

## ***FELIX KLEIN SEMINAR***

**Speaker: Jonah Duncan**  
**Johns Hopkins University**



**Date:** Thursday, January 20, 2022

**Time:** 2:00 PM

**Location:** 258 Hurley Hall

**Zoom URL:** [notredame.zoom.us/j/91490739731?](https://notredame.zoom.us/j/91490739731?pwd=a0dtWWpCanlCdWFJMFNra3BhamhQQT09)  
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***Lecture Title:***

**Estimates and regularity for the  $k$ -Yamabe equation**

***Abstract***

The  $k$ -Yamabe problem is a fully nonlinear generalisation of the Yamabe problem, concerned with finding conformal metrics with constant  $k$ -curvature. In this talk, I will start by introducing the  $k$ -Yamabe problem, including a brief survey of established results and open problems. I will then discuss some recent work (joint with Luc Nguyen) on estimates and regularity for the  $k$ -Yamabe equation, addressing solutions in both the so-called positive and negative cones.