

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research  
Department of Mathematics*

# Representation Theory Seminar

## Metaplectic Whittaker functions and Lusztig's quantum group

**Professor Valentin Buciumas**

Pohang University of Science and Technology

### Abstract

Whittaker functions are basic tools in representation theory generalizing Fourier coefficients of modular forms. At the unramified level, the space of Whittaker functions on a  $p$ -adic group is modeled by the representation theory of the Langlands dual group. I will explain this result (which is sometimes called the geometric Casselman-Shalika formula), as well as how to generalize it to Whittaker functions on metaplectic covers of  $p$ -adic groups. In this latter setting, the Langlands dual group gets replaced by a quantum group at a root of unity.

This is joint work with Manish Patnaik.

Date:	June 12, 2024 (Wednesday)
Time:	3:00 – 4:30pm
Venue:	Room 210, Run Run Shaw Building, HKU

*All are welcome*