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Im Rahmen der

AG Komplexe Analysis

laden wir zu folgendem Vortrag ein:

CR manifolds with symmetries and the embeddabilty problem

Professor Gerd Schmalz (University of New England, Australia)

am **Freitag, den 07.06.2024, um 14 Uhr c.t. in G.10.03 (Hörsaal 08)**.

Abstract: It is a classical result by Jacobowitz that a hypersurface type CR manifold M with complex structure V can be locally realised as a hypersurface in complex space if and only if there exists a complex vector field Z transversal to V and such that $[Z, V] \subseteq V$. Hill and Nacinovich proved the following generalisation: If (M, V) is a CR manifold of type (n, k) and there exists a solvable Lie algebra of complex vector fields of dimension $\ell \leq k$ transversal to V then (M, V) can be embedded into a CR manifold (M', V') of type $(n + \ell, k - \ell)$. In particular, if $k = \ell$ this is an embedding into complex space.

I will present a generalisation for Hill and Nacinovich's theorem without the assumption of solvability of the Lie algebra.

If M is a connected, simply connected nilpotent Lie group with an integrable left-invariant complex structure on a generating and suitably complemented subbundle of the tangent bundle then M admits a polynomial CR embedding in complex space. A similar conclusion holds on suitable quotients of nilpotent Lie groups.

This is joint work with M. Cowling and A.Ottazzi (UNSW) and Masoud Ganji (UNE).

Alle Interessenten sind herzlich eingeladen!

gez. Prof. N. Shcherbina