

**Hosted by the Yale Mathematics Department**

**Hahn Lecture Series**  
***Jonathan Pila, Oxford***  
**October 29, 30, 31, 2018**



**10/29/18 Title: Point-counting and diophantine applications**

**4:15 p.m. DL 220**

This introductory lecture will describe results about counting rational points on certain non-algebraic sets and sketch how they can be used to attack certain problems in diophantine geometry and functional transcendence.

**10/30/2018 Title: O-minimality and Ax-Schanuel properties**

**4;15 p.m. LOM 214**

This lecture will describe the historical context and some key properties of o-minimality. It will then describe certain results in functional transcendence, generalizing the classical results on exponentiation due to Ax, and sketch how they can be proved.

**10/31/2018 Title: The Zilber-Pink conjecture**

**4:15 p.m. LOM 215**

The Zilber-Pink conjecture is a far reaching finiteness conjecture in diophantine geometry, unifying and extending Mordell-Lang and Andre-Oort. This lecture will state the conjecture, illustrate its varied faces, and indicate how the point-counting strategy can be applied to parts of it.

Refreshments will be available at 3:45 p.m. for all three talks in the Mathematics Lounge.