



復旦大學
FUDAN UNIVERSITY

Applied Math
Ph.D. Seminar

Geometric Deformation on Objects: Unsupervised Image Manipulation via Conjugation

Speaker: Changqing Fu (PSL Research University)

Time: 2021-09-13, 16:10 to 17:00

Location: Rm 1801, Guanghua East Tower

Advisor: Laurent D. Cohen

Abstract: This presentation addresses the problem of image manipulation and generation under user-specific geometric constraints. Key challenges for solving this problem include: (i) Limited training database which causes low generalization ability; (ii) Hand-crafted sketch input producing irregular structure; (iii) Handling noise to balance between image quality and data privacy. To address these problems, a novel two-stage approach is proposed. Interactive image deformation is performed through editing on contours. This is performed in the latent sparse edge space with both color and gradient information. The output of editing is then fed into a multi-scale representation of the image to recover quality output. The model is flexible in terms of transferability and training efficiency.