Generative Adversarial Networks in Medical Imaging

Univ.-Prof. Dr.-Ing. Volkmar Schulz , Department of Physics of Molecular Imaging (PMI), RWTH Aachen

Generative models have gained a lot of attention in medical imaging data generation as they allow sharing realistic synthetic medical data in a non-objectionable manner. Here, Generative Adversarial Networks (GANs) have proven to be a very powerful tool. The architecture of GANs, where two neural networks are trained in an adversarial way, enables unsupervised and clever learning of the probability density function of the data. In this talk, we will present and discuss interesting applications in the field of medical imaging in addition to the basic elements of the architecture.