



GIAN Course on  
**“Cosmological Structure Formation”**

9-14<sup>th</sup> April, 2018

Center For Theoretical Physics  
Jamia Millia Islamia, New Delhi

Course faculty : **Prof. Ravi K Sheth** (UPENN, USA)  
Course Coordinator : **Prof. Anjan A Sen** (CTP, JMI, India)

**Schedule:**

**9<sup>th</sup> April 2018**

9:30-10:00 : Registration  
10:00-11:00 : Inauguration  
11:00-11:45 : Tea  
  
11:45-12:45 : An Overview of current status of observable  
Universe (RS)  
12:45-14:00 : Lunch  
14:00-15:00 : Basic Cosmology and Cosmological Probes-I  
(geometry) (AS)  
15:00-15:30 : Tea  
15:30-16:30 : Cosmological Probes-II (Cluster Counts, Lensing  
RSD..) (RS)

## **10<sup>th</sup> April 2018**

- 10:00-11:00 : Linear Perturbation Theory –I (AS)  
11:00-11:30 : Tea  
11:30-12:30 : Linear Perturbation Theory–II (AS)
- 12:35-14:00 : Lunch  
14:00-15:00 : Statistics and Ongoing Surveys (RS)  
15:00-15:30 : Tea  
15:30-16:30 : Tutorial/Discussions

## **11<sup>th</sup> April 2018**

- 10:00-11:00 : Spherical Collapse Model (RS)  
11:00-11:30 : Tea  
11:30-12:30 : Lagrangian Perturbation Theory (RS)
- 12:35-14:00 : Lunch  
14:00-15:00 : Modified Gravity (AS)  
15:00-15:30 : Tea  
15:30-16:30 : Tutorial/Discussions

## **12<sup>th</sup> April 2018**

- 10:00-11:00 : Phenomenology of Structure Formation  
(Biased Tracers) (RS)  
11:00-11:30 : Tea  
11:30-12:30 : Halo Model -I (RS)
- 12:35-14:00 : Lunch  
14:00-15:00 : Halo Model -II (RS)  
15:00-15:30 : Tea  
15:30-16:30 : Tutorial/Discussions

### **13<sup>th</sup> April 2018**

- 10:00-11:00 : Unbiased constraints from biased tracer  
- Cosmology (RS)
- 11:00-11:30 : Tea
- 11:30-12:30 : Unbiased constraints from biased tracer  
- Galaxy Formation (RS)
- 12:35-14:00 : Lunch
- 14:00-15:00 : Unbiased constraints from biased tracer  
- Future Surveys(RS)
- 15:00-15:30 : Tea
- 15:30-16:30 : Tutorial/Discussions

### **14<sup>th</sup> April 2018**

- 10:00-12:00 : Examination
- 12:00-13:00 : Valedictory Session
- 1:00-14:00 : Lunch