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Conformal classes realizing the Yamabe invariant. (English) Zbl 1429.53054

Summary: We give a characterization of conformal classes realizing a compact manifold’s Yamabe invariant. This characterization is the analogue of an observation of Nadirashvili for metrics realizing the maximal first eigenvalue, and of Fraser and Schoen for metrics realizing the maximal first Steklov eigenvalue.

MSC:
53C21 Methods of global Riemannian geometry, including PDE methods; curvature restrictions
58J50 Spectral problems; spectral geometry; scattering theory on manifolds

Keywords:
conformal classes; maximal first eigenvalue; first Steklov eigenvalue

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