied Mathematics and Computational Science,
CEMSE, King Abdullah University of Science and Technology (KAUST)
2010-14 Chair of the Steering Committee, Archimedes Center for Modeling, Analysis
and Computation (ACMAC), University of Crete, Greece

Awards

Marie Curie Fellowship, 2002-03

Editorial work

SIAM Journal on Mathematical Analysis, 2009-present
Zeitschrift für Analysis und Anwendungen (ZAA), 2006 - present
Mathematics, 2013 - present

Selected Publications

- A. Tzavaras, Wave interactions and variation estimates for self-similar viscous limits in systems of conservation laws. *Arch. Rational Mech. Anal.* **135** (1996), 1-60.
- M. Katsoulakis and A. Tzavaras, Contractive relaxation systems and the scalar multidimensional conservation law. *Comm. Partial Differential Equations* **22** (1997), 195-233.
- S. Demoulini, D. Stuart and A. Tzavaras, A variational approximation scheme for three-dimensional elastodynamics with polyconvex energy. *Arch. Rational Mech. Anal.* **157** (2001), 325-344.
- Y.J. Kim and A. Tzavaras, Diffusive N-waves and metastability in the Burgers equation. *SIAM J. Math. Anal.* **33** (2001), 607-633.
- A. Tzavaras, Relative entropy in hyperbolic relaxation. *Comm. Math. Sci.* **3** (2005), 119-132.
- F. Otto, A. Tzavaras, Continuity of velocity gradients in suspensions of rod-like molecules. *Comm. Math. Physics* **277** (2008), 729-758.
- S. Demoulini, D. Stuart and A. Tzavaras, Weak-strong uniqueness of dissipative measure-valued solutions for polyconvex elastodynamics. *Arch. Rational Mech. Anal.* **205** (2012), 927-961.
- C. Lattanzio, J. Giesselmann and A. Tzavaras, Relative entropy for the Korteweg theory and related Hamiltonian flows in gas dynamics. *Arch. Rational Mech. Anal.* **223** (2017), 1427-1484.
- M.-G. Lee, Th. Katsaounis and A.E. Tzavaras, Localization in adiabatic shear flow via geometric theory of singular perturbations. *J. Nonlinear Science* **29** (2019), 2055-2101.
- X. Huo, H. Liu, A.E. Tzavaras and Sh. Wang, An energy stable and positivity-preserving scheme for the Maxwell-Stefan diffusion system. *SIAM J. Numer. Anal.* **59** (5) (2021), 2321 - 2345.