

Mathematics People

Nagurney and Zhigljavsky Receive Carathéodory Prize



Anna Nagurney

Anna Nagurney of the University of Massachusetts, Amherst, and **Anatoly Zhigljavsky** of Cardiff University have been awarded the 2019 Constantin Carathéodory Prize.

Nagurney's chief research focus is the applied and theoretical aspects of network systems, particularly in the areas of transportation and logistics, critical infrastructure, and economics and finance. She received her PhD from Brown University and was the first woman appointed to an endowed professorship in the University of Massachusetts system. She is a Fellow of INFORMS, the Regional Science Association International, and the Network Science Society. Nagurney tells the *Notices* that she is "honored that, according to the Mathematical Genealogy project, [my] academic ancestors include:

Maxwell, Newton, and Galileo! A poster hangs in [my] office to inspire students that they are standing on 'the shoulders of giants.'"

Zhigljavsky's research concentrates on statistical modeling in market research, multivariate statistical analysis, stochastic global optimization, probabilistic methods in search and number theory, time series analysis, and dynamical systems approaches for studying convergence of search algorithms. He received his PhD in 1981 and his Habilitation in 1987 from the University of St. Petersburg. He tells the *Notices*: "The best piece of luck I had in my life was finding my profession. Being a professional mathematician helped me to continuously enjoy my work, to stay creative and optimistic all my life, to meet many interesting people all around the world, and to advance in life regardless of political perturbations and economic difficulties in my native country, which was the Soviet Union." His major hobbies are tennis and sailing, and his dream is "to prove

the Riemann hypothesis by estimating the rate of decrease of discrepancies of weighted Farey fractions."

The prize is given biannually by the International Society of Global Optimization to an individual or a group for "fundamental contributions to theory, algorithms, and applications of global optimization."

—From Carathéodory Prize announcements

2019 Computer-Aided Verification Award



Jean-Christophe Filliâtre

Jean-Christophe Filliâtre of the Centre National de Recherche Scientifique (CNRS) and **K. Rustan M. Leino** of Amazon Web Services have been named the recipients of the 2019 Computer-Aided Verification (CAV) Award "for the design and development of reusable intermediate verification languages that have significantly simplified and accelerated the construction of practical automated deductive verifiers." Filliâtre received his PhD in 1999 from the University Paris-Sud under the supervision of Christine Paulin-Mohring. In 2001, he designed a tool, Why3, to be used as an intermediate language for program verification. It is used today to verify programs in various programming languages (C, Java, OCaml, Ada), to make an interface with theorem provers, to verify algorithms, or to teach program verification.



K. Rustan M. Leino

He enjoys woodworking, playing the drums, and playing soccer. Leino received his PhD from the California Institute of Technology in 1995. He has been technical lead in the Windows NT group, as well as principal researcher, at Microsoft Corporation, a researcher at DEC-Compaq SRC, and a visiting professor at Imperial College London. He is currently senior principal engineer in the automated reasoning group at Amazon Web Services. He has taught step