

PS10. Generative models

Organised by Jes Frellsen (Technical University of Denmark)
Co-organised with the Pioneer Centre for Artificial Intelligence

Session overview

Deep generative models are a class of probabilistic models that use neural networks to unsupervised estimate complex and high dimensional distributions. It is a research field that has seen great process in the last years, and today these models are capable of, e.g., generating photorealistic images, and they have found application across the sciences as well as in the industry. In the two sessions on generative models (PS2 and PS10), we have invited leading national and international speakers to present their latest research. With generative models as the common theme, the talks will cover experimental design, generalisation, out-of-distribution detection, generative AI, representation learning, and few-shot learning. The talks are mainly methodological, and we aim to make them and the discussions relevant both for the machine learning specialists and the broader data science community.

Speakers

- Anna Kuzina, Vrije Universiteit Amsterdam
- Babak Esmaeili, University of Amsterdam
- Ole Winther, Technical University of Denmark and University of Copenhagen

Programme

10:15	Welcome
10:15 – 10:55	Anna Kuzina <i>Analysing Adversarial Robustness of Variational Autoencoders and Denoising Abilities of Diffusion-based Generative Models</i>
10:55 – 11:35	Babak Esmaeili <i>Representation Learning with Energy-based Models</i>
11:35 – 12:15	Ole Winther <i>Few-shot generative modelling</i>