Ultradifferentiable regularity of CR mappings

Stefan Fürdös

University of Vienna

The regularity problem of CR mappings between real hypersurfaces in $\mathbb{C}^N$ arises naturally when discussing the boundary behaviour of holomorphic mappings. A mapping between real hypersurfaces in $\mathbb{C}^N$ is CR if it preserves the complex structures the real hypersurfaces inherited from the surrounding complex space.

After a brief introduction to the basics of CR geometry, I will discuss a couple of results on the ultradifferentiable regularity of CR mappings and the methods used to prove them. These statements generalize known results in the smooth category, including work of Lamel and Mir. This is joint work with Bernhard Lamel.