
Mathematics People

Matomäki and Radziwill Awarded 2016 SASTRA Ramanujan Prize



Kaisa Matomäki

KAISA MATOMÄKI of the University of Turku, Finland, and MAKSYM RADZIWILL of McGill University and Rutgers University have been awarded the 2016 SASTRA Ramanujan Prize for their joint work on multiplicative functions in short intervals. They will share the cash award of US\$10,000.

The prize citation reads “Kaisa Matomäki and Maksym Radziwill are jointly awarded the 2016 SASTRA Ramanujan Prize for their deep and far-reaching contributions to several important problems in diverse areas of number theory and especially for their spectacular collaboration, which is revolutionizing the subject. The prize recognizes that in making significant improvements over the works of earlier stalwarts on long-standing problems, they have introduced a number of innovative techniques. The prize especially recognizes their collaboration starting with their 2015 joint paper in *Geometric and Functional Analysis* which led to their 2016 paper in the *Annals of Mathematics* in which they obtain amazing results on multiplicative functions in short intervals, and in particular a stunning result on the parity of the Liouville lambda function on almost all short intervals—a paper that is expected to change the subject of multiplicative functions in a major way. The prize notes also the very recent joint paper of Matomäki, Radziwill, and Tao announcing a significant advance in the case



Maksym Radziwill

$k = 3$ towards a conjecture of Chowla on the values of the lambda function on sets of k consecutive integers. Finally, the prize notes that Matomäki and Radziwill, through their impressive array of deep results and the powerful new techniques they have introduced, will strongly influence the development of analytic number theory in the future.”

Kaisa Matomäki was born in Nakkila, Finland, in 1985. After completing her PhD at the Royal Holloway College of the University of London in 2009 under the direction of Glyn Harman, she returned to Turku, where she is an Academy Research Fellow. She is currently on maternity leave and enjoys spending most of her time with her seven-month-old daughter and three-year-old son.

Maksym Radziwill was born in Moscow, Russia, in 1988. In 1991 his family moved to Poland and in 2006 to Canada. He received his PhD from Stanford University under the direction of Kannan Soundararajan. He has been a visiting member at the Institute for Advanced Study (2013–2014) and assistant professor at Rutgers University (2014–2017) and is currently assistant professor at McGill University.

The SASTRA Ramanujan Prize is awarded annually for outstanding contributions by young mathematicians to areas influenced by the work of Srinivasa Ramanujan. The age limit for the prize has been set at thirty-two because Ramanujan achieved so much in his brief life of thirty-two years. The prize will be awarded in December 2016 at the International Conference on Number Theory at SASTRA University in Kumbakonam (Ramanujan’s hometown), where the prize has been given annually.

The members of the 2016 SASTRA Ramanujan Prize Committee were:

- Krishnaswami Alladi, chair, University of Florida
- Henri Darmon, McGill University
- Winfried Kohnen, University of Heidelberg
- Hugh Montgomery, University of Michigan
- Peter Sarnak, Princeton University and Institute for Advanced Study
- Michael Schlosser, University of Vienna
- Cameron Stewart, University of Waterloo

The full list of awardees of the SASTRA Ramanujan Prize follows:

- 2005 Manjul Bhargava and Kannan Soundararajan (two full prizes)
- 2006 Terence Tao
- 2007 Ben Green
- 2008 Akshay Venkatesh
- 2009 Kathrin Bringmann
- 2010 Wei Zhang
- 2011 Roman Holowinsky
- 2012 Zhiwei Yun
- 2013 Peter Scholze
- 2014 James Maynard
- 2015 Jacob Tsimerman
- 2016 Kaisa Matomäki and Maksym Radziwill (joint prize)

—*Krishnaswami Alladi, University of Florida*

Khot Awarded MacArthur Fellowship



Subhash Khot

SUBHASH KHOT of the Courant Institute of Mathematical Sciences, New York University, has been awarded a MacArthur Fellowship for 2016. According to the prize citation, Khot “is a theoretical computer scientist whose work is providing critical insight into unresolved problems in the field of computational complexity.”

The MacArthur Foundation awards unrestricted fellowships to individuals who display exceptional creativity, promise for important future advances based on a track record of significant accomplishment, and potential for the fellowship to facilitate subsequent creative work.

