

Recipients of the Väisälä Prize 2015

Risto Korhonen, Professor of Mathematics, University of Eastern Finland

Professor Risto Korhonen (born 1975) gained his doctorate from the University of Joensuu in 2002 and continued his research at the University of Loughborough, U.K., in 2002–2004 and as a research fellow of the Academy of Finland in 2004–2010. He was appointed to a chair in mathematics at the University of Eastern Finland in 2010 and has since been deputy head of that university's Department of Physics and Mathematics.

Risto Korhonen produced his first scientific publication in 2001 and has now accumulated a total of 35 papers in international journals. His work marks a continuation of the Finnish tradition of research into function theory, providing a new viewpoint on the applications of value distribution theory to meromorphic functions, the most significant of which has been the tropical Nevanlinna theory developed in the last decade, in which the behaviour of linear functions is examined in a piecewise manner. This theory has proved especially applicable to the study of the behaviour of solutions to differential equations. Professor Korhonen and his team at the University of Eastern Finland have reached the forefront

of this field worldwide, and Korhonen himself published a book on the subject together with I. Laine and K. Tohge in 2015.

Four of Professor Korhonen's students completed their doctoral theses in 2010–2013, and his research group at present comprises more than 10 persons, including 6 who are working for a doctorate.

Olli Martio

Mika Sillanpää, Professor of Physics, Aalto University

Professor Mika Sillanpää (born 1976) has risen to the international elite in the field of experimental quantum physics and technology within a short space of time. Having obtained his doctorate from Helsinki University of Technology in 2005, he worked as a post-doctoral researcher at the National Institute of Standards and Technology in Boulder, Colorado, and as a research fellow of the Academy of Finland. He has twice succeeded in obtaining finance for his research group at the Aalto University from the highly respected European Research Council (ERC) and was appointed to a professorship at that university in 2012 out of a field of 160 applicants.

Mika Sillanpää is head of the Quantum Nanomechanics Research Group, which is engaged in innovative and pioneering investigations into optomechanics and nanomechanics at the quantum boundary and low temperature mesoscopic physics, and he is also a group leader in the Low Temperature Quantum Phenomena and Devices Centre of Excellence. He was among the first members of the Academy's Club for Young Scientists in 2009–2010.

Professor Sillanpää's performance with

respect to scientific publications has been exceedingly successful and impressive. The list includes 44 titles, of which as many as 9 have been published in *Nature*, 1 in *Science* and 8 in *Physical Review Letters*. There are few physicists anywhere in the world who can match this. Also, his works have been cited on more than 1000 occasions (h-index 17).

Professor Sillanpää is a brilliant experimental physicist who has the potential for opening up new avenues of study.

Olli Martio