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Abstracts of Short Communications and Posters

Section:

8. Analysis

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Analytic discs attached to totally real surfaces

Two essentially different frameworks will be described in which it becomes possible to establish the existence of analytic discs with boundaries in totally real submanifolds of $\mathbb{C}^2$. For a certain class of non-compact totally real smooth surfaces, it will be shown how the technique of nonlinear transmission problems yields the existence of global foliations by boundaries of attached analytic discs. For generic singular surfaces, a simple sufficient condition for the existence of nearby analytic discs will be formulated in terms of certain effectively computable local topological invariants. Part of these results is joint work with I. Spitkovsky.

Reference: E. Wegert, G. Khimshiashvili, and I. Spitkovsky, Nonlinear transmission problems, Memoirs on Diff. Equations and Math. Physics **12**(1997), 223-230.