

Deep Learning and Inverse Problems

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In this talk, I will give an overview over popular approaches for solving linear inverse problems (as they typically arise in imaging tasks) with artificial neural networks. We will start with a simple feedforward architecture from 2004, which merely reconstructs 27×27 images, then show for instance how CNNs can be used in iterative schemes, and finally end the discussion by mentioning more advanced strategies such as generative adversarial networks (GANs). I will not present own original research, but rather try to stimulate a debate about the topic.