

## ***GEOMETRIC ANALYSIS SEMINAR***

**Speaker: Henrik Matthiesen**

**University of Chicago**

**Date:** Thursday, April 15, 2021

**Time:** 11:00 AM

**Location:** Zoom

**Zoom URL:** [notredame.zoom.us/j/96288130964?pwd=c2dDelJJTXhSdTBVSEtLYlI1NEdzZz09](https://notredame.zoom.us/j/96288130964?pwd=c2dDelJJTXhSdTBVSEtLYlI1NEdzZz09)



***Lecture Title:***

**Ground states of semilinear elliptic equations with applications to the Allen-Cahn equation on the sphere**

***Abstract***

I will discuss symmetry properties of least positive energy solutions to certain second order semilinear equations and some applications. This in particular includes the Allen-Cahn equation on spheres and balls and consequences for the low energy min-max picture. The latter is in analogy with the picture for minimal surfaces in spheres and additionally requires a precise understanding of the linearized problem at symmetric solutions.