

YAU ' S PRESCRIBED MEAN CURVATURE PROBLEM IN EUCLIDEAN SPACE

Speaker: Liam Mazurowski
Lehigh university

Time: Thur, Jun 19th; 13:30-14:20pm

Venue: Room 102, SCMS

Abstract:

Yau proposed the following problem: given a function h on Euclidean space, what conditions on h guarantee the existence of a closed surface with mean curvature given by h ? I will survey some variational methods for approaching this problem. First, I will discuss a one-parameter min-max argument that applies when h is positive and radially decreasing near infinity. Then, I will discuss work in progress with Xin Zhou on a sequence of higher parameter min-max arguments that can be used to handle the case where h is positive and radially increasing near infinity.