

THE UNIVERSITY



OF HONG KONG

Department of Mathematics

Qualifying Research Seminar

Archimedean Bernstein-Zelevinsky theory and Casselman's comparison conjecture

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(Supervisor: Professor Xuhua HE)

January 21, 2026 (Wednesday) at 3:00pm

Rm 210, Run Run Shaw Building, HKU

Abstract

The Bernstein-Zelevinsky filtration describes the restriction of smooth representations of p -adic general linear groups to their mirabolic subgroups. This theory has had deep applications in the local Langlands correspondence, the relative Langlands program, and branching laws for p -adic groups.

In this talk, we present an Archimedean analogue of this theory. We outline its generalization to other classical groups and explain how this filtration can be used to approach Casselman's comparison conjecture and branching laws. We also illustrate further research directions, including explicit computations of the Casselman-Jacquet functor.

All are welcome

Advisory Panel:

Prof. Zheng HUA

Prof. Kei Yuen CHAN

Prof. Xuhua HE