

LECTURE SERIES ON ELLIPTIC CURVES AND MODULAR FORMS

Kazım Büyükboduk

University College Dublin

December 16, 2019

10.00-11.00 *Basic definitions, Elliptic Curves over F_p (Hasse's Theorem), Elliptic Curves over Complex Numbers and GAGA*

11.00-11.15 Break

11.15-12.15 *Elliptic curves over Q (Mordell-Weil Theorem), Torsion Points (Mazur's Theorem and the Tate module)*

12.15-13.30 Lunch Break

13.30-14.30 *Modular curves and their Jacobians, formulation of the modularity theorem*

December 18, 2019

10.00-11.00 *Modular forms, Basic Definitions, Dimension Formulae, emphasizing algebraic features*

11.00-11.15 Break

11.15-12.15 *Hecke Algebras*

December 20, 2019

10.00-11.00 *Eichler-Shimura relations*

11.00-11.15 Break

11.15-12.15 *Galois representations attached to elliptic curves and modular forms*

12.15-13.30 Lunch Break

13.30-14.30 *Modularity and Fermat's Last Theorem*

Date : December 16-18-20, 2019

Place: IMBM Seminar Room, Boğaziçi University South Campus