

NONCONVEX HIGHER-ORDER REGULARIZATION FOR RICIAN NOISE REMOVAL

Myeongmin Kang¹, Myungjoo Kang¹ and Miyoun Jung²

1) *Department of Mathematical Sciences, Seoul National University, Seoul 151-747, KOREA*

2) *Department of Mathematics, Hankuk University of Foreign Studies, Yongin 449-791, KOREA*

Corresponding Author : Myeongmin Kang, wjdjr1@snu.ac.kr

ABSTRACT

Rician noise frequently occurs in the magnitude image where the real and imaginary parts of the images are both corrupted by Gaussian noise. In this manuscript, we propose a variational model that makes use of nonconvex higher order regularization, aiming at reconstructing images degraded by Rician noise. The nonconvex higher-order regularization enables homogeneous regions to be efficiently smoothed while edges are well preserved. We numerically demonstrate the superiority of our proposed model over TV model.

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