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*Conformal invariants associated with quadratic differentials*

We associate a conformal invariant of nested pairs of simply connected domains to any quadratic differential such that the boundary of the outer domain is a trajectory. The resulting conformal invariants are monotonic, strictly negative, and are zero precisely when the inner domain is the outer domain minus trajectories of the quadratic differential. By choosing various quadratic differentials one obtains various inequalities for bounded univalent functions or domain functions.

The construction is a generalization of a technique of Nehari for extremal problems for families of conformal maps, involving Dirichlet energies of singular harmonic functions.