



Tata Institute of Fundamental Research

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The 8th Madanlal Mehta Memorial Lecture

Computing Reality

By Prof. David B. Kaplan

Institute for Nuclear Theory, Seattle.

Tuesday, October 10, 2017 at 4.00 p.m.

Lecture Theatre, AG66, TIFR

1-Homi Bhabha Road, Colaba, Mumbai 400005

Physicists have beautiful theories for the microphysical interactions between particles, but face a number of problems when trying to compute predictions from these theories for the properties of matter. A lot of these obstacles cannot be solved simply by bigger computers and better code, but require the development of new approaches to scientific computation. I discuss the particular examples of chiral symmetry and so-called sign problems, which lead us naturally to consider extra dimensions, topological materials, and quantum computers.

Prof. Kaplan is a senior fellow at the Institute for Nuclear theory at the University of Washington in Seattle where he was the Director during the period 2006-2016. He received his Ph.D from Harvard University in 1985. His research interests are applications of quantum field theory to strong interactions, lattice field theory, quantum computing, cosmology, and physics beyond the standard model. He is a member of the National Academy of Sciences and of the American Academy of Arts and Sciences.



Prof. David B. Kaplan

Talk is open to all.

Non TIFR members are requested to carry valid photo ID card.

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