Workshop dedicated to the memory of Professor Gabriela Kohr
Geometric Function Theory in Several Complex Variables and Complex Banach Spaces

Cluj-Napoca, Romania   1 – 3 December 2021

On certain polynomially convex sets in $\mathbb{C}^n$

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Abstract

First we discuss a criterion for two Φ-like domains in $\mathbb{C}^n$ to form a Runge pair. Next we consider geometric characterizations (starlikeness, spiralikeness and convexity) with respect to automorphisms of $\mathbb{C}^n$ for certain biholomorphic mappings $f : \mathbb{B}^n \to \mathbb{C}^n$, defined on the Euclidean unit ball, with $\overline{f(\mathbb{B}^n)}$ polynomially convex. In particular, we present an extension of a result of Arosio, Bracci and Wold on convexshapelike domains. Certain examples and applications are also discussed.

This talk is based on joint work with Hidetaka Hamada and Gabriela Kohr.