

09.05.2018

CHRISTINA YU. BRESTER

M.Sc., Candidate of Technical Sciences (first-stage doctoral degree in Russia)

Personal

Date of birth: 17 February 1991

Place of birth: Sosnovoborsk, Krasnoyarsk region, Russian Federation

Gender: Female

Citizenship: Russian Federation

Current residence: 70700 Kuopio, Särkiniementie 18, 33

Education and degrees awarded

2016: Candidate of Technical Sciences

Siberian Federal University and Institute of Computational Modeling of Siberian Branch of Russian Academy of Sciences, Krasnoyarsk, Russia

Dissertation: *Cooperative Evolutionary Method for Multi-objective Optimization in Speech Analysis Problems*

2014: M.Sc. in System Analysis and Control (with honors)

Reshetnev Siberian State Aerospace University (SibSAU), Krasnoyarsk, Russia

Major subject: Data Science and Modeling

2012: B.Sc. in System Analysis and Control (with honors)

Reshetnev Siberian State Aerospace University (SibSAU), Krasnoyarsk, Russia

Major subject: Data Science and Modeling

Other education and training

Participation in “Leonhard-Euler Scholarship Program”, 2013-2014 (DAAD, Germany): Internship at the Ulm University, working on Master’s thesis under the joint Russian-German supervision

Linguistic skills

Mother tongue: Russian

Other languages: English (fluent)

Current position

Doctoral student, grant researcher: the EDUFI Fellowship (CIMO) by the Finnish National Agency for Education, 01.02.2018 – 31.10.2018

University of Eastern Finland, Kuopio

Department of Environmental and Biological Sciences

Research in the field of epidemiology: automated design of mathematical models to predict cardiovascular diseases

Previous work experience

2017-18: Docent

Department of Higher Mathematics, Reshetnev Siberian State University of Science and Technology (former SibSAU), Krasnoyarsk, Russia

Lecturing in higher mathematics for engineering and economics students (mathematical analysis, linear algebra and analytical geometry)

2016-17: Senior Lecturer

Department of Higher Mathematics, Reshetnev Siberian State Aerospace University (SibSAU), Krasnoyarsk, Russia

Lecturing in higher mathematics for engineering and economics students (mathematical analysis, linear algebra and analytical geometry)

2015-16: Visiting Research Fellow

University of Eastern Finland, Kuopio, Finland

Research in the field of epidemiology: automated design of mathematical models to predict cardiovascular diseases

Grant of the Ministry of Education and Science of the Russian Federation to do research abroad

2014-16: Doctoral Study

Reshetnev Siberian State Aerospace University (SibSAU), Krasnoyarsk, Russia

Development and investigation of multi-objective optimization evolutionary algorithms, automated design of artificial neural networks

2012-15: Junior Research Fellow

Reshetnev Siberian State Aerospace University (SibSAU), Krasnoyarsk, Russia

Data analysis, data mining, working on international projects, implementing novel algorithms, writing scientific papers

2012-13: Analyst

Siberian Integration Systems, Krasnoyarsk, Russia

Analyst of Software Development: meeting with clients, writing requirements for software, presentations for clients, software testing

Research funding as well as leadership and supervision

EDUFI Fellowship: a start-up grant for doctoral level students for 9 months, **2018** (13 500 EUR)

Presidential Fellowship: Grant of the Ministry of Education and Science of the Russian Federation to do research abroad for 10 months, **2015-2016** (14 830 EUR)

Project leader: “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** (11 725 EUR)

Project leader: “Automatic segmentation of the heart's left ventricle in magnetic resonance imaging based on the clustering approach” №16-41-243036, Russian Foundation for Basic Research, Government of Krasnoyarsk Territory, Krasnoyarsk Region Science and Technology Support Fund, **2016-2018** (12 850 EUR)

Project leader: “Speech-based speakers and speakers’ personal characteristics recognition”, Foundation for Assistance to Small Innovative Enterprises, Russia, **2014-2016** (5 715 EUR)

Team member: 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 BI-RU/16-18-040

Team member: “Development of algorithms and approaches for improving the quality and speed of data mining technologies design by means of data reduction” №16-31-00349, Russian Foundation for Basic Research, **2015-2016**

Team member: “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 2.1889.2014/K

Team member: “Distributed self-configuring multi-agent technologies of intelligent information nets design and control”, **2014-2015**, governmental contract № 14.574.21.037

Team member: “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 (MK-5391.2014.9), **2014-2015**

Team member: Joint Russian-German research project “Distributed intelligent systems of multilingual information processing in dialogue telecommunication systems”, SibSAU – Ulm University (Germany), **2011-2013**, governmental contract № 11.519.11.4002

Team member: 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 № 16.740.11.0742

Merits in teaching and pedagogical competence

Mathematics Courses: **Mathematical Analysis, Linear Algebra and Analytical Geometry**, 2016-2018: lecturing for engineering and economics students, Department of Higher Mathematics, Siberian State University of Science and Technology, Krasnoyarsk, Russia

Awards, prizes and honours

2018 – Award of the Head of Krasnoyarsk city for the high contribution to scientific research, Krasnoyarsk, Russia

2017 – Russian Presidential Fellowship for young scientists to perform advanced research in priority areas of the Russian economy, 2018-2020

2015 – Russian Presidential Fellowship for research stay abroad, 2015-2016

2015 – State Award of Krasnoyarsk region for the high contribution to scientific research, Krasnoyarsk, Russia

2013 – Winner of the competition in “Leonhard-Euler Scholarship Program” (DAAD, Germany, 2013-2014)

2013 – Russian Presidential Scholarship for outstanding students, 2013-2014

2013 – Laureate of the All-Russian competition of students in the area of System Analysis, Moscow, Russia, the 1st team place

Other academic merits

Chair at the Fifth International Workshop on Mathematical Models and their Applications 2016 (IWMMA2016), Krasnoyarsk, Russia (Student Session)

Scientific and societal impact of research

Publications:

Over **60** research papers in journals and conference proceedings (over **25** papers in English and over **35** papers in Russian).

Patents:

11 state patents for software systems are received

Distribution of research results:

The developed software has been used in two IT-companies, Krasnoyarsk, Russia