

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE
2A&B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India

Seminar Notice

Org. by

Theoretical Physics Department

Title:	Hyperbolic Geometry and Chaos in the Complex Plane
Speaker:	Mahan Mj, Department of Mathematics, TIFR, Mumbai
Date:	February 27, 2017 (Monday)
Time:	12:00 noon
Venue:	Theoretical Physics Seminar Room (R/No.-C406), 3rd Floor, Centenary Building, IACS
Abstract:	Instances of hyperbolic geometry come up in nature whenever a system starts developing fast interconnections. Examples include trees, the human brain and the internet. A tell-tale signature is the existence of a fractal in one dimension less, e.g. the surfaces of trees and brains in the above examples. After dealing with the above examples, we shall discuss a special case where the fractals emerge in the complex plane as a result of symmetries of hyperbolic 3-space. These symmetries act on the complex plane as well; however the dynamics being chaotic, it is hard to get a hold on them directly. Instead we go to hyperbolic geometry in 3 dimensions, set up a dictionary between the two and finally get a hold on the fractals in the complex plane through our study of hyperbolic geometry in 3 dimensions.

All are cordially invited to attend the seminar