

# Arnaud Delaunoy

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## Education

### University of Liège

PhD student in machine learning

- Advisor: Professor Gilles Louppe
- Research interests: simulation-based inference and uncertainty quantification.

Liège, Belgium

2020 - present

### University of Liège

MSc in data science and engineering

- Magna cum laude
- Master's thesis: Lightning-Fast Gravitational Wave Parameter Inference through Neural Amortization

Liège, Belgium

2018 - 2020

### University of Liège

Bachelor in engineering

- Cum laude
- Primary focus: computer science, Secondary focus: electrical engineering

Liège, Belgium

2015 - 2018

## Selected publications

### Balancing Simulation-based Inference for Conservative Posteriors

Arnaud Delaunoy\*, Benjamin Kurt Miller\*, Patrick Forré, Christoph Weniger, Gilles Louppe

5th Symposium on Advances in Approximate Bayesian Inference, 2023

### Towards Reliable Simulation-Based Inference with Balanced Neural Ratio Estimation

Arnaud Delaunoy\*, Joeri Hermans\*, François Rozet, Antoine Wehenkel, Gilles Louppe

Advances in Neural Information Processing Systems, 2022

### A Trust Crisis In Simulation-Based Inference? Your Posterior Approximations Can Be Unfaithful

Joeri Hermans\*, Arnaud Delaunoy\*, François Rozet, Antoine Wehenkel, Volodimir Begy, Gilles Louppe

Transactions on Machine Learning Research, 2022

### SAE: Sequential Anchored Ensembles

Arnaud Delaunoy, Gilles Louppe

Bayesian deep learning workshop, NeurIPS 2021

### Lightning-Fast Gravitational Wave Parameter Inference through Neural Amortization

Arnaud Delaunoy, Antoine Wehenkel, Tanja Hinderer, Samaya Nissanke, Christoph Weniger, Andrew R

Williamson, Gilles Louppe

Machine Learning and the Physical Sciences Workshop, NeurIPS2020

## Work Experience

### Lasea

Research internship

Machine learning for laser manufacturing

Liège, Belgium

jul 2019 - sep 2019

### Kantify

Research internship

Machine learning for health

Remote

jul 2023 - oct 2023

### University of Liège

Teaching assistant

deep learning, Introduction to artificial intelligence, statistics

Liège, Belgium

sep 2020 - present

## Skills

**Expertises** Machine Learning, Deep Learning and Bayesian statistics

**Frameworks** PyTorch, JAX, NumPy and Scikit-learn

## Languages

**French** Native

**English** Fluent

**Dutch** Beginner level