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

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Intrinsic metrics in geometric function theory

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Abstract

Two generalizations of the hyperbolic metric are discussed: the triangle ratio metric and the visual angle metric. We also report experimental results concerning conformal capacities of planar condensers and bounds for their capacities in terms of the hyperbolic perimeter. This talk is based on the following joint works:

- P. Hariri, R. Kl'en, and M. Vuorinen: Conformally Invariant Metrics and Quasiconformal Mappings.- Springer 2020.

- G. Wang, M. Vuorinen, and X. Zhang: On cyclic quadrilaterals in Euclidean and hyperbolic geometries.- Publ. Math. Debrecen 99/1-2 (2021), 123–140.

- M. M.S. Nasser, O. Rainio, and M. Vuorinen: Condenser capacity and hyperbolic perimeter+MATLAB code.- Comp. Math. Appl. (to appear).