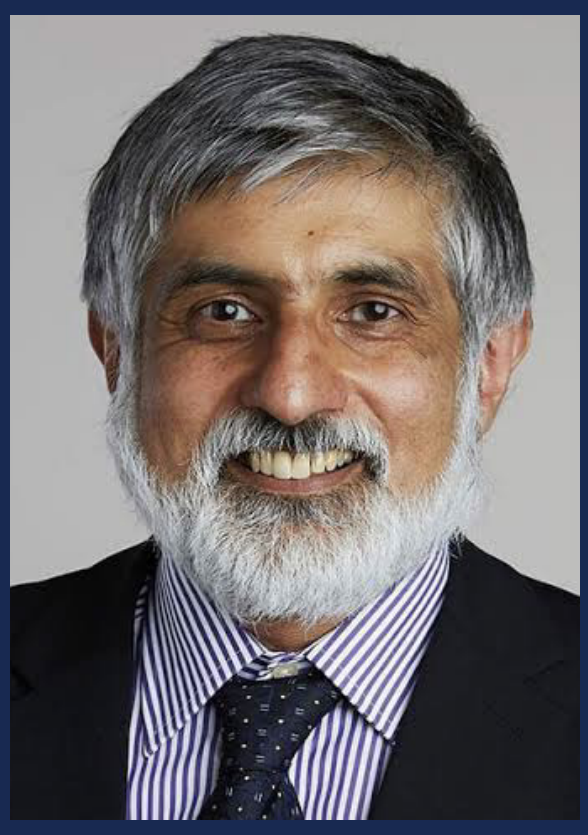
ICTS | International Centre for Theoretical Sciences

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS SPECIAL COLLOQUIUM

Using mathematical modelling to understand collective cell motion

Collective cell motion is a common theme in biology occurring, for example, in developmental biology, wound healing and cancer growth. We show how the complexities of the process can lead to interesting challenges in both mathematical modelling and analysis. We will provide specific examples from the field of cancer cell invasion and developmental biology. The models will range from fully nonlinear coupled systems of partial differential equations, to comparatively simple hybrid agent-based models.



Philip K Maini

University of Oxford, UK

Prof. Philip K Maini is a professor of mathematical biology at Oxford, Director of the Centre for Mathematical Biology, and a collaborator in the newly formed Oxford Centre for Integrative Systems Biology. His research focuses on mathematical modeling and analysis with applications in developmental biology, cancer, and wound healing. Prof. Maini completed his undergraduate degree in mathematics and his doctorate in mathematical biology at Oxford. Prof. Maini co-authored a 1997 Bellman Prize-winning paper. He received the Royal Society Leverhulme Trust Senior Research Fellowship, the Wolfson Research Merit Award, London Mathematical Society Naylor Prize, and Sylvester Medal from the Royal Society. He is a Fellow of the Royal Society, the Institute of Mathematics and its Applications (IMA), the Society for Industrial and Applied Mathematics (SIAM), the Royal Society of Biology, the European Academy of Sciences, the American Association for the Advancement of Science, Academy of Medical Sciences and a Foreign Fellow of the Indian National Science Academy.

4:00 PM, 17th April 2025

Emmy Noether Seminar Room

ICTS, Bengaluru

Zoom link: https://shorturl.at/4T6Yr

Meeting ID: 921 0919 9805

Passcode: 202030