

Bessas - Fractional total variation denoising model with L^1 fidelity

Friday, 25 November 2022 16:15 (45 minutes)

Abstract. Image denoising is a core problem in image processing which has been addressed by several authors by means of different mathematical techniques, among which variational ones have attracted particular interest.

In this talk I will focus on a nonlocal version of the total variation-based model with L^1 fidelity for image denoising, where the regularizing term is replaced with the fractional s -total variation.

I will discuss regularity of the level sets and uniqueness of solutions, both for high and low values of the fidelity parameter.

I will also analyse in detail the case of binary data given by the characteristic functions of convex sets.

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