



INDIAN INSTITUTE
OF TECHNOLOGY
PALAKKAD

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G.K. Ananthasuresh (B. Tech. IIT-Madras, 1989; MS, U. Toledo, 1991; PhD, Michigan, 1994) is a Professor of Mechanical Engineering at the Indian Institute of Science, Bengaluru, India. His previous positions include post-doctoral associate at the Massachusetts Institute of Technology, Cambridge, USA; Associate Professor at the University of Pennsylvania, Philadelphia, USA; and visiting professorships in University of Cambridge, UK, and Katholieke Univesiteit, Leuven, Belgium; and Indian Institute of Technology-Kanpur. His current research interests include compliant mechanisms, kinematics, multi-disciplinary design optimization, microsystems technology, micro and meso-scale fabrication, protein design, biomedical devices, and biomechanics of cells. He served on the editorial boards of ten journals and is a co-author of 100 journal papers and more than 175 conference papers as well as four edited books, one textbook, and 16 book-chapters. He has 13 patents, five granted and eight in process. He is Editor in Chief of the Journal of IISc. He is a recipient of the NSF Career Award and SAE Ralph O Teeter Educational Award in the USA; and the Swarnajayanthi Fellowship, Shanti Swarup Bhatnagar Prize, Abdul Kalam Technology Innovation National Fellowship in India as well as 11 best paper awards in international and national conferences and 10 prizes in design contests that his students and he participated. He advised 20 PhD students and 37 master's students so far. His students have formed two start-up companies and his group's research has led to six commercialized products.

Grasping Cells

There is increasing evidence that mechanical response of biological cells changes when a cell is under disease conditions. Correlating the changed mechanical response to a specific disease condition paves the way for mechano-diagnostics as much as it would help understand a disease from the viewpoint of biomechanics. In this talk, we will discuss the micromachined tools and computational techniques developed in assessing the mechanical responses of single cells, suspended or adhered, in their native medium. The prospects for mechano-diagnostics will be outlined and some examples will be discussed in detail.

28th August 2019 | 4 pm

**Venue: Auditorium,
Indian Institute of Technology Palakkad
Ahalia Integrated Campus, Kozhipara,
Palakkad - 678 557, Kerala.**