

Computer Science/Discrete Mathematics Seminar I

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On Bilinear Complexity

Series: Computer Science/Discrete Mathematics

Pavel Hrubes

University of Washington

Date & Time: Mon, 01/14/2013 - 11:15 - 12:15

Location: S-101

Video Link:

<http://video.ias.edu/1213/csdm/PavelHrubes-0114>

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.

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Thu, 12/06/2012 - 14:24

Mon, 01/07/2013 - 16:41

terms:

- [CSDM Seminars](#)