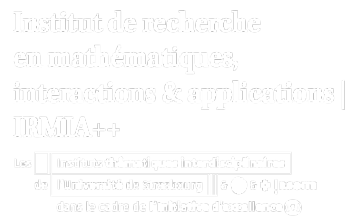


## Summer school "Deep Learning and applications"



ID de Contribution: 5

Type: **Non spécifié**

### Generative models for images

*lundi 29 août 2022 11:00 (1h 30m)*

The goal of this short course is to introduce the main deep generative models that have been developed this last decade. These models are practical solutions for the unsupervised learning problem of parametric modeling of any data distribution. The advances in deep learning representation have led to generative models enable to generate synthetic realistic data. The course will mainly focus on variational auto-encoders (VAE) and Generative Adversarial Networks (GAN). The mathematical modeling will be presented and the basic properties of fundamental tools for comparing distributions, such as Kullback-Leibler divergences and optimal transport metrics, will be recalled. Numerical examples will focus on image modeling although the range of applications of these generic models is broader.

**Orateur:** GALERNE, Bruno

**Classification de Session:** L2