

MORSE INDEX OF MINIMAL SUBMANIFOLDS IN SPHERES

Speaker: Peng Wang
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Time: Mon, Nov 18th, 13:30 - 14:30

Venue: Room 110, SCMS

Abstract:

The Morse index and spectral properties of minimal submanifolds in spheres connect several branches of geometry, analysis, topology and spectral theory. It is known that Urbano's estimate of index of minimal surfaces in 3-sphere plays an important role in Marques and Neves's proof of Willmore conjecture in the 3-sphere. In this talk we will recall several related topics on this direction and report our recent works on index estimate of minimal 2-tori, minimal hypersurfaces with $\lambda_1 < n$ and minimal products of minimal submanifolds. Classification of λ_1 -minimal flat 3-tori and 4-tori will be also discussed briefly. These are based on joint works with Hang Chen, Rob Kusner, Ying Lv, Changping Wang and Zhenxiao Xie.