

PUNE KNOWLEDGE CLUSTER AND INDIAN ACADEMY OF SCIENCES PRESENT
INDIA S&T @ 75 LECTURE SERIES

PHASE TRANSITIONS IN SPACES OF NON-INTEG DIMENSIONS: FRACTALS

In the modern theory of phase transitions, it is realized that the nature of transition depends strongly on the dimension of the space in which the system lives. Sometimes, one can express the behaviour near phase transitions as a function of the dimension of space d . This leads to the question if such formulas continue if the underlying space is a fractal when d is no longer an integer. Prof. Deepak Dhar will give a popular level introduction to the subject, and also discuss some of his work dealing with this question.

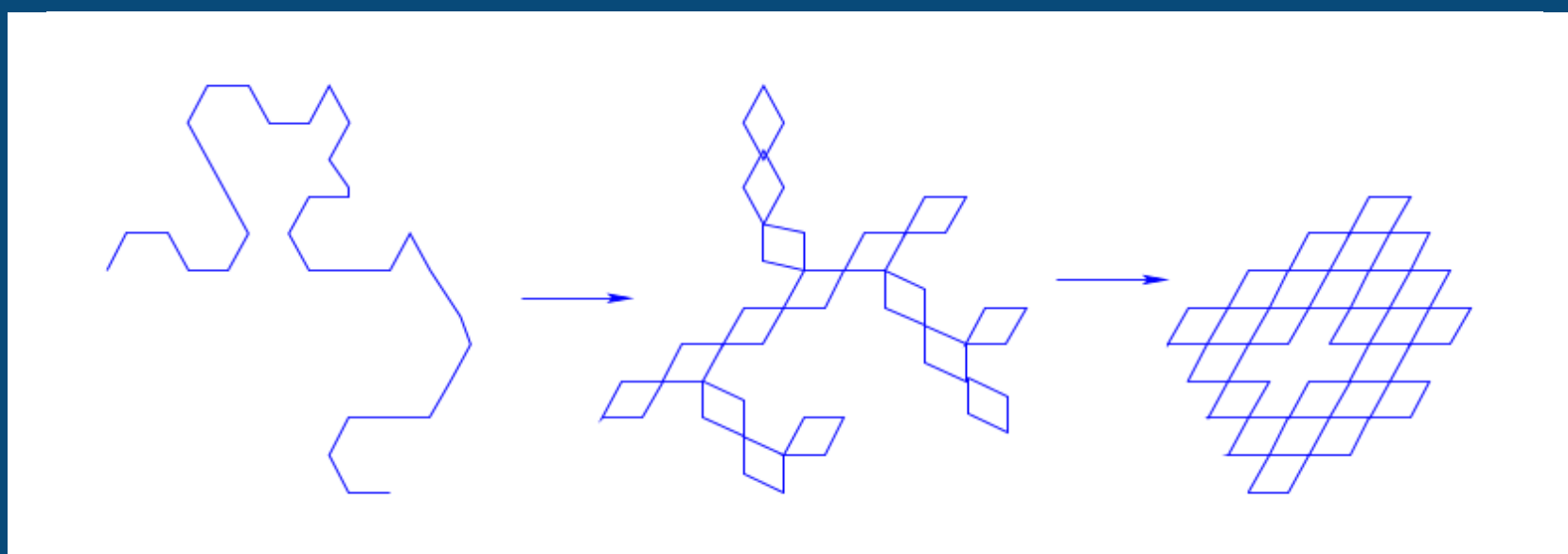


Image shows different phases of a self-attracting polymer chain: The expanded phase, the phase the chain doubles up as a double chain, and a collapsed phase.
(The above image is from a review of Prof. Deepak Dhar's work on fractals)

SATURDAY | 28TH MAY 2022 | 11:00 AM

LIVE STREAM ON zoom



About The Speaker

Prof. Deepak Dhar obtained B.Sc. Degree from the University of Allahabad in 1970, M. Sc. degree from Indian Institute of Technology, Kanpur in 1972, and Ph.D. in Physics from California Institute of Technology (USA) in 1978. After Ph.D, he joined the theoretical physics group at the Tata Institute of Fundamental Research as a postdoc and became a regular faculty member in 1980. After his retirement from TIFR, he has been at the IISER Pune as a distinguished visiting professor since 2016.

His research is in the general area of statistical physics. He is a fellow of INSA, IAS, NASI, and TWAS, and recipient of The S. S. Bhatnagar prize (1991), S.N. Bose medal of INSA (2001), and the Boltzmann medal of IUPAP (2022).



As a part of the "India S&T@75" events during the countdown to the 75th year of India's independence, the Pune Knowledge Cluster will be organising a number of lectures on scientific topics. These lectures will be delivered by Fellows and Associates of the Indian Academy of Sciences, who are based in Pune, and will be organised in association with the Academy. The lectures will cover a wide variety of topics, ranging from cutting edge science and technology to developments in these areas in the country over the 75 years since independence.