



INSTITUTE COLLOQUIUM



Title : SUTRA: A Model for Pandemics with Changing Dynamics

Abstract: We describe SUTRA, a new model for pandemics. A unique feature of the model is its ability to learn parameter values from daily new cases data, even when the parameters change. The model was applied to COVID 19 pandemic and was able to capture its trajectory very well. The model was also able to quantify the loss of different types of immunity, leading to a better understanding of the impact of the vaccination and prior infection.

Prof . Manindra Agrawal

*Professor, Department of Computer Science and Engineering, IIT Kanpur Adjunct
Professor, Chennai Mathematical Institute Senior Faculty Associate, ICTS Bangalore
(<https://sites.google.com/view/manindra/publications?authuser=0>)*

Prof. Manindra Agrawal is acting as the Director of IIT Kanpur. In 1996, he joined as an Assistant Professor in the Department of Computer Science and Engineering at IIT Kanpur. Prof. Agrawal has made significant contributions to the theory of efficient reactions between computational problems, which are a part of the program studying the well-known "P vs NP" question in mathematics/computer science. He co-created the AKS primality test with Neeraj Kayal and Nitin Saxena for which he and his co-authors won the 2006 Fulkerson Prize and the 2006 Gödel Prize. He was also awarded the Clay Research Award for this work in 2002. The test is the first unconditional deterministic algorithm to test an n -digit number for primality in a time that has been proven to be polynomial in n . He designed private-key encryption algorithms for Indian Navy and Air Force. These algorithms are being used by the armed forces to secure their communications. In September 2008, he was chosen for the first Infosys Mathematics Prize for outstanding contributions in the broad field of mathematics. In 2013, he was honored with Padma Shri. He has published more than 200 research papers (<https://scholar.google.com/citations?hl=en&user=UBXqggoAAAAJ>), more than 4K citations and h-index 26), has authored/co-authored 3 books.

Date: 25th , April, 2024
Time: 5 PM to 6 PM
Venue: Auditorium Hall ,
North Campus