

# Arnaud Delaunoy

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## Education

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### University of Liège

PhD 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

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### 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

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### 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

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

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

## Languages

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**French** Native

**English** Fluent

**Dutch** Beginner level