

数学与系统科学研究院

计算数学所学术报告

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报告题目：

Image Retinex Via Total Variation-Type-Based Model

邀请人： 于海军 副研究员

报告时间：2017 年 12 月 16 日(周六)

上午 9:00--11:00

报告地点： 数学院科技综合楼

三层 311 报告厅

报告摘要：

Retinex theory deals with compensation for illumination effects in Retinex illusions, medical

image intensity inhomogeneity and color image shadow effect etc.. Such ill-posed problem has been studied by researchers for decades. However, most existing methods paid little attention to the noises contained in the images and lost effectiveness when the noises increase. The main aim of this paper is to present a general Retinex model to effectively and robustly restore images simultaneously corrupted by intensity inhomogeneity and noises. We propose a total variation-type-based based on a new image decomposition model, which models a given image as a combination of reflection, illumination and noises. The existence of the minimizers of our main model is shown. Furthermore, we employ the fast and efficient ADM to solve the proposed model. Applications of the algorithm to various gray images and color images with noises of different distributions yield promising results.

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