

# Unbounded matroids, polymatroids and subspace arrangements

*Monday, 19 August 2024 15:05 (25 minutes)*

The goal of the talk is to introduce the theory of unbounded matroids. These are possibly unbounded Polyhedra in  $\mathbb{R}^d$  whose vertices are 01 whose edge directions are of the form  $e_i - e_j$ . We will explore some cryptomorphic variations of these definitions involving linear extensions of posets and relate them to matroids and polymatroids. We will discuss how these objects can be used to study the geometry of subspace arrangements and present several questions inspired by classical results for matroids. Based on joint work with J. Berggren and J. Martin.

**Primary author:** SAMPER, José (Pontifical Catholic University of Chile)

**Presenter:** SAMPER, José (Pontifical Catholic University of Chile)