

## Genocchi numbers and hyperplane arrangements

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**05.05****Michelle Wachs***(University of Miami)***Time:** Friday 08.07., 14:00 – 14:50

**Abstract:** In joint work with Alex Lazar, we refine a result of Gabor Hetyei relating the number of regions of a homogenized version of the Linial hyperplane arrangement to the median Genocchi numbers. We do so by obtaining combinatorial interpretations of the coefficients of the characteristic polynomial of the arrangement and by deriving generating functions for the characteristic polynomials, which reduce to known generating functions for the Genocchi and median Genocchi numbers. Our work involves the Ferrers graphs of Ehrenborg and van Willigenburg, a class of permutations related to Dumont permutations, the surjective staircase tableaux of Dumont, and a result of Chung and Graham on chromatic polynomials of incomparability graphs. Our techniques also yield type B analogs, and Dowling arrangement generalizations.