

# Daniel M. Tartakovsky

## Curriculum Vitae

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## Research Interests

**Applied and computational mathematics:** Mathematical modeling of complex systems (electrochemistry for energy storage, design of nano-porous materials), uncertainty quantification, probabilistic risk assessment, stochastic partial differential equations, hybrid numerical algorithms, spatial statistics, data assimilation

**Environmental fluid mechanics:** subsurface flow and contaminant transport, multiphase flow, groundwater hydrology, reservoir simulations, well hydraulics, surface-water/groundwater interactions, inverse modeling, subsurface imaging, decisions under uncertainty, geothermal energy

**Biomedical modeling:** Blood flow, microcirculation, intracellular and intercellular transport, bioinformatics, computational cell biology, hemodynamics, chemotaxis

## Academic Employment

- 11/16–tenure **Professor**, *Department of Energy Resources Engineering, Stanford University.*
- 7/08–10/16 **Professor**, *Department of Mechanical and Aerospace Engineering, University of California, San Diego.*
- 10/04–6/08 **Associate Professor**, *Department of Mechanical and Aerospace Engineering, University of California, San Diego.*
- 10/00–7/07 **Technical Staff Member and Team Leader (Multiscale Analysis Team, since 9/2004)**, *Mathematical Modeling and Analysis Group, Theoretical Division, Los Alamos National Laboratory.*
- 9/01–9/04 **Adjunct Associate Professor**, *Department of Hydrology and Water Resources, The University of Arizona, Tucson.*
- 6/99–10/00 **Technical Staff Member**, *Computer Research and Applications Group, CCS Division, Los Alamos National Laboratory.*
- 9/90–7/93 **Staff Scientist**, *Institute of Mathematics and Mechanics, Kazan State University, Kazan, Russia.*

## Other Academic Affiliations

Institute for Computational and Mathematical Engineering (ICME), Stanford  
Woods Institute for the Environment, Stanford  
Bio-X, Stanford

## Education

- 9/96 – 5/99 **Postdoctoral Research Associate**, *Scientific Computing Group (10/98 - 05/99) and Geanalysis Group (10/96 - 10/98), Los Alamos National Laboratory.*

- 8/93 – 8/96 **Ph.D. in Hydrology**, *Department of Hydrology and Water Resources, The University of Arizona, Tucson.*
- 9/86 – 5/91 **M.Sc. in Applied Mathematics/Fluid Mechanics**, *Department of Mathematics and Mechanics, Kazan State University, Russia (Summa Cum Laude).*

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## Awards & Honors

- 2015 **Foreign Member**, *Accademia delle Scienze, Istituto di Bologna (Sezione: Scienze Tecniche), Italy.*
- 2000 **The 1999 Editors' Citation for Excellence in Refereeing for *Water Resources Research***, *EOS*, 81(49), p. 598, December 5, 2000.
- 1993 **Award**, *Special Fund for the Award of Personal Scholarships and Grants to Gifted Young Academics*, Novosibirsk, Russia.
- 1991 **Award**, *All-Union Student Research Conference in Mathematics and Mechanics*, Moscow, USSR.

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## Synergetic Activities

- since 2020 **Member of Editorial Board**, *Journal of Machine Learning for Modeling and Computing.*
- since 2018 **Member of Editorial Board**, *Computational Geosciences.*
- 2012 – 2021 **Associate Editor**, *SIAM/ASA Journal on Uncertainty Quantification*, three terms.
- 2012 – 2020 **Associate Editor**, *SIAM Journal on Scientific Computing (SISC)*, three terms.
- 2009 – 2020 **Associate Editor**, *Water Resources Research*, four terms.
- since 2010 **Member of Editorial Board**, *International Journal for Uncertainty Quantification.*
- since 2007 **Associate Editor**, *Stochastic Environmental Research and Risk Assessment.*
- 2005 & 2007 **Guest Editor**, *Computing in Science and Engineering.*
- 2004 – 2020 **Member of Editorial Board**, *Advances in Water Resources.*
- 2001 – 2010 **Editor**, *Reviews of Geophysics*, two terms.
- Panelist**, Hydrologic Sciences Review Panel of the NSF Division of Earth Sciences, Numerical PDE Review Panel of the NSF Division of Mathematical Sciences; DOE Peer Review Panels: Early Career Principal Investigator Programs in Applied Mathematics and Climate and Environmental Sciences.

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## Membership in Professional Societies

European Geophysical Society (EGS), since 1995; American Geophysical Union (AGU), since 1996; International Association of Hydrological Sciences (IAHS), since 2002; Society of Industrial and Applied Mathematics (SIAM), since 2001; U.S. Association for Computational Mechanics (USACM), since 2005; International Society for Porous Media, since 2012.