

TOWARDS SUPERTROPICAL REPRESENTATION THEORY

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ABSTRACT. Our joint research with Izhakian and Knebusch, in the language of the supertropical structure, has focused mostly in two directions at the tropical level: affine algebraic geometry and linear algebra. In this talk, also involving work of Adi Niv, we survey the latter, starting with some basic matrix theory including the tropical determinant and adjoint, and wending our way through more recent results on quadratic forms and a version of SL, which is the set of matrices having supertropical determinant 1. This “almost” partitions into monoids having unit elements which are close, but not quite, the identity matrix, and seems the natural way to enter into a tropical K_1 -theory.

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