

# Antoine Wehenkel

PHD CANDIDATE · MACHINE LEARNING

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## PERSONAL STATEMENT

*"We know the past but cannot control it. We control the future but cannot know it."* Claude Shannon

In 2018, I was graduated in Computer Engineering (MSc) from **University of Liège (ULiège)**. I spent my last year of study at **Ecole Polytechnique Fédérale de Lausanne (EPFL)** as an exchange student. There, I did my **Master's thesis** in the laboratory of Prof. **Jean-Yves Le Boudec** on the parameter estimation of electrical distribution lines. I am now a **PhD student (FNRS Research Fellowship)** in machine learning at ULiège under the supervision of Prof. **Gilles Louppe**. In my research, I wish to advance **simulation-based inference** by exploring new means to implement more effective and stronger inductive bias into **deep generative models**.

My main research interests revolve around **Statistics, Machine Learning** and **Information Theory**.

## PUBLICATIONS & AWARDS

### Selected publications

- Graphical Normalizing Flows, A. Wehenkel, G. Louppe - Under review
- You say Normalizing Flows I see Bayesian Networks, A. Wehenkel, G. Louppe - INNF+ Workshop @ ICML2020 (**Spotlight**)
- Unconstrained Monotonic Neural Networks, A. Wehenkel, G. Louppe - Neural Information Processing Systems 2019
- Parameter Estimation of Three Phase Untransposed Short Transmission Lines from Synchrophasor Measurements, A. Wehenkel, A. Mukhopadhyay, J.-Y. Leboudec, M. Paolone - IEEE Transactions on Instrumentation and Measurement 2020
- Introducing neuromodulation in deep neural networks to learn adaptive behaviours, N. Vecoven, D. Ernst, A. Wehenkel, G. Drion - PLoS one 2020
- Recurrent machines for likelihood-free inference, A. Wehenkel, A. Pesah, G. Louppe - MetaLearn Workshop @ Neurips 2018 (**Contributed talk**)

### Honours & awards

- FNRS Grant (Research Fellowship; 2018 - 2022)
- Best Master's thesis awards from AIM and from AILg(2018)
- Physics award for outstanding student (2013)
- Physics award at belgian olympiads (2012 and 2013)

## EDUCATION & TRAINING

Oct 2018 - Present

PhD candidate in Machine Learning - *ULiège, Liège*

Deep Learning for Intractable Inverse Problems in Science

Sep 2016 - Jun 2018

Master in Computer Engineering - *ULiège, Liège*

*Summa Cum Laude*

Sep 2017 - Jun 2018

Exchange student in the Master in Data Science - *EPFL, Lausanne*

*Average score: 5.8/6*

Sep 2013 - Jun 2016

Bachelor in Engineering - *ULiège, Liège*

*Magna Cum Laude*

## PERSONAL SKILLS

### Mother tongue

French

### Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B1	B2

### Digital skills

- Proficient in Python, C and C++.
- General expertise in Optimisation, Statistics, Artificial Intelligence, Machine Learning and Deep Learning.

### Teaching activities

- *Current*: Deep Learning (ULiège), Introduction to Artificial Intelligence (ULiège).
- *Past*: Computer