Maxim, Solovchuk, Ph.D.

Institute of Biomedical Engineering and Nanomedicine

National Health Research Institutes

35, Keyan Road, Zhunan Town, Miaoli, 35053, Taiwan

Phone No.: 037-206-166 ext. 37156

Fax No.: 037-586-440

E-mail: solovchuk@nhri.edu.tw/solovchuk@gmail.com

Web: http://iben.nhri.org.tw/staffs-

profile.php?staff=Maxim+Solovchuk&lang=en



Education

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

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

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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 st Global Conference on Biomedical Engineering		
	(GCBME 2014) and 9 th 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 th Edition and 2014, 31 st Edition		
2011	ICU grant to attend International Congress on Ultrasonics, Poland		
2010	ICA Young Scientist Grant to attend 20 th 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		