International π Day

Joint Event by IISER and IIT Tirupati

March 14, 2024

Venue: Lecture Hall Complex, IISER Tirupati

Program Schedule

Time	Title of the Talk	Speaker
09:25 AM – 09:30 AM	Inauguration	
9:30 AM 1– 10:30 AM	Counting using geometry and dynamics	Dr. Anish Gosh, TIFR Mumbai
10:30 AM – 11:00 AM	Tea Break	
11:00 AM – 12:00 PM	**AmAC** Subset of power series ring and its applications	Dr. Mohit Upmanyu, CMI Chennai
12:00 PM – 02:30 PM	Lunch Break	
02:30 PM – 03:30 PM	An introduction to h-principle	Dr. Dishan Pancholi, IMSc Chennai
03:30 PM – 04:00 PM	Tea Break	
04:00 PM – 05:00 PM	Resolution of singularities	Dr. Anand Sawant, TIFR Mumbai
05:00 PM – 05:05 PM	Closing Ceremony	

Titles and Abstracts

- **Anish Ghosh** (TIFR Mumbai). *Counting using geometry and dynamics.* I will explain how to count various points of arithmetic interest using methods from the geometry of numbers as well as methods from ergodic theory.

- **Mohit Upmanyu** (CMI Chennai). **AmAC** *subset of power series ring and its applications.* In this talk, we introduce the notion of **AmAC** subsets of power series rings. We then use these to prove a generalization of Gurjar's Hyperplane section theorem and "Milnor number on Tjurina number constant family is bounded. All terms stated will also be defined.

- **Dishant Pancholi** (IMSc Chennai). *An introduction to h-principle.* I will discuss via examples the method of holonomic approximation developed by Eliashberg and Mishachev to establish h-principle for a large class of underdetermined partial differential relations.

- **Anand Sawant** (TIFR Mumbai). *Resolution of singularities.* Roughly speaking, the problem of resolution of singularities asks if an arbitrary singular algebraic variety can be parametrized by a smooth variety. This was proved by Hironaka in 1964 for varieties over fields of characteristic 0, whereas for varieties over fields of positive characteristic, it is an open problem in dimensions greater than 3. In this talk, I will explain the statement of the problem and illustrate it with examples.