

Fifth annual conference of the SFB-TRR 195

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Verifying Terao's freeness conjecture for small arrangements in arbitrary characteristic

A longstanding conjecture of Terao asks whether the freeness of an arrangement over a fixed field is determined by its underlying combinatorics. Recently, Dimca, Ibadula, and Macinic confirmed Terao's conjecture for arrangements in \mathbb{C}^3 with up to 13 hyperplanes. In joint work with Behrends, Jefferson, and Leuner, we confirmed Terao's conjecture for rank 3 arrangements with exactly 14 hyperplanes in arbitrary characteristic. The main result discussed in this talk is a common generalization of the two aforementioned results: Theorem. Terao's freeness conjecture is true for rank 3 arrangements with up to 14 hyperplanes in any characteristic.