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Solving Poincaré–Lelong equation via Hodge–Laplace heat equation

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Solving the Poincaré–Lelong equation amounts to find a function u so that $\sqrt{-1}\partial\bar{\partial}u$ is any given real (1,1)-form. It was motivated by the study of the complex geometry. In this talk, which is based on a *joint work with L.-F. Tam*, I would like to illustrate a new approach to the problem via the study of the asymptotics of a parabolic system.

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