



# Nullspaces of Conformally Invariant Operators. Applications to $Q_{\{k\}}$ -curvature

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We study conformal invariants that arise from functions in the nullspace of conformally covariant differential operators. The invariants include nodal sets and the topology of nodal domains of eigenfunctions in the kernel of GJMS operators. We establish that on any manifold of dimension  $n \geq 3$ , there exist many metrics for which our invariants are nontrivial. We discuss new applications to curvature prescription problems.

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MSC classes: 58J50, 53A30, 53A55, 53C21

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