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*Classification of 3-dimensional real-analytic CR-manifolds*

The classification problem for real-analytic hypersurfaces in complex space under the action of the group of local CR-diffeomorphisms has attracted considerable attention in the last 50 years. In the Levi-nondegenerate case, it was solved in the seminal work of Cartan, Tanaka and Chern-Moser. In the Levi-degenerate but finite type case, a solution in complex dimension 2 was obtained by Kolar. However, in the infinite type case the problem remains open, even in complex dimension 2.

In our joint work with Ebenfelt and Lamel, we solve the CR-equivalence problem for infinite type hypersurfaces in  $\mathbb{C}^2$  satisfying the generic condition of non-resonancy. We do so by constructing a complete normal form for such hypersurfaces. The normal form construction is done by a recent technique of interpreting CR-manifolds as appropriate Dynamical Systems, and solving subsequently the classification problem for the latter objects.

In this talk, I will give an overview of the latter result.