On the decidability of the real field with a generic power function

Tamara Servi (joint work with Gareth Jones)

Abstract: In recent work we proved that, if A is a real number not zero-definable in the real exponential field, then the theory of the real field with the power function x^A is decidable, relatively to an oracle for A. I will prove this statement, and give a proof of the existence of a computable generic real number.