Biharmonic Maps
on
Conformally Compact Manifolds

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In this talk, I will present a result proved in my recent paper arXiv:2502.13580. I will discuss biharmonic maps between (and submanifolds of) of conformally compact manifolds, a large class of complete manifolds generalizing hyperbolic space. After an introduction to conformally compact geometry, I will discuss one of the main results of the paper: if S is a properly embedded submanifold of a conformally compact manifold (N,h), and moreover S is transversal to the boundary and (N,h) has non-positive curvature, then S must be minimal. This result confirms a conjecture known as Generalized Chen's Conjecture in the conformally compact context.