

Exact Minimizers in Real Interpolation and Duality in Convex Analysis

Natan Kruglyak

Linköping University, Sweden

natan.kruglyak@liu.se

The talk is based on joint work with Japhet Niyobuhungiro

Session: 4. Banach Spaces and Operator Theory with Applications

I plan to discuss possibility to use convex analysis and particularly the Attouch-Brezis theorem for the following extremal problem which appear in real interpolation: how to characterize (to construct) optimal decomposition of K , L and E -functionals. Important parts of the talk will be infimal convolutions on Banach couples and geometrical characterization of optimal decompositions for the L -functional. I also plan to show connection of this area of research with inverse problems in image processing, especially with famous Rudin-Osher-Fatemi denoising model.