

abstract

Computer Science/Discrete Mathematics Seminar I
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

For a set of polynomials F , we define their bilinear complexity as the smallest k so that F lies in an ideal generated by k bilinear polynomials. The main open problem is to estimate the bilinear complexity of the single polynomial $\sum_{i,j} x_i^2 y_j^2$. This question is related to the classical sum-of-squares problem as well as to problems in arithmetic circuit complexity. We will focus on related sets of polynomials and prove some lower and upper bounds on their bilinear complexity.