

# Colloquium

University of Notre Dame  
Department of Mathematics

Marianna Csörnyei - University of Chicago

**Speaker:** Marianna Csörnyei

University of Chicago

**Will give a lecture entitled**

Keakeya problem and related questions for planar  
rectifiable sets

**Date:** Wednesday, October 25, 2023

**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](https://notredame.zoom.us/j/99986867672?pwd=Z2NJRIZwL0dTR0Nxbk50NEIHK0dNdz09)



**Abstract:**

A Kakeya set is a set of measure zero that contains a line segment in every direction. The classical Kakeya problem asks what the Hausdorff dimension of a Kakeya set is, it is conjectured that in  $\mathbb{R}^n$  it must have dimension  $n$ . This is known to be true in dimension 2. In the talk I will discuss variants of this problem, and some interesting results, when the line segment is replaced by a rectifiable curve.