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Final Polynomials for Non-Realizable Oriented Matroids

Abstract for the Combinatorics Seminar 2012 February 14

Final polynomials allow us to view the question of non-realizablility of oriented matroids in the algebraic setting of bracket algebras. A final polynomial exists for every non-realizable oriented matroid and can provide a concise proof for non-realizability.

In this talk I will define final polynomials and bi-quadratic final polynomials. This is the first of two talks based on “Euclideanness and final polynomials in matroid theory” by Jürgen Richter-Gebert.

In the second talk, I will show how to find biquadratic final polynomials for non-euclidean oriented matroids.
