

Mathematics People

Kiltz, Viehmann Awarded Leibniz Prizes

Eike Kiltz, University Bochum, and Eva Viehmann, University of Münster, are among the ten winners of the Gottfried Wilhelm Leibniz Prizes. The prizes were to have been presented by Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) on March 13, 2024, at the Berlin-Brandenburg Academy of Sciences and Humanities in Berlin.

Kiltz received the Leibniz Prize 2024 for his fundamental and pioneering work in the field of public key cryptography, which has had a lasting impact on theory and practice. He obtained his doctorate in mathematics from the Ruhr University Bochum in 2004, after which he spent a year as a postdoctoral researcher at the University of California, San Diego. He then moved to the Centrum Wiskunde & Informatica in Amsterdam as a research assistant, before returning to the University Bochum in 2010. He now holds the Chair of Cryptography there and is one of the spokespersons for the Cluster of Excellence “Cyber Security in the Age of Large-Scale Adversaries (CASA).” Sources of funding for his research include an ERC Consolidator Grant (2013) and an ERC Advanced Grant (2021).

Viehmann received the Leibniz Prize for her influential work on arithmetic algebraic geometry in connection with the Langlands program. One of her strengths is the elaboration of group-theoretic formulations behind various structures, phenomena, and constructions. After obtaining her doctorate at the University of Bonn in 2005, Viehmann completed her postdoctoral lecturing qualification in Bonn (2010), following research stays in Chicago and Orsay, near Paris. Following a fellowship under the DFG’s Heisenberg Programme, she took up a professorship at the Technical University of Munich in 2012. Since 2022, she has held a chair in arithmetic geometry and representation theory at the University of Münster, where she conducts research in the Cluster of Excellence “Mathematics Münster: Dynamics – Geometry – Structure.” In 2012 she received the DFG’s von Kaven Award. She has been

awarded an ERC Starting Grant (2011) and an ERC Consolidator Grant (2018).

The Gottfried Wilhelm Leibniz Prize has been awarded annually by the DFG since 1986. Up to ten prizes can be awarded per year, each endowed with prize money of €2.5 million. Including the ten prizes in 2024, a total of 418 Leibniz Prizes have been awarded to date. The winners each receive €2.5 million in prize money. They are entitled to use these funds for their research work in any way they wish, without bureaucratic obstacles, for up to seven years. The award ceremony for the Leibniz Prizes will be held in Berlin on March 13, 2024.

—*Deutsche Forschungsgemeinschaft*

Tsimerman Receives 2023 Ostrowski Prize

The Ostrowski Prize for 2023 is awarded to Jacob Tsimerman of the University of Toronto in recognition of his work at the interface of transcendence theory, analytic number theory, and arithmetic geometry, including recent breakthroughs on the André-Oort and Griffiths conjectures.

Tsimerman is a Canadian mathematician who received his doctorate from Princeton University in 2011 under the supervision of Peter Sarnak. He held a postdoctoral position at Harvard University as a Junior Fellow of the Harvard Society of Fellows. In July 2014 he was awarded a Sloan Fellowship and he started his term as assistant professor at the University of Toronto, where he is now a full professor.

The Ostrowski Foundation was created by Alexander M. Ostrowski, who was for many years a professor at the University of Basel. He left his entire estate to the foundation and stipulated that the income should provide a prize for outstanding achievements in mathematics. The prize is awarded every other year and is currently 100,000 Swiss francs.

—*Ostrowski Prize Citation*

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2023 CRM-Fields-PIMS Prize Awarded to Genest

The Centre de recherches mathématiques (CRM), the Fields Institute, and the Pacific Institute for the Mathematical Sciences (PIMS) have awarded the 2023 CRM-Fields-PIMS Prize to Christian Genest of McGill University.

Genest is one of the leading statisticians in Canada, whose work has had dual impact on both theory and real-world applications. He is best known for his contributions to multivariate analysis and was a pioneer in the expansive use of copula models in science. Together with a few close collaborators, he combined nonparametric methods and the asymptotic theory of empirical processes to design a broad array of rank-based inference tools for building, selecting, fitting, and validating stochastic models within this class. Additionally, Genest has also contributed to group decision-making, prioritization techniques, multivariate extreme-value theory and, most recently, to space-time modeling of rare events in environmental science.

The CRM-Fields-PIMS Prize is the premier Canadian award for research achievements in the mathematical sciences. It is awarded jointly by the three largest Canadian mathematics institutes: the CRM in Montréal, the Fields Institute in Toronto, and the PIMS in Vancouver. This annual prize comes with a monetary award.

—Fields Institute

CRM-ISM-AMQ Prize Awarded for 2023

The 2023 CRM-ISM-AMQ Prize is awarded to Ashay Burungale (University of Texas at Austin), Francesc Castella (University of California, Santa Barbara), Christopher Skinner (Princeton University) and Ye Tian (University of Chinese Academy of Sciences) for their article " p^∞ -Selmer groups and rational points on CM elliptic curve," published in the special issue of *Annales Mathématiques du Québec* (AMQ) in honor of Bernadette Perrin-Riou.

In recent years, an important breakthrough in the study of the Birch and Swinnerton-Dyer conjecture is the so-called p -converse theorem pioneered by Skinner. The BSD conjecture predicts that the algebraic and analytic ranks of an elliptic curve are equal. The p -converse theorem states that if the algebraic rank given by the Selmer group of an elliptic curve is 1, then the analytic rank is 1, which proves the BSD conjecture for a large family of elliptic curves.

The article studies a new method that generalizes previous results to a number of new settings. It is also the building block of further generalizations to totally real fields announced by the authors. This article can be an important stepping-stone for many further results in the study of the BSD conjecture.

The CRM-ISM-AMQ Prize is awarded annually for an outstanding publication in the AMQ. The prize was created in collaboration between the Centre de recherches mathématiques (CRM), the Institut des sciences mathématiques (ISM), and the AMQ.

—Centre des Recherches Mathématiques

Nazaryan Awarded 2024 Emil Artin Junior Prize in Mathematics

Aram Nazaryan of Yerevan State University has been awarded the 2024 Emil Artin Junior Prize in Mathematics for his paper "Equilateral triangles have minimal area and perimeter among all triangles containing a given circle in Hilbert planes," *Journal of Geometry* **114** (2023), no. 3, Paper No. 25.

Established in 2001, the Emil Artin Junior Prize in Mathematics is awarded under the auspices of the Armenian Mathematical Union and carries a cash prize of US\$1,400. It is presented usually every year to a student or former student of an Armenian educational institution who is under the age of thirty-five, for outstanding contributions to algebra, geometry, topology, and number theory: the fields in which Artin made major contributions.

—AMS Communications