CV
Christina Brester
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Name:	Christina Brester
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Key Skills and Application Areas

- Data Analytics: from data pre-processing and curation to visualization and testing hypotheses
- Computational Intelligence: development and application single- and multi-objective evolutionary algorithms to complex optimization problems
- Inverse Mathematical Modeling: dynamic system identification
- Data-driven Modeling: implementation and application to various real-world problems such as:
    - Human emotion recognition from speech
    - Predicting bacterial abundances in drinking water distribution systems
    - Fault and load prediction in energy grids
    - Cardiovascular predictive modeling
- Implementing Machine Learning tools in R, Python, C++; software integration
- Artificial Neural Network design, including Deep Learning with Keras and Tensorflow
- Planning, leading, and participation in international multidisciplinary scientific projects

Work experience

- Researcher, Department of Environmental and Biological Sciences, University of Eastern Finland, Kuopio, Finland, 1.2.2018 – till now
- Docent, Department of Higher Mathematics, Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russia, 2017 – 2018
- Senior Lecturer, Department of Higher Mathematics, Reshetnev Siberian State Aerospace University, Krasnoyarsk, Russia, 2016 – 2017
- Junior Research Fellow, Reshetnev Siberian State Aerospace University, Krasnoyarsk, Russia, 2012 – 2015
- Software Analyst, Siberian Integration Systems, Krasnoyarsk, Russia, 2012 – 2013

Education

- Doctoral Degree: Candidate of Technical Sciences, Siberian Federal University and Institute of Computational Modeling of Siberian Branch of Russian Academy of Sciences, 2016
  Dissertation: “Cooperative Evolutionary Method for Multi-objective Optimization in Speech Analysis Problems”, supervisor professor Eugene Semenkin
- Master of Science in System Analysis and Control, Reshetnev Siberian State Aerospace University, Krasnoyarsk, Russia, 2014

Internship

- DAAD Scholar: working on Master thesis under the joint Russian-German supervision, Ulm University, Ulm, Germany, 2013 – 2014
- Visiting Research Fellow, Department of Environmental and Biological Sciences, University of Eastern Finland, Kuopio, Finland, 2015 – 2016

Language Skills (self-assessment)

Russian	Native
English	Advanced
Finnish	Beginner

Other merits

- Teaching: mathematical analysis, linear algebra, analytical geometry (for engineering and economics students), environmental and advanced environmental data mining (for students from environmental sciences)
- Chairing: International Joint Conference on Computational Intelligence (IJCCI 2019), Vienna, Austria; International Workshop on Mathematical Models and their Applications (IWMMA 2016), Krasnoyarsk, Russia
- Reviewing: IWMMA conference articles

Reference Projects

Project leader:

- EDUFI Fellowship: a start-up grant for doctoral level students for 9 months, University of Eastern Finland, Kuopio, 2018
- Joint Russian-Finnish research project “Multi-objective design of predictive models with compact interpretable strictures in epidemiology”, SibSU – UEF, Russian Foundation for Basic Research and Government of Krasnoyarsk region, 2018 – 2020
- Cooperative multi-objective evolutionary algorithms in dynamic system identification problems, Presidential Fellowship for young scientists to perform advanced research in priority areas of the Russian economy, 2018 – 2020
- Automatic segmentation of the heart's left ventricle in magnetic resonance imaging based on the clustering approach, Russian Foundation for Basic Research and Government of Krasnoyarsk region, 2016 – 2018
- Speech-based speakers and speakers’ personal characteristics recognition, Foundation for Assistance to Small Innovative Enterprises, Russia, 2014 – 2016

Team member:

- Analytics: Adaptive data analytics and modelling for flexible power systems, Academy of Finland, University of Eastern Finland, Kuopio, 2019 – 2020
- DWDSOME: Microbial Interaction in Drinking Water Distribution System, Academy of Finland, University of Eastern Finland, Kuopio, 2018
- Joint Russian-Slovenian research project “Evolutionary and Bio-Inspired Algorithms-based Efficient Control of Cyber-physical Systems & Internet of Things”, 2016 – 2018, SibSAU – Maribor University (Slovenia), Slovenian Academy of Science project
- Development of algorithms and approaches for improving the quality and speed of data mining technologies design by means of data reduction, Russian Foundation for Basic Research, 2015 – 2016
- Self-configuring intelligent technologies-based algorithms for the computer-aided design of highly reliable systems for analysis, decision support and control of rocket engine fire tests, 2014 – 2016, State Assignment Project
- Distributed self-configuring multi-agent technologies of intelligent information nets design and control, 2014-2015, governmental contract
- Models and algorithms of data mining systems with adaptation mechanism for solving of modeling and optimization problems in complex technical systems - grant of the President of the Russian Federation, 2014-2015
- Joint Russian-German research project “Distributed intelligent systems of multilingual information processing in dialogue telecommunication systems”, SibSAU – Ulm University (Germany), 2011 – 2013, governmental contract
- Joint Russian-German research project “Models and algorithms for the automated design of hardware-software complexes of multilingual information intelligent processing in distributed high-performance systems of space mission”, SibSAU – Ulm University (Germany), 2011 – 2013, governmental contract