The Trivial Notions Seminar
Proudly Announces

Strassen's Degree Bound for Arithmetic Circuits

A talk by

Jenny Kaufmann

Abstract

Say you're given variables $x_1, \ldots, x_n$ and you want to compute the polynomials $(x_1)^k, \ldots, (x_n)^k$, using only the operations "input a variable," "input a constant," "add two things," and "multiply two things." Strassen's degree bound tells you that you'll need to use at least $n \log k$ operations, and more generally provides a lower bound on the number of operations needed to compute a given collection of n polynomials. I will give some definitions to make this more precise, and then give a proof via algebraic geometry.

Friday, November 15th, at 12:30 pm
Science Center 530