Infosys Prize 2022

The Infosys Science Foundation (ISF), Bengaluru, announced the winners of the Infosys Prize 2022 on 15 November 2022. Every year, the foundation honours exceptional achievements by contemporary researchers and scientists in six categories: Engineering and Computer Sciences, Humanities, Life Sciences, Mathematical Sciences, Physical Sciences and Social Sciences. The recipients of the 14th edition of the award were selected from among 218 nominees by a jury of accomplished scientists and experts. The following are the winners of the Infosys Prize 2022.

Engineering and Computer Sciences: Suman Chakraborty, Professor of Mechanical Engineering and Dean of Research and Development, Indian Institute of Technology, Kharagpur. He has been chosen for

the prize for his pioneering work in elucidating the interaction of fluid mechanics, interfacial phenomena, and electromechanics at the micro- and nanoscale. Using this insight, he has contributed to the advancement of healthcare in resource-limited situations by developing revolutionary low-cost medical devices useful in sensing, diagnostics and therapeutics.

Humanities: Sudhir Krishnaswamy (Vice Chancellor, National Law School of India University, Bengaluru) has been chosen for his in-depth understanding of the Indian Constitution, particularly his carefully argued

account of the significance of the landmark 'basic structure doctrine' adopted by the Supreme Court of India in 1973, which guides and constrains various efforts to amend it while also ensuring its stability in the face of executive and legislative outcomes in India's political life.

Life Sciences: The awardee in Life Sciences is Vidita Vaidya, Professor and Chairperson, Department of Biological Sciences, Tata Institute of Fundamental Research, Mumbai. The award is made in recognition of her fundamental contributions to understanding

brain mechanisms that underlie mood disorders such as anxiety and depression, including signals engaged by the neurotransmitter serotonin in causing persistent changes in behaviour induced by early life stress and the role of serotonin in energy regulation in brain cells. Her study is highly relevant in post-pandemic era when the focus on mental health has become increasingly urgent and crucial.

Mathematical Sciences: Mahesh Kakde, Professor of Mathematics, Indian Institute of Science, Bengaluru, has been awarded for his exceptional contributions to the field of

algebraic number theory. His extensive work on the non-commutative Iwasawa main conjecture, the Gross-Stark conjecture (with Samit Dasgupta and Kevin Ventullo), and the Brumer-Stark conjecture (with Samit Dasgupta) resolve conjectures at the heart of modern number theory. Number theory, often regarded as the 'queen of mathematics', analyses the connections between numbers and has many practical applications in the fields such as cryptography.

Physical Sciences: Nissim Kanekar, Professor, National Centre for Radio Astronomy, Pune, has been awarded for his research on galaxies during the so-called 'high noon' period when star formation was at its peak.

His meticulous astronomical analyses have set the most stringent limits on secular variations in the fine structure constant and the electron-to-proton mass ratio. Prof. Kanekar's research has boosted India's radio astronomy capabilities at global level.

Social Sciences: Rohini Pande, Henry J. Heinz II Professor of Economics and Director, Economic Growth Center, Yale University, has been selected for the prize for her research on critical issues such as governance

and accountability, women's empowerment, the role of credit in the lives of the poor, and the environment. Her empirical findings, using various techniques, have great promise and potential for policy design in emerging economies like India. Prof. Pande's work has tremendous implications as conversations about the aftermath of the climate catastrophe, social justice, and what constitutes a just and equitable society become more urgent.

According to the foundation, the purpose of the Infosys Prizes is not only to recognize the individual achievements of researchers, but also to inspire young minds to choose science and research as a career. The awards will be presented on 7 January 2023 in Bengaluru. The awardees will be felicitated by 2012 ACM A. M. Turing Award winner Shafi Goldwasser, Director, Simons Institute, and the C. Lester Hogan Professor, Electrical Engineering and Computer Sciences at University of California, Berkeley. The prize for each category comprises a gold medal, a citation, and a purse of US$ 100,000 (or its equivalent in Rupees).