



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

Title: Phase transitions in spaces of non-integer dimensions: Fractals

| Organized By | Pune Knowledge Cluster (PKC) |
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| Date | 28th May 2022 |
| Time | 11:00 AM - 12: 30 PM |
| Abstract | 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 behavior near phase transitions as a function of the dimension of spaced. This leads to the question if such formulas continue if the underlying space is a fractal when d is no longer an integer. I will give a popular level introduction to the subject, and also discuss some of my own work dealing with this question. |
| Open to all | It's public talk. Open to all |
| Potential Gains | 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. |
| Speaker | Prof. Deepak Dhar, Fellow Indian Academy of Science, Boltzmann medal of IUPAP (2022) (First Indian to receive the Prestigious Boltzmann medal) |







Profiles of Speaker Brief information about the speaker

Prof. Deepak Dhar obtained is 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).

About the Organizer



The Pune Knowledge Cluster (PKC) has been established by the Office of the Principal Scientific Adviser to the Government of India. It aims is to bring together academia, R&D institutions, and the industry of Pune and its surrounding areas, to address the challenging problems of the region through innovative means, using scientific knowledge and engaging highly skilled human resources.

PKC is administered by the Inter-University Centre for Astronomy and Astrophysics (IUCAA). In the initial phase, PKC would focus on Health, Sustainability and Environment, Sustainable Mobility, BIG Data and AI and Capacity Building

For more information, visit: <u>https://www.pkc.org.in/</u>