

Colloquium

University of Notre Dame
Department of Mathematics

Andrei Jorza - University of Notre Dame

Speaker: Andrei Jorza

University of Notre Dame

Will give a lecture entitled

Nonarchimedean Analysis in Number Theory



Date: Tuesday, March 26, 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: [notredame.zoom.us/j/99986867672?](https://notredame.zoom.us/j/99986867672?pwd=Z2NJRIZwL0dTR0Nxbk50NEIHK0dNdz09)
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Abstract:

Starting with the beginning of the 20th century, p -adic nonarchimedean analysis has revolutionized the study of diophantine equations and number theory more generally, appearing crucially in the proof of Fermat's Last Theorem and the stunning recent work of Peter Scholze, which won the Fields Medal in 2018. The reason for its power is that the p -adic world allows for deformations of arithmetically significant objects that have no real deformations. I will explain some uses of p -adic analysis in central number theory questions, including applications to one of the Millenium Problems, the Birch and Swinnerton-Dyer conjecture.