

Measuring families of curves by approximation modulus

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The talk is based on the joint work with Olli Martio and Vendula Honzlová Exnerová

Moduli of families of curves are widely used as a tool in the theory of Sobolev spaces or in quasiconformal theory and its generalizations. Recently, Olli Martio invented a new kind of modulus, so called approximation modulus (AM), which fits well in the BV theory (including the setting of metric measure spaces). We show that a Lorentz space version is suitable for neglecting some families of curves naturally related to sets of a given dimension. Also, we show an application to the Stokes theorem.