

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

COLLOQUIUM

Integral models of Shimura varieties beyond parahoric level

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Date:	December 8, 2025 (Monday)
Time:	2:00 – 3:00pm
Venue:	Room 210, Run Run Shaw Bldg., HKU

Abstract

The modular curve with $\Gamma_0(p)$ -level structure has a beautiful integral model over $\mathbb{Z}_p$, and generalizations of this model to any Shimura variety with p -parahoric level have been constructed in the last 30 years. When passing from $\Gamma_0(p)$ -level to $\Gamma_1(p)$ -level, the situation changes drastically. In the talk I will explain a general method that potentially allows to deal with such level structures. The method is based on the construction of torus embeddings of the maximal torus of a reductive group scheme. Joint work with G. Pappas.

All are welcome