

IMCB Invited Speaker



Speaker : Prof. Stephen Quake
Visiting Scientist, Institute of Molecular and Cell Biology, Singapore
Professor of Bioengineering, Stanford University,
Investigator, Howard Hughes Medical Institute, USA

Date : 12 March 2013 (Tuesday)

Time : 11:00AM - 12:00PM

Venue : IMCB Seminar Room 3-46, Level 3, Proteos, Biopolis

Host : Prof. Wanjin Hong

Seminar :

Single Cell and Single Molecule Genomics

Studying complex biological systems such as a developing embryo, a tumor, or a microbial ecosystem often involves understanding the behavior and heterogeneity of the individual cells that constitute the system and their interactions. I will be discussing a variety of approaches to single cell genomic analysis.

About the Speaker :

Stephen (Steve) Quake, PhD, is Professor of Bioengineering and Applied Physics at Stanford University. He pioneered the development of Microfluidic Large Scale Integration (LSI), demonstrating the first integrated microfluidic devices with thousands of mechanical valves. This technology is helping to pave the way for automation of biology at the nanoliter scale, and in recent years Quake and his collaborators have used it for applications as diverse as discovering a new drug for hepatitis C, mapping the genomes of environmental microbes, and measuring gene expression in individual cancer stem cells. Commercial versions of microfluidic LSI are now used in hundreds of laboratories around the world for diverse purposes.

Quake demonstrated the first successful single molecule DNA sequencing technology, which has been commercially developed and is a leading candidate to deliver the first \$1,000 genome. In 2009 he and two co-workers sequenced his genome using the commercial version of the single molecule sequencing technology that he developed, an event that was widely reported in the popular press. He has received numerous awards from the NIH, MIT, Forbes, and Popular Science among others. He is a founder and scientific advisory board chair of Fluidigm, Inc. and Helicos Biosciences, Inc. (NASDAQ: HLCS).



Institute of
Molecular and
Cell Biology

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