Monday's Nonstandard Seminar 31

14:00

Author: Amiran Gogatishvili (Institute of Mathematics of the Czech Academy of Sciences)

Title: **Some new results related to $G\Gamma$–spaces and interpolation**

Abstract: the presentation is based on the paper [1]. We compute the K-functional related to some couple of spaces as small or classical Lebesgue space or Lorentz-Marcinkiewicz spaces completing the results of [2]. This computation allows to determine the interpolation space in the sense of Peetre for such couple. It happens that the result is always a $G\Gamma$-space, since this last space covers many spaces.

The motivations of such study are various, among them we wish to obtain a regularity estimate for the so called very weak solution of a linear equation in a domain Ω with data in the space of the integrable function with respect to the distance function to the boundary of Ω.

References:

[1] I. Ahmed, A. Fiorenza, M. R. Formica, A. Gogatishvili and J. M. Rakotoson. Some new results related to Lorentz $G\Gamma$-spaces and interpolation. J. Math. Anal. Appl. 483 (2020), no. 2, 123623.

[2] A. Fiorenza, M. R. Formica, A. Gogatishvili, T. Kopaliani and J. M. Rakotoson, Characterization of interpolation between Grand, small or classical Lebesgue spaces, Nonlinear Analysis 177 (2018) 422-453.
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