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Locally Heavy hyperplanes in multiarrangements and their freeness

One of the central topics among the theory of hyperplane arrangements is their freeness. Terao's conjecture tries to link the freeness with the combinatorics of an arrangement. One of the few categories of arrangements which satisfy this conjecture consists of 3-dimensional arrangements with an unbalanced Ziegler restriction. This means that the arrangement contains a lot of hyperplanes intersecting in one single line. In this talk, we generalize this result to arbitrary dimensional arrangements in terms of flags by introducing locally heavy multiarrangements. For that purpose, we generalize several freeness criteria for simple arrangements, including Yoshinaga's freeness criterion, to loc. heavy multiarrangements. This is joint work with Takuro Abe.