—*From a MacArthur Foundation announcement*

CMS Doctoral Prize Awarded



Vincent X. Genest

VINCENT X. GENEST of the Massachusetts Institute of Technology has been awarded the 2016 Doctoral Prize of the Canadian Mathematical Society (CMS). His doctoral thesis, “Algebraic structures, superintegrable systems and orthogonal polynomials,” comprises twenty-three research papers and five conference proceedings written in collaboration with other mathematicians and physicists, most of which

have been published in top-tier journals. In addition to mathematics, Genest is “passionate about motorcycle

riding, weightlifting, and tennis.” The Doctoral Prize is awarded annually to a doctoral student from a Canadian university who has demonstrated exceptional performance in mathematical research.

—*From a CMS announcement*

Diamond Awarded CME-MSRI Prize

DOUGLAS DIAMOND of the University of Chicago has been named the 2015 recipient of the CME-MSRI Prize in Innovative Quantitative Applications by the CME Group and the Mathematical Sciences Research Institute (MSRI) for his work in financial economics. His major interest is the study of financial intermediaries, financial crises, and liquidity. The prize recognizes individuals who contribute original concepts in mathematical, statistical, or computational methods for the study of the markets’ behavior and global economics.

—*From a CME-MSRI announcement*

2016 Davidson Fellows Selected



Katherine Hudek

Two high school students whose projects involved the mathematical sciences have been named 2016 Davidson Fellows. KATHERINE HUDEK, seventeen, of Grafton, Massachusetts, was awarded a US\$25,000 scholarship for her project “A New Quantum Programming Language for Specifying Quantum Computations.”



Meena Jagadeesan

MEENA JAGADEESAN, eighteen, of Naperville, Illinois, was awarded a US\$50,000 scholarship for her project “The Exchange Graphs of Weakly Separated Collections.”

The Davidson Fellows program, a project of the Davidson Institute for Talent Development, awards scholarships to students eighteen years of age or younger who have created significant projects that have the potential to benefit society in the fields of science, technology, mathematics, literature, music, and philosophy.

—*From a Davidson Fellows announcement*

NDSEG Fellowships Awarded

Ten young mathematicians have been awarded National Defense Science and Engineering Graduate (NDSEG) Fellowships by the Department of Defense (DoD) for 2016. The Fellowships are sponsored by the United States Army, Navy, and Air Force. As a means of increasing the number of US citizens trained in disciplines of military importance in science and engineering, DoD awards fellowships to individuals who have demonstrated ability and special aptitude for advanced training in science and engineering.

Following are the names of the fellows, their institutions, and the offices that awarded the fellowships:

- KRISTEN ALTENBURGER, Stanford University, Office of Naval Research (ONR)
- SAMUEL COGAR, University of Delaware, Army Research Office (ARO)
- DANIEL FORTUNATO, Harvard University, Air Force Research Laboratory (AFRL)
- RINA FRIEDBERG, Stanford University, ONR
- KRISTEN HUNTER, Harvard University, ONR
- SHUAI JIANG, Brown University, ARO
- WILL PAZNER, Brown University, AFRL
- MARK PERLMAN, Stanford University, AFRL
- EVAN ROSENMAN, Stanford University, AFRL
- ANGELA ZHOU, Undecided, ARO

—From a DoD announcement

*NSF Postdoctoral Research Fellowships Awarded

The Mathematical Sciences Postdoctoral Research Fellowship Program of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) awards Fellowships each year for postdoctoral research in pure mathematics, applied mathematics and operations research, and statistics. Following are the names of the fellowship recipients for 2016, together with their PhD institutions (in parentheses) and the institutions at which they will use their fellowships.

- ALEX BLUMENTHAL (New York University), University of Maryland
- NATHANIEL BOTTMAN (Massachusetts Institute of Technology), Princeton University
- BRIAN COLLIER (University of Illinois Urbana-Champaign), University of Maryland
- NICHOLAS COOK (University of California, Los Angeles), Stanford University
- ANIL DAMLE (Stanford University), University of California Berkeley

*The most up-to-date listing of NSF funding opportunities from the Division of Mathematical Sciences can be found online at www.nsf.gov/dms and for the Directorate of Education and Human Resources at www.nsf.gov/dir/index.jsp?org=ehr. To receive periodic updates, subscribe to the DMSNEWS listserv by following the directions at www.nsf.gov/mps/dms/about.jsp.

