UNIVERSITY OF WARSAW

Press Office

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TWO ERC STARTING GRANTS FOR RESEARCHERS FROM THE UW FACULTY OF MATHEMATICS, INFORMATICS AND MECHANICS

Dr. Wojciech Czerwiński and Dr. Michał Pilipczuk from the UW Faculty of Mathematics, Informatics and Mechanics have received prestigious European Research Council grants. Their teams will analyse problems related to infinite state systems and solve difficult research problems using fast computational methods.

Is it possible to develop a faster algorithm answering the question about the reachability of a specific computer system? How can computational problems in networks be solved efficiently by understanding the network's structure? These are the questions asked by scientists from the UW Institute of Informatics: Dr. Wojciech Czerwiński and Dr. Michał Pilipczuk.

UW researchers have been awarded prestigious European Research Council Starting Grants. ERC supports talented early-career scientists with 2-7 years of experience since completion of doctoral thesis. Those researchers have already produced excellent supervised work.

Reachability questions

"There are many kinds of models. We have, for example, computational models called infinite-state systems," says Dr. Wojciech Czerwiński, whose project entitled "Challenging Problems in Infinite-State Systems" (INFSYS) was awarded the prestigious ERC Starting Grant ERC.

The author of the INFSYS project aims to present solutions to the greatest challenges arising in the field of infinite state systems. The project's objectives concentrate on three main problems: reachability in Petri nets and VAS systems (Vector Addition Systems) separation in automata theory and unambiguity in simple models.

More information about INFSYS >>

Deep mathematics

How to solve hard computational problems in networks by using decomposition methods? A research team led by Dr. Michał Pilipczuk, one of ERC Starting Grant awardees, will try to find it out. Dr. Michał Pilipczuk's project "Decomposition methods for discrete problems" (BOBR) studies the structural and decomposition properties of networks.

"What really interest us is this mathematical connection, between the abstract notions of structure in networks and the possibility of using those structural properties in order to design efficient algorithms for real life problems," explains the computer scientist awarded by ERC.

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In the BOBR project, Dr. Michał Pilipczuk will apply structural graph theory in four areas related to: the theory of sparse graphs, parameterized dynamic algorithms, parameterization and approximation on planar graphs, and algorithms on graphs with forbidden substructures.

More information on BOBR >>

As yet ERC has awarded 41 grants to scientists working in Polish institutions, including 18 researchers from the University of Warsaw.

Starting Grants:

2007 – Prof. Stefan Dziembowski

2009 – Prof. Mikołaj Bojańczyk

2009 – Prof Natalia Letki

2010 – Prof. Piotr Sankowski

2012 – Prof. Justyna Olko

2013 – Prof. Piotr Sułkowski

2015 – Prof. Marek Cygan

2016 – Prof. Marcin Pilipczuk

2017 – Prof. Artur Obłuski

2020 – Dr. Wojciech Czerwiński

2020 – Dr. Michał Pilipczuk

Consolidator Grants:

2015 – Prof. Katarzyna Marciniak

2015 – Prof. Mikołaj Bojańczyk

2017 – Prof. Piotr Sankowski

2019 – Prof. Anna Matysiak

Advanced Grants:

2009 – Prof. Andrzej Udalski

2019 – Prof. Stefan Dziembowski

Proof of Concept:

2015 – Prof. Piotr Sankowski

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