

# Philadelphia Area Number Theory Seminar

**Byungchul Cha**  
Lafayette College

## Intrinsic Diophantine Approximation of Spheres

**Abstract:**

In this talk, we study Lagrange spectra arising from intrinsic Diophantine approximation of the unit circle  $S^1$  in  $\mathbb{R}^2$ . Our focus is to give a complete description of an initial discrete part of the Lagrange spectrum of  $S^1$ , providing an analogue of the celebrated theorem of Markoff in 1879. Additionally, we also study intrinsic Diophantine approximation of a two-sphere  $S^2$  and obtain similar results. This is joint work with Dong Han Kim.

**Thursday, February 17, 2022**  
**3:25 - 4:45 PM**

Bryn Mawr College  
Department of Mathematics  
Park Science Center **337**

Informal gathering at 3:10PM in Park 361