1022-35-113   **Peter D Hislop** (`hislop@ms.uky.edu`), Department of Mathematics, University of Kentucky, Lexington, KY 40506-0027, **Peter A. Perry*** (`perry@ms.uky.edu`), Department of Mathematics, University of Kentucky, Lexington, KY 40506-0027, and **Siu-Hung Tang** (`shtang@ms.uky.edu`), Department of Mathematics, University of Kentucky, Lexington, KY 40506-0027. *CR-Invariants and the scattering operator for complex manifolds with CR-boundary.*

This is a report on joint work with Peter Hislop and Siu-Hung Tang. Suppose that M is a CR-manifold bounding a compact complex manifold X. The manifold X admits an approximate Kähler-Einstein metric g which makes the interior of X a complete Riemannian manifold. We identify certain residues of the scattering operator as CR-covariant differential operators and obtain the CR Q-curvature of M from the scattering operator as well. Our results are an analogue in CR-geometry of Graham and Zworski's result that certain residues of the scattering operator on a conformaly compact manifold with a Poincaré-Einstein metric are natural, conformally invariant differential operators, and the Q-curvature can be recovered from the scattering operator. (Received September 11, 2006)

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