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GEOMETRY AND ANALYSIS IN FUNCTION AND MAPPING THEORY ON EUCLIDEAN AND METRIC MEASURE SPACES

01.09.2019- 30.11.2019
WARSAW | BĘDLEWO

Riikka Korte
Aalto University

Two notions of functions of bounded variation and the Semmes pencil of curves

Thursday, September 12
room 403, 14:00-16:30
(with coffee break 15:00-15:30)

Abstract:

We consider two notions of functions of bounded variation in complete metric measure spaces, one due to Martio and the other due to Miranda Jr. We show that these two notions coincide, if the measure is doubling and supports a 1-Poincaré inequality.

We will also discuss the benefits of the new approach. In proving the result, we also show that if the measure is doubling and supports a 1-Poincaré inequality, then the metric space supports a Semmes family of curves structure.

This is joint work with E. Durand-Cartagena, S. Eriksson-Bique and N. Shanmugalingam. The second result was obtained independently by K. Fässler and T. Orponen.

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