JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

Medal of the University of Jyväskylä to IT Faculty Professor Nikolay Kuznetsov

The Faculty of Information Technology of the University of Jyväskylä has given medal to Nikolay Kuznetsov *for his distinguished merits in the field of applied mathematics and training doctoral students* within the Finnish-Russian Educational & Research program. The program was organized in 2006 by the Dean of the Faculty of Information Technology Prof. Pekka Neittaanmäki (University of Jyväskylä) and the Dean of Mathematics & Mechanics Faculty Prof. Gennady Leonov (Saint-Petersburg State University) and this collaboration allowed integration of theoretical mathematical methods, developed in the St. Petersburg State University, with modern approaches for the numerical analysis and simulation of real-world systems, developed in the University of Jyväskylä. As a result, a major breakthrough has eventuated in the area of computer architecture, telecommunications and drilling systems. N. Kuznetsov is the coordinator of the program and has supervised 10 Ph.D. theses.

In 2004 N. Kuznetsov received Candidate degree from the Saint-Petersburg State University, in 2008 he received *Ph.D. degree* from the University of Jyväskylä (Finland), in 2016 he defended his thesis for the Doctor of Science degree (Habilitation) at the Saint-Petersburg University and became the full Professor at the Department of Applied Cybernetics. From 2014 N. Kuznetsov is Adjunct Docent and from 2017 is Visiting Professor at the University of Jyväskylä.

Nikolay Kuznetsov has more than 200 scientific papers, 3 monographs on dynamical systems on and their applications, and 5 patents (http://www.math.spbu.ru/user/nk/). In 2016 he became one of the two most cited mathematicians in Russia, according to citation data from the Web of Science, and got Russian Highly Cited Researchers Award from Clarivate Analytics Thomson Reuters.

His research interests are now in dynamical systems and applied mathematics. Among his main result are the concept of hidden attractor, discovery of the first hidden attractor in famous Chua electronic circuits; effective analytical-numerical methods for the localization of hidden oscillations in various applied models such as drilling systems, aircraft control systems, phase-locked loops and others; solution of the Gardner problem on the lock-in range for phase-locked loops (formulated by F. Gardner in 1979); effective analytical-numerical methods for the counterexample construction to the Kalman problem on the absolute stability of control systems (formulated by R. Kalman in 1957); justification of the time-varying linearization and analysis of the Perron effects of Lyapunov exponents sign reversal, effective analytical-numerical method for the finite-time and exact Lyapunov dimension computation.

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