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

Lecture Series

Org. by

School of Physical Sciences

Speaker	**Rik Sengupta, MIT, USA**		
	Lecture- I	**Lecture-II**	**Lecture-III**
Title	**How to Draw a Graph ?**	**The Four Colour Theorem**	**Puzzles, Games and Paradoxes**
Date	**August 1, 2018 (Wednesday)**	**August 2, 2018 (Thursday)**	**August 03, 2018 (Friday)**
Time	**11: 00 a.m.- 12:00 noon**	**12:00 noon – 1:00 p.m.**	**12:00 noon – 1:00 p.m.**
Abstract	How do we draw graphs? How do we represent an abstract mathematical object as a two-dimensional figure on the page without losing the abstraction of the object itself? And most importantly, is there a trade-off to that? Can drawing the object in two dimensions reveal something	Of the many simple-to-state problems that have risen out of graph theory, perhaps none has captured people's imagination as much as the Four Colour Theorem -- an incredibly simple puzzle that eluded a proof for nearly two centuries, and continues even	Human beings are unique in that we love intellectual perplexity. We crave being stumped by puzzles; we love playing complicated games in spite of losing again and again; and we obsess about paradoxes, from complex Escher drawings to throwaway remarks in Inception. How do mathematicians impart their own spin on classic puzzles? What games do mathematicians like

	fundamental about its abstract structure? This talk is a very gentle introduction to graphs as "drawn pictures" and provides an overview of several graph properties that depend on the embedding of the graph in question. It is a quick introduction to planar graphs, crossing numbers, and structure theorems,as well as to toy puzzles like John Conway's thrackles.	today to baffle mathematical purists looking for an elegant proof to a simple statement. This talk is an introduction to the Four Colour Theorem, from its roots as a cartographical puzzle, going all the way to its eventual proof, and the shortcomings thereof.	playing? And finally, are paradoxes the sign of a flaw in the infallibility of mathematics at a specific point? This talk is a very broad overview of the mathematics behind these essentially recreational pursuits. Without going deep into theory or proofs, the aim is to engage the audience in the elusive idea of a "mathematical way of thinking".
Venue	**Seminar Room(R.No.-C406), 3rd Floor, Centenary Building**		

All are cordially invited to attend the seminar