

Colloquium

University of Notre Dame
Department of Mathematics

Nicole Looper - University of Illinois at Chicago

Speaker: Nicole Looper

University of Illinois at Chicago

Will give a lecture entitled

Small points in arithmetic geometry and dynamical systems

Date: Wednesday, April 10, 2024

Time: 4:00 PM

Location: 129 Hayes-Healy Bldg



Departmental Tea: Tea in Room 257 (lounge in Hurley Hall) at 3:30 p.m.

Zoom URL: <https://notredame.zoom.us/j/99986867672?pwd=Z2NJRIZwL0dTR0Nxbk50NEIHK0dNdz09>

Abstract:

Height functions play a fundamental role in number theory, especially in counting and finiteness theorems as well as in the study of rational points on varieties. As a field that sets forth both analogues and generalizations of statements in Diophantine geometry, arithmetic dynamics has used heights as a major tool. Points of small canonical height are of particular interest, as they enjoy very distinctive arithmetic and geometric properties. In this talk, I will sketch a few seminal results concerning these points. As most of the progress in this area has so far occurred in the dimension 1 setting, I will discuss a recent result of mine transporting a key tool to the higher dimensional setting, with applications to small points on abelian varieties.