JEFFREY CASE, The Pennsylvania State University
Sharp Michael-Simon inequalities and the extrinsic Yamabe constant

The extrinsic Yamabe constant is a conformal invariant of submanifolds that computes the best constant in the L^2-Michael–Simon inequality. In this talk I will describe its basic properties, explain how to compute it on conformal submanifolds of the sphere, and apply it to the nonexistence of compact minimal submanifolds and obstructions to regularity in the σ_k-Loewner–Nirenberg problem. This talk is based on joint works with Dawit Mengesha, Samuel Perez-Ayala, and Aaron J. Tyrrell.