

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, MAY 25, 2016

PADEL FORD C-36

4PM–5PM

Riemannian manifolds with positive Yamabe invariant and
Paneitz operator

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For a compact Riemannian manifold of dimension at least three, we know that positive Yamabe invariant implies the existence of a conformal metric with positive scalar curvature. As a higher order analogue, we seek for similar characterizations for the Paneitz operator and Q-curvature in higher dimensions. For a smooth compact Riemannian manifold of dimension at least six, we prove that the existence of a conformal metric with positive scalar and Q-curvature is equivalent to the positivity of both the Yamabe invariant and the Paneitz operator. In addition, we also study the relationship between different conformal invariants associated to the Q-curvature. This is joint work with Matt Gursky and Fengbo Hang.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, www.math.washington.edu, follow the link **Seminars, Colloquia, and Conferences**).

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