



*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

REAL LOCUS OF $\bar{\mathfrak{h}}$

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ABSTRACT. The wonderful compactification $\bar{\mathfrak{h}}$ of a Cartan subalgebra of a semisimple Lie algebra has recently been studied from many different perspectives. For example, it has appeared in connection with the study of the variety of Lagrangian subalgebras, matroid Schubert varieties, additive (tropical) toric geometry, (trigonometric and inhomogeneous) Gaudin algebras, etc. We explain some topological properties of the real locus of $\bar{\mathfrak{h}}$. In particular, we will show that $\bar{\mathfrak{h}}(\mathbb{R})$ is homeomorphic to the permutohedron with parallel faces identified. This is joint work with A. Ilin, J. Kamnitzer, P. Przytycki and L. Rybnikov.

Date: August 24, 2023 (Thursday)

Time: 2:00pm – 3:00pm

Venue: Room 210, Run Run Shaw Building,
HKU

All are welcome