

Mathematics People

Kakde Awarded Infosys Prize 2022 in Mathematical Sciences

The Infosys Prize 2022 in Mathematical Sciences was awarded to Mahesh Kakde, professor of mathematics, Indian Institute of Science, Bengaluru for his outstanding contributions to algebraic number theory. “Prof. Kakde’s deep work on the non-commutative Iwasawa main conjecture, his work on the Gross-Stark conjecture (with Samit Dasgupta and Kevin Ventullo), and his work on the Brumer-Stark conjecture (with Samit Dasgupta), resolves outstanding conjectures at the heart of modern number theory,” according to the citation.

The Infosys Prize celebrates the achievements of the recipients and awards them for their contributions to science and research impacting India. The Infosys Science Foundation (ISF) awarded the Infosys Prize 2022 in six categories: Engineering and Computer Science, Humanities, Life Sciences, Mathematical Sciences, Physical Sciences, and Social Sciences. The prize for each category is comprised of a gold medal, a citation, and a prize of US\$100,000 (or its equivalent in rupees). “The Infosys Prize counts among its laureates two Nobel Prize winners, two Fields Medal winners, a MacArthur fellow, and others who have gone on to hold high posts in government and academia,” according to a press release.

2022 Clay Research Awards Presented

The 2022 Clay Research Awards were presented by the Clay Mathematics Institute (CMI) to John Pardon, Søren Galatius, and Oscar Randal-Williams.

Pardon, of Princeton University, was recognized for his wide-ranging and transformative work in geometry and topology, particularly his achievements in symplectic topology.

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“Pardon’s work displays a remarkable clarity of vision, sustained through extensive projects in which he develops conceptually sophisticated theories that cast long-standing problems into settings where they become tractable,” according to the citation. “His novel treatment of the theory of moduli spaces of pseudo-holomorphic curves, leading to an elegant construction of virtual fundamental cycles and chains, provides a compelling example.”

Galatius (University of Copenhagen) and Randal-Williams (University of Cambridge) were honored for their profound contributions to the understanding of high-dimensional manifolds and their diffeomorphism groups. “They have transformed and reinvigorated the subject,” according to the prize citation.

“In a celebrated trilogy of papers on moduli spaces of high-dimensional manifolds, they established homology stability for diffeomorphism groups of manifolds in even dimensions $2n > 4$, where the stabilization is performed by taking connected sums with an increasing number of copies of the product of two n -dimensional spheres,” according to the citation. “They explained how to compute the limiting homology in terms of a specific spectrum, and beyond their explicit results they developed an array of ideas that have stimulated waves of subsequent advances in the field.”

Karagulyan Awarded 2023 Emil Artin Junior Prize in Mathematics

Davit Karagulyan of KTH Royal Institute of Technology, Stockholm, has been awarded the 2023 Emil Artin Junior Prize in Mathematics for his paper “On certain aspects of the Möbius randomness principle,” *Colloquium Mathematicum* 157 (2019), no. 2, 231–250.

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.

2022 AMSI Awards Announced

The Australia Mathematical Society Inc. (AMSI) announced its 2022 awardees.

The 2022 AustMS Medal was awarded to Guoyin Li (University of New South Wales), recognizing his outstanding contributions to optimization, variational analysis, and multilinear algebra. The medal is awarded for distinguished research in the mathematical sciences to a member of the Society within 15 years of the award of their PhD.

The 2022 George Szekeres Medal—AustMS's most prestigious medal recognizing research achievement and outstanding support of the mathematical sciences—was awarded to Igor Shparlinski (UNSW). "Professor Shparlinski has made notable contributions in many areas of mathematics with specialisms in number theory and its applications, and his influence on mathematics is reflected in his incredible citation rate," according to a press release.

The 2022 Gavin Brown Prize for best paper was awarded to Mark Holmes (University of Melbourne) and Edwin Perkins (University of British Columbia) for their paper "On the range of lattice models in high dimensions," *Probability Theory and Related Fields* 176 (2020), no. 3, 941–1009.

The 2022 Mahony-Neumann-Room Prize for outstanding contributions to AustMS's research publications was awarded to Satish K. Pandey (University of Waterloo) and Vern I. Paulsen (University of Waterloo), for their paper "A spectral characterization of AN operators," *J. Aust. Math. Soc.* 102 (2017), no. 3, 369–391.

Journal of Complexity Names Best Paper Award 2022

Thomas Kühn and Martin Petersen are winners of the 2022 Best Paper Award. According to the Award Committee, the paper "Approximation in periodic Gevrey spaces" by Kühn and Petersen, published in Volume 73, December 2022, Article 101665, exhibits exceptional merits. The winners will divide a US\$4,000 prize and each author will receive a plaque.

US Rhodes Scholarship Winners Announced

Two US students who study math were among those elected as 2023 Rhodes Scholars.

Sophie A. Bryant is a senior at Columbia University, where she is completing dual majors in East Asian Languages and Cultures and Mathematics. Isaac A. Robinson is a senior at Harvard College, where he majors in Computer Science and Mathematics.

G. de B. Robinson Award to Coulembier, Chen

Kevin Coulembier and Chih-Whi Chen received the G. de B. Robinson Award, which recognizes the publication of excellent papers in the *Canadian Journal of Mathematics* (CJM) and the *Canadian Mathematical Bulletin* (CMB), and encourages the submission of the highest quality papers to these journals.



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