VIRTUAL EAST-WEST SCV SEMINAR

February 1, 2022

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Maximal extimates for the $\bar{\partial}$-Neumann problem in non-pseudoconvex domains

Ellipticity fails for the $\bar{\partial}$-Neumann Problem, so the best that one can hope for would be elliptic estimates in every direction except one. When this happens, we say that maximal estimates hold. Maximal estimates on pseudoconvex domains are completely characterized by a geometric condition on the boundary, as shown by work of Derridj (for $(0,1)$-forms) and Ben Moussa (for $(0,q)$-forms with $q \geq 1$). In this talk, we will discuss preliminary results for maximal estimates on non-pseudoconvex domains and their broader implications for the L^2 theory on non-pseudoconvex domains.