



## Algebra and Number Theory Seminar

**Title:** Introduction to the Iwasawa theory of elliptic curves

**Speaker:** Professor ANTONIO LEI (University of Ottawa)

**Date:** Thu 13th October 2022 at 2:00PM

**Location:** Seminar Room SCN 1.25

**Abstract:** Let  $E$  be an elliptic curve and  $p$  an odd prime number where  $E$  has good reduction. In this talk, I will introduce the central ideas of the Iwasawa theory of  $E$  over the  $p$ -adic cyclotomic extension of  $\mathbb{Q}$ . It turns out that the natural objects arising from Iwasawa theory have very different arithmetic behaviours depending on whether  $E$  has ordinary or supersingular reduction at  $p$ . I will explain how these objects are defined and why certain of their properties depend on the reduction type of  $E$  at  $p$ .

Note: This will be Prof Lei's second talk (in a series of 3), following a colloquium talk on October 4 (Tuesday) at 4 pm (same location).

[https://maths.ucd.ie/kazim\\_b/UCD\\_ANT\\_Seminar.html](https://maths.ucd.ie/kazim_b/UCD_ANT_Seminar.html)