CURRICULUM VITAE

Mindaugas Šnipas

Institute of Cardiology at Lithuanian University of Health Sciences, Sukileliu str. 15, Kaunas, Lithuania.

Department of Mathematical Modeling at Kaunas University of Technology, Studentu str. 50, Kaunas, Lithuania.

Education

2013 – PhD in Computer Science, Kaunas University of Technology, Kaunas, Lithuania.

2008 – Master's degree *summa cum laude* in Applied Mathematics, Kaunas University of Technology, Kaunas, Lithuania.

Professional Appointments

Institute of Cardiology at Lithuanian University of Health Sciences:

2018 08 – now: Senior Research Associate, The Research Group at the Laboratory of Molecular Cardiology.

2017 07 – 2018 07: Research Associate, The Research Group at Laboratory of Molecular Cardiology.

2015 09 – 2017 06: Junior Research Associate, The Research Group at the Laboratory of Molecular Cardiology.

Responsibilities: creation and implementation of mathematical/computational models; supervision and execution of numerical experiments; data analysis; preparation of scientific publications and research reports.

Kaunas University of Technology:

2017 02 – now: Associate Professor, Faculty of Mathematics and Natural Sciences, Department of Mathematical modelling.

2014 02 – 2017 01: Lecturer, Faculty of Mathematics and Natural Sciences, Department of Mathematical modelling.

2010 01 – 2014 01: Assistant Professor, Faculty of Fundamental Sciences, Department of Mathematical Research in Systems.

Teaching Experience:

Probability Theory and Statistics; Optimization methods; Calculus (all levels); Graph Theory and Network Science (course supervisor); Business Logistics Analytics.

Other responsibilities:

Supervisor of Bachelor's and Master's Thesis; participation in Bachelor's and Master's Thesis committees; participation in undergraduate studies examination committees; presenting popular science lectures for high school students; participation in study committees.

Lithuanian Energy Institute:

2014 04 – 2015 06: Research Associate at Laboratory of Systems Control and Automation.

2013 04 – 2014 03: Junior Research Associate at Laboratory of Systems Control and Automation.

Responsibilities: Reliability modeling of electric power distribution systems; statistical data analysis; application of global optimization methods; preparation of scientific reports.

MB „Energetikos sprendimų grupė".

2014 09 – 2015 05: Engineer

Responsibilities: Creation and implementation of computational algorithms for development of smart control systems in electric power distribution networks. This work was funded by the Agency for Science, Innovation and Technology project "*Innovative Business Promotion* (INOVEKS)".

Research grants

2022: Grant (P-MIP-22-141) by Research Council of Lithuania „*Modeling of biophysical properties of gap junction channel and hemichannel gating*". Role: PI.

2021: Grant (P-MIP-21-226) by Santaka Valley Association „*Modelling of gap junctional conductance at a single-channel level (Jungtis PP22/182)*". Role: PI.

2018-2019: Grant (PP22/182) by Santaka Valley Association „*Modeling voltage gating properties of gap junction channels, formed of connexin protein (Koneksinas PP22/182)*"“. Role: PI.

2016: Grant (ST17-15-4) "Mathematical modeling of neuronal networks connected through modulated electrical synapses (Synapse ST17-15-4)" for young scientists from Faculty of Mathematics and Natural Sciences at Kaunas University of Technology. Role: PI.

2015 06 – 2018 04: Grant (MIP-76/2015) by Research Council of Lithuania "pH-dependent modulation of connexin-based intercellular communication; experimental theoretical studies". Role: Co-investigator.

2012 08 – 2015 08: Grant (VP1-3.1-ŠMM-08-K-01-018) by European Social Fund "Research and development of Internet technologies and their infrastructure for smart environments of things and services". Role: Co-investigator.

2012 05 – 2015 02: Grant (MIP074/12) by Research Council of Lithuania „Model creation for physiological and clinical applications". Role: Co-investigator

Research Interests

• **Biophysics**: gap junction channel gating; electrophysiology.

• **Mathematical modeling**: application of Markov chains for modelling of stochastic systems; numerical methods; application of optimization methods.

• **Computational neuroscience**: neuronal excitability; neurotransmission; the role of electrical synapses.

Other activities:

• Member of Lithuanian Biophysical Society and Lithuanian Mathematical Society

• Participation in "Workshop of Mathematical Solutions for Business and Industry", Palanga, Lithuania.

• Participant in annual science festival "Spaceship Earth", organized by Kaunas University of Technology.

• Organization of annual mathematics competition for high school students in honor of Jonas Matulionis at Kaunas University of Technology.