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Institute of Biomedical Engineering and Nanomedicine

National Health Research Institutes

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**Education**

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| 1999-2004 | Master's degree with honours, Theoretical Physics Department, Kaliningrad State University |
| 2004-2007 | Ph.D. degree in the Theoretical Physics Department, I. Kant State University, Kaliningrad  |

**Research and Professional Positions Held in Chronological Sequence**

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| 2020-        | Associate Principal Investigator, Institute of Biomedical Engineering and Nanomedicine, National Health Research Institutes   |
| 2015/02-     | Head of the Laboratory: Biomedical Simulation Laboratory, National Health Research Institutes   |
| 2020-        | Associate Professor (Joint Appointment), National Taiwan University, Department of Engineering Science and Ocean Engineering  |
| 2020-        | Associate Professor (adjunct), National Chung Hsing University, Graduate Institute of Biomedical Engineering, Research Center in Tissue Engineering and Regenerative Medicine |
| 2024/06-     | Associate Professor (Joint Appointment), National Taiwan University, Department of Biomedical Engineering   |
| 2015/02-2019 | Assistant Principal Investigator, Institute of Biomedical Engineering and Nanomedicine, National Health Research Institutes   |
| 2016/02-2019 | Assistant Professor (Joint Appointment), National Taiwan University, Department of Engineering Science and Ocean Engineering  |
| 2016/09-2019 | Assistant Professor (adjunct), National Chung Hsing University, Graduate Institute of Biomedical Engineering, Research Center in Tissue Engineering and Regenerative Medicine |
| 2012-2015/02 | Research Associate, National Taiwan University, Taida Institute for Mathematical Sciences (TIMS), Center for Advanced Study in Theoretical Sciences (CASTS)                   |
| 2011-2012    | Postdoctoral Research Fellow, National Taiwan University, Taida Institute for Mathematical Science (TIMS), Center for Advanced Study in Theoretical Sciences (CASTS)          |
| 2009-2011    | Postdoctoral Research Fellow, National Taiwan University, Department of Engineering Science and Ocean Engineering   |

2008-2009	Associate Professor (Docent), Theoretical Physics Department, I. Kant State University
2005-2008	Assistant Professor of Theoretical Physics Department, I. Kant State University

### Research Interests

1. High intensity focused ultrasound, nonlinear acoustics
2. High Performance Computing on multiple GPUs and CPUs, computational fluid dynamics
3. Machine Learning, thermal treatment of liver tumor: modeling, simulation and measurement
4. Statistical physics, kinetic gas theory, Boltzmann equation
5. Nano-channel flow modeling, ion channels
6. Multiphysics multiscale modeling for biomedical applications

### Major Honors and Awards

2022	Outstanding Young Scholar Research Project Award, Ministry of Science and Technology
2022/08	Cover page of Nanoscale (journal published by Royal Society of Chemistry)
2022	Young Scientist Award, National Health Research Institutes
2022/01	Editor's Pick for paper in Physics of Fluids
2014	Paper in Journal of Computational Surgery – most read paper all time
2014/10	Young Investigator Award at 1 <sup>st</sup> Global Conference on Biomedical Engineering (GCBME 2014) and 9 <sup>th</sup> Asian Pacific Conference on Medical and Biological Engineering (APCMBE 2014), Tainan, Taiwan
2014	Best Paper Award at 21th National Computational Fluid Dynamics Conference, Taiwan, August 2014
2013	Best Research Paper Award for Young Researcher by National Science Council (now it is renamed as Ministry of Science and Technology)
2012	the paper was among Top 20 most download AIP papers in June, 2012
2012-2014	Who's Who in the World - 2013, 30 <sup>th</sup> Edition and 2014, 31 <sup>st</sup> Edition
2011	ICU grant to attend International Congress on Ultrasonics, Poland
2010	ICA Young Scientist Grant to attend 20 <sup>th</sup> International Congress on Acoustics, Sydney
2006/09	The best report of a young researcher at the section “Atmospheric acoustic” at XVIII Session of the Russian Acoustical Society
2006-2007	Scholar of the President of the Russian Federation
2002-2004	Scholar of city administration
2001	Winner of the Olympiad among institutes of higher education (Universities) at Engineering Mechanics