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## Homological branching laws for p-adic groups Dr. Kei Yuen Chan

## Fudan University

## <u>Abstract</u>

The local Langlands conjecture gives an arithmetic classification of irreducible smooth representations of p-adic groups, which is the center of many research in representation theory, number theory, arithmetic geometry and other areas over few decades.

Branching law is a classical problem to decompose a representation of a group when restricted to a subgroup, and for p-adic reductive groups, that is a part of relative Langlands program nowadays. In the case of classical groups, the quotients of a large family of restricted representations are predicted by the Gan-Gross-Prasad conjectures. In this talk, I shall explain a new perspective from homological algebra to study branching laws, and explain how Hecke algebras can be used as a new tool for branching problems.

- Date: 9 January 2020 (Thursday)
- Time: 11:00am 12:00noon
- Venue: Room 219, Lady Shaw Building,
  - The Chinese University of Hong Kong, Shatin