

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Homi Bhabha Road, Mumbai-400 005

November 10, 2018

ASET Colloquium

- Speaker** : Prof. Hirok Chaudhuri (*National Institute of Technology Durgapur*)
- Title** : Physics of Earthquake Precursors
- Date & Time** : Friday 16 November 2018 at 16:00 hrs.
- Venue** : Lecture Theater (AG-66)

Abstract :

My talk is focused on detection and statistical analysis of earthquake precursory signals (abnormal variations in concentrations of He, CH₄, radioactive ²²²Rn and gamma dose rate). Explicit rules to unequivocally distinguish earthquake related signals in a monitoring time series have not been developed as yet. However this talk will explore about understanding of the dynamics of the aforesaid gas-geochemical signals, its relation with seismic tremor and finally about a proposed model for geochemical precursors for earthquake. I will discuss about my work that I have carried out on direct inter-comparison and cross-correlation study of the pre-seismic gas-geochemical anomalies recorded simultaneously at different identically equipped monitoring stations placed in totally dissimilar geological environments and in different seismic zones of India. Time series data obtained thereafter revealed several large anomalies that were subsequently correlated to possible major seismic disturbances (local and/or remote) that occurred in and around India.

About the Speaker:

Dr. Hirok Chaudhuri completed his Ph.D from SINP, Kolkata and Post-Doc at VECC, DAE, Kolkata. He is a Fellow of Earth Science Society of India. He is nodal officer for WB state for MHRD-“Rashtriya Avishkar Abhiyan. He is member of the International core committee for Water Group under BRICS NUs. His research areas are: Earthquake Precursors, Geothermal and Helium Exploration, Nonlinear Dynamics, Wastewater Treatment. Dr. Chaudhuri has several international collaborations including NASA, USA; FEFU, Russia; TIPGG, Russia’ TPU, Russia. He has several research projects funded by Govt. of India MHRD, SERB, DST. He has more than 20 publications in Peer Reviewed International Journals, 5 research articles as book chapters, 40 publications in the Proceedings of International Conferences. He is also working as a mentor for Research Student for Ph D Thesis work and M. Tech. and M. Sc. Thesis work.



Dr. Satyanarayana Bheesette
(Coordinator, ASET Forum)