

# The New Era of Image Denoising

*jeudi 20 avril 2023 10:00 (30 minutes)*

Image denoising is one of the oldest and most studied problems in image processing. An extensive work over several decades has led to thousands of papers on this subject, and to many well-performing algorithms for this task. As expected, the era of deep learning has brought yet another revolution to this subfield and took the lead in today's ability for noise suppression in images. This talk focuses on recently discovered abilities and opportunities of image denoisers. We expose the possibility of using image denoisers for serving other problems, such as regularizing general inverse problems and serving as the engine for image synthesis. We also unveil the (strange?) idea that denoising and other inverse problems might not have a unique solution, as common algorithms would have you believe. Instead, we describe constructive ways to produce randomized and diverse high perceptual-quality results for inverse problems.

**Orateur:** Prof. ELAD, Michael (Technion)