



## UCD School of Mathematics and Statistics Colloquium Seminar

**Title:** The radius of convergence of the  $p$ -adic sigma function

**Speaker:** Professor SHINICHI KOBAYASHI (Kyushu University)

**Date:** Fri 19th April 2024 at 2:00PM

**Location:** E0.32 (beside Pi restaurant)

**Abstract:** The  $p$ -adic sigma function is a  $p$ -adic analog of the classical Weierstrass sigma function for elliptic curves. It has applications such as an explicit description of the  $p$ -adic height pairing. In this talk, we explain the radius of convergence of the  $p$ -adic sigma function associated with an elliptic curve defined over  $p$ -adic fields. It depends on whether the elliptic curve has ordinary or supersingular reduction at  $p$ . The ordinary case is classical and was investigated by Mazur-Tate. We explain mainly the supersingular case.