ICTS DISTINGUISHED LECTURE

STATISTICAL MECHANICAL ENSEMBLES AND TYPICAL BEHAVIOR OF MACROSCOPIC SYSTEMS

In this talk I will focus on describing, in a qualitative way, the reason statistical mechanics is able to predict, with great certainty, behavior of macroscopic systems, both in equilibrium and out of it.

I will relate this to the fact that this behaviour is typical for systems represented by the usual Gibbs ensembles or those derived from them. These take small phase space volume to indicate small probability.

I will not try to justify this here.

Joel Lebowitz

Joel Lebowitz was born in Taceva, then in Czechoslovakia, now Ukraine, in 1930 into a Jewish family. After earning a doctorate degree from Syracuse University, Lebowitz became a NSF fellow at Yale University, where his mentor was Lars Onsager. He worked at the Stevens Institute of Technology, in Hoboken, New Jersey, and Yeshiva University, in New York City, New York, before joining Rutgers University in 1977, where he is the G.W. Hill Professor of Mathematics and Physics and director of the Center for Mathematical Sciences Research.

Lebowitz is a member of the National Academy of Science and has received many awards: the Boltzmann Medal, the Max Planck Medal, the Poincare Prize, the "Grande Médaille" from the French Academy of Sciences and the 2021 Danie Heineman Prize in Mathematical Physics from the AIP and APS. Lebowitz is a Co-Chair of the Committee of Concerned Scientists which is dedicated to the protection of the human rights of scholars and students.

7.30pm – 9pm, 13 July 2021

ZOOM LINK : https://bit.ly/ictsDLjuly2021

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