TATIANA GAMBARYAN – ROISMAN, APL. PROF., DR. SC.

Education/Degrees

2008	**Dr. habil (Habilitation)**, Faculty of Mechanical and Process Engineering, Technische Universität Darmstadt, Darmstadt, Germany. Topic of habilitation lecture: "Heat transfer in solar energy systems"
1998	**D. Sc.** in Mechanical Engineering, Technion, Haifa, Israel
1994	**M. Sc.** in Mechanical Engineering, Technion, Haifa, Israel
1986 – 1991	Study of Engineering Thermophysics, National Research University Moscow Power Engineering Institute, Moscow, Russia

Professional Experience

2015 –	Apl. Professor, Technische Universität Darmstadt, Darmstadt, Germany
2010 –	*Head of Research Group*, Institute of Technical Thermodynamics, Faculty of Mechanical and Process Engineering, Technische Universität Darmstadt, Darmstadt, Germany
2003 – 2010	*Head of Emmy Noether Junior Research Group*, Institute of Technical Thermodynamics, Faculty of Mechanical and Process Engineering, Technische Universität Darmstadt, Darmstadt, Germany
2000 – 2002	*Research Fellow*, Institute of Technical Thermodynamics, Faculty of Mechanical and Process Engineering, Technische Universität Darmstadt, Darmstadt, Germany
1998 – 2000	*Research Fellow*, Institute of Glass and Ceramics, Department of Materials Science, University of Erlangen – Nuremberg, Erlangen, Germany
1992 – 1998	*Teaching Assistant*, Faculty of Mechanical Engineering, Technion, Haifa, Israel

Other Appointments and Affiliations

2021 –	Coordinator of EU Marie Skłodowska-Curie Innovative Training Network "Dynamics of dense nanosuspensions: a pathway to novel functional materials" (nanoPaInt)
2020 –	Organizer of the Droplets 2021 Conference, August 16-18, 2021, Darmstadt, Germany
2019 – 2020	Editor of a Special Issue "Challenges in Nanoscale Physics of Wetting Phenomena" (together with Shahriar Afkhami and Len Pismen) in "The European Physical Journal Special Topics", Springer
2019	Scientific coordinator of the Workshop "Challenges in Nanoscale Physics of Wetting Phenomena" (together with Shahriar Afkhami and Len Pismen), August 26-30, 2019, Dresden, Germany
2018 –	Ordinary Member of Council of IACIS (International Association of Colloid and Interfaces Scientists)
2018 –	Sectional Editor of the journal "Current Opinion in Colloid and Interface Science", Elsevier
2018 –	Editorial Board Member of the journal „Interfacial Phenomena and Heat Transfer", Begell House
2017 –	Editorial Board Member of the journal „Colloids and Interfaces", MDPI
2016 –	Member of Scientific Council of International Center for Heat and Mass Transfer
2016 – 2020	Editor of "Experimental Thermal and Fluid Science", Elsevier
2015	Member of Advisory Board, Conference of the Association of Colloid and Interface Scientists, IACIS, May 24 – 29, 2015, Mainz

2015	Member of International Board, 6th International Workshop on Bubble and Drop Interfaces, B&D 2015, July 6– 10, Potsdam
2014 – 2017	Coordinator of EU Marie Curie Initial Training Network „Complex Wetting Phenomena“ (CoWet)
2012 – 2016	Member of Management Committee, COST Action MP1106 „Smart and green interfaces: from single bubbles/drops to industrial/environmental/biomedical applications”
2010 – 2014	Member of Scientific Steering Committee, Cluster of Excellence 259 “Smart Interfaces – Understanding and Designing Fluid Boundaries”
2010 – 2012	Member of Scientific Steering Committee, Cluster of Excellence 259: “Smart Interfaces – Understanding and Designing Fluid Boundaries”
2008 – 2014	Member of International Scientific Committee, International Conference on Nanochannels, Microchannels and Minichannels
2008 –	Member of Editorial Board of “Computational Thermal Sciences”, Begell House
2007 -	Member of International Scientific Committee, International Symposium on Advances in Computational Heat Transfer

Prizes, Awards and Honors

2019	Ralf-Dahrendorf Prize for European Research Area
2015	Promotion to apl. Professor, Technische Universität Darmstadt, Darmstadt, Germany
2005	„Team Achievement Award” for Foton M2 Space Mission from European Space Agency
2002	Emmy Noether Research Grant of the German Science Foundation (DFG)
1998	Minerva Research Fellowship of the Max-Planck Society (MPG)
1989	Winner of the Moscow Student Mathematical Olympiad
1996	Second Prize for paper "Effect of anisotropic thermal expansion of crystals on the thermal conductivity of ceramic materials", *26th Israel Conference on Mechanical Engineering*, Israel
1988, 1989	First and Second Places at the Student Mathematical Olympiads of the National Research University Moscow Power Engineering Institute

Main Research Fields

- Interfacial heat and mass transport, hydrodynamics and phase change
- Complex wetting phenomena
- Heat and mass transfer enhancement
- Nano- and micro-scale phase change and heat/mass transfer
- Stability and dynamics of interfacial flows, transport processes and chemical conversion
- Fuel evaporation in modern turbine combustors and engines
- Exhaust aftertreatment
- Thermal separation processes
- Efficient cleaning and drying
- Efficient additive manufacturing
- Transport processes under microgravity conditions