

Lecture Programme for students of class XI and XII,
in association with National Academy of Sciences, Allahabad,
to be held at the Chennai Mathematical Institute, Siruseri
on 17th & 18th July 2017.

Monday, 17th July:

<u>Time</u>	<u>Speaker</u>	<u>Title</u>
10.00-11.00	Dr. Kavita Sutar, CMI	Origami Geometry <u>Abstract:</u> Anyone who has made origami models, maybe even with a passing interest, must notice that there should be some rules of Euclidean or school-level geometry at work. One might wonder if there is a geometry of origami itself. Indeed there is! In my talk I will try to describe the interesting geometry hidden in the creases of an origami model.
11.00-11.30		Discussion
11.30-11.45		Tea break
11.45-12.45	Dr. Ajith Kumar Inter-University Accelerator Centre, New Delhi	Science experiments using ExpEYES* <u>Abstract:</u> ExpEYES is a cost effective interface that can convert your PC to function as a low frequency oscilloscope. This will be used to demonstrate and give students hands on experience in studying some electrical and other physics experiments. Reading the attached chapter from NCERT book will be useful.
12.45-13.15		Discussion
13.15-14.15		Lunch
14.15-15.15	Dr. Ajith Kumar Inter-University Accelerator Centre, New Delhi	Continuation of Physics experiments
15.15-15.45		Discussion
15.45-16.00		Tea break & disperse

* Reading the attached chapter from NCERT book will be useful.

Tuesday, 18th July:

<u>Time</u>	<u>Speaker</u>	<u>Title</u>
10.00-11.00	Prajakta Nimbhorkar, CMI	Popular matchings <u>Abstract:</u> We will consider the problem of assigning positions to people. People have their individual preferences over positions. The goal is to find an assignment which is “popular” among people. Discussion
11.00-11.30		Tea break
11.30-11.45		Introduction to Probability Theory
11.45-12.45	Rajeeva L. Karandikar, CMI	<u>Abstract:</u> Often probability theory is taught with a mathematical definition and most examples given are from gambling. Students often wonder if all this has any connect with real world? And they cannot understand how one could interpret statement like, 70% chance of Rain tomorrow - since that does not fit in any definition that has been taught to them. My endeavor in this talk would be to convince the students that probability is very much connected with real world and is important when one is faced with making decisions under uncertainty. Discussion
12.45-13.15		Lunch
13.15-14.15		Sikku Kolam, Rational Curves and Pythagorean Triples
14.15-15.15	Dr. P. Vanchinathan, VIT, Chennai	<u>Abstract:</u> attached Discussion
15.15-15.45		Tea break & disperse
15.45-16.00		