

# EQUIVARIANT RIGIDITY AND BIFURCATION IN GEOMETRIC VARIATIONAL PROBLEMS

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I will first discuss some abstract equivariant bifurcation results for variational problems. Then I will present some applications, including bifurcation of constant mean curvature embeddings, bifurcation of solutions of the Yamabe problems in product manifolds and in some special Riemannian submersions, and of solutions of the  $\sigma_2$ -Yamabe problem in product of Einstein manifolds.