

Gröbner bases over polytopal affinoid algebras

Legrand Lucas - XLIM, Limoges

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In this talk, I'll present a Gröbner bases theory for polytopal affinoid algebras. These are specific affinoid algebras connecting rigid analytic geometry and tropical geometry, as introduced by Einsiedler, Kapranov, and Lind.

The theory extends the recent advancements by Caruso et al. on Gröbner bases for Tate algebras and incorporates the earlier work of Pauer et al. on Gröbner bases for Laurent polynomials.

I'll present effective algorithms for computing Gröbner bases in this context. In collaboration with Barkatou Moulay and Vaccon Tristan.

Keywords: rigid geometry, Gröbner bases, Tate algebras, tropical geometry.