- NATHAN DOWLIN (Princeton University), Columbia University
- NICHOLAS EDELEN (Stanford University), Massachusetts Institute of Technology
- MARIA GILLESPIE (University of California Berkeley), University of California Davis
- KARSTEN GIMRE (Columbia University), Harvard University
- RYAN GOH (University of Minnesota), Boston University
- BOAZ HABERMAN (University of California Berkeley), University of Chicago
- IRINA HOLMES (Louisiana State University), Washington University
- KATRINA HONIGS (University of California Berkeley), University of Utah
- KAITLYN HOOD (University of California Los Angeles), Massachusetts Institute of Technology
- AUKOSH JAGANNATH (New York University), University of Toronto
- CASEY JAO (University of California Los Angeles), University of California Berkeley
- KENNETH JEFFRIES (University of Utah), University of Michigan
- BENJAMIN KNUDSEN (Northwestern University), Harvard University
- BEN KRAUSE (University of California Los Angeles), University of British Columbia
- SUBRAHMANYA KRISHNAMOORTHY (Columbia University), Freie Universitat
- JACLYN LANG (University of California Los Angeles), Université Paris 13
- EMILY LEVEN (University of California San Diego), University of Pennsylvania
- KATHRYN MANN (University of Chicago), University of California Berkeley
- HOWARD NUER (Rutgers University), Northeastern University
- JAMES PASCOE (University of California San Diego), Washington University
- ALEXANDER PERRY (Harvard University), Columbia University
- AARON ROYER (University of Texas Austin), University of California Los Angeles
- NOAH SCHWEBER (University of California Berkeley), University of Wisconsin, Madison
- BENJAMIN SCHWEINHART (Princeton University), Ohio State University
- KIRILL SERKH (Yale University), New York University
- KYLER SIEGEL (Stanford University), Massachusetts Institute of Technology
- LIAM SOLUS (University of Kentucky), Royal Institute of Technology
- NICHOLAS SWITALA (University of Minnesota), University of Illinois at Chicago
- MICHAEL TAIT (University of California San Diego), Carnegie Mellon University
- JESSE THORNER (Emory University), Stanford University

- NATHANIEL TRASK (Brown University), Sandia National Laboratory
- LINH TRUONG (Princeton University), Massachusetts Institute of Technology
- KURT VINHAGE (Pennsylvania State University), University of Chicago
- PRESTON WAKE (University of Chicago), University of California Los Angeles
- KIMBERLY WESTON (Carnegie Mellon University), University of Texas at Austin
- DAN WILSON (University of California Santa Barbara), University of Pittsburgh
- JASON XU (University of Washington), University of California Los Angeles
- LETAO ZHANG (Rice University), Stony Brook University

—NSF announcement

B. H. Neumann Awards Given

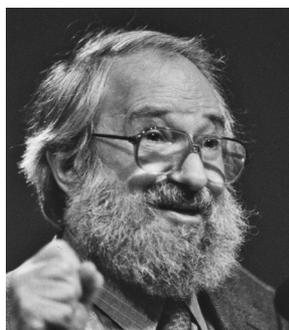
The Australian Mathematics Trust has honored three mathematics teachers with B. H. Neumann Awards for service to the mathematics profession. The honorees are:

- LIM CHONG KEANG, New Era College, Selangor, Malaysia
- GREG GAMBLE, University of Western Australia
- ANDREW KEPERT, University of Newcastle.

The awards honor Bernhard H. Neumann, who supported mathematics and mathematics teaching at all levels in Australia.

—From an Australian Mathematics Trust announcement

Seymour Papert (1928–2016)



Seymour Papert at the Learning & Common Sense Society of Minds Symposium in 1988.

Seymour Papert died on July 31, 2016. He was known worldwide for his innovative approaches to education and for the use of technology in education. Papert helped develop Logo®, a programming language for children; he was co-director of MIT's Artificial Intelligence Lab; and he cofounded MIT's Media Lab. He was born in South Africa and earned his first doctorate in 1952 from the University of Witwatersrand. Papert later moved

to England and earned his second PhD from the University of Cambridge in 1959 under the direction of Frank Smithies. Papert retired in 1998 but was still very active in education, especially in his new home state of Maine, where he helped establish a program to give each seventh and eighth grader in the state a laptop. Yet he was not one to treat the computer as a panacea, writing in 1980 against “the computer being used to program the child” (*Mindstorms: Children, Computers and Powerful Ideas*).

Waclaw Szymanski (1949–2016)



Waclaw Szymanski

WACLAW SZYMANSKI, a functional analyst who also did work in ethnomathematics, died August 7, 2016, at the age of sixty-six. He received his PhD in 1974 from the Institute of Mathematics, Polish Academy of Sciences, and taught in Poland, Mexico, Canada, and at Indiana University before joining the faculty at West Chester University in 1985, where he spent most of his career. His research in functional

analysis received international recognition; Japanese mathematician Fumio Kuro coined the term “Szymanski Family” for certain mathematical objects, studied by Szymanski, that are related to von Neumann algebras.

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