Joint Geometric Analysis Seminar

(Part of MIST program)

Uniqueness and Morse index of minimal surfaces in the sphere and ball

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Abstract

I will present some recent work with Alessandro Carlotto and Mario Schulz that in some respects builds on and in other respects complements earlier work with Nicos Kapouleas, which I will also review. Specifically, I will review the result with Kapouleas that each of Lawson's embedded minimal surfaces in the 3-sphere is uniquely determined by its topological type and symmetry group, and I will review the calculation, also with Kapouleas, of the Morse index of an infinite subfamily of these same surfaces. Then, somewhat complementarily, I will describe the construction with Carlotto and Schulz of a family of free boundary minimal surfaces in the 3-ball having the same topological types and symmetries as those of a previously identified family, and I will further describe some index estimates for our new surfaces.

Date: April 14, 2023 (Friday)
Time: 3:00-4:00pm (Hong Kong time)
ZOOM link: https://cuhk.zoom.us/j/91805734715

All are Welcome