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"A Wronskian approach to the real τ -conjecture"

Abstract:

According to the real τ -conjecture, the number of real roots of a sum of products of sparse polynomials should be polynomially bounded in the size of such an expression. It is known that this conjecture implies a superpolynomial lower bound on the arithmetic circuit complexity of the permanent.

In this talk, I will show how to use the Wronskian determinant to give an upper bound on the number of real roots of sums of products of sparse polynomials.