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Ramachandran. The closed range property of the Cauchy–Riemann operator for open sets in \mathbb{C} .

This talk will be about necessary and sufficient potential-theoretic conditions for the $\overline{\partial}$ -operator, defined on an open set $\Omega \subset \mathbb{C}$, to have closed range in $L^2(\Omega)$. Understanding the situation in one complex variable is a first step towards describing the closed range property in higher dimensions. A reason for this being interesting in \mathbb{C} is that the closed range property holds for $\overline{\partial}$ on $\Omega \subset \mathbb{C}$ if and only if the Poincaré–Dirichlet inequality holds on Ω .

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