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| Code of course: **BMI-LOTD-306E.01, BMA-LOTD-306.01** |
| Title of course: **Introduction to Forcing** |
| Lecturer: **Amitayu Banerjee** |
| **General aim of the course:**  Getting acquainted with the basics of Forcing. We will also see some applications of forcing in other fields (like in Modal logic, Algebra, Graph theory etc) after covering the contents of the course.  **Content of the course:**  Basics of Forcing, Cardinal collapse prevention after forcing, Cohen forcing, Levy collapse, Prikry forcing, Product forcing, Iterated forcing, Martin’s axiom and Forcing axioms, Independence of General Continuum hypothesis (GCH) and independence of the Axiom of choice(AC) from other axioms of Zermelo--Fraenkel set theory with choice (ZFC).  **Grading criteria, specific requirements:**  Oral exam and assignments.  **Required reading:**  Parts from (Chapter 14, 15, and 16 of Thomas Jech), Set theory, Springer Monographs in Mathematics, Springer-Verlag, Berlin, 2003, The third millennium edition, revised and expanded, DOI: 10.1007/3-540-44761-x, MR 1940513.  **Suggested further reading:**  (Chapter 7, and 8 of Kenneth Kunen), Set theory, Studies in Logic and the Foundations of Mathematics, vol. 102, North-Holland Publishing Co., Amsterdam-New York, 1980, An introduction to independence proofs, DOI: 10.2307/2274070, MR 597342.  **Note:** There are a lot of terminological differences between the contents of the above two mentioned books. |