A sparse overview of sparse elimination

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30th Applications of Computer Algebra - ACA 2025

From its origins in the 1970's until today, sparse, or toric, elimination theory has evolved into a standard approach in algebraic variable elimination, offering new root counts as well as new algorithmic methods important in bounding complexity and leading to practical results for polynomial system solving. The theory's connections to convex geometry, linear algebra, algebraic combinatorics, and tropical geometry offer avenues for further investigation. In this talk we survey complexity and algorithmic aspects, while including some recent results and some open questions for future research.