Definable sets: model theory meets algebra

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102 Bradley Hall, 4:00 pm
(Tea 3:30 pm Math Lounge)

Abstract

Model theory has recently become an increasingly mainstream subspecialty of mathematical logic. Many of the techniques used by model theorists are readily applicable to other areas of pure mathematics, and were actually inspired by purely algebraic notions. In particular, definable sets–those subsets of a mathematical structure that are defined by a single (first order) formula–are analogous to varieties in algebraic geometry. We will look at the notion of a definable set from an algebraic perspective, and present an application related to solutions of linear systems over p-adic power series of a particular form.

This talk should be accessible to graduate students.

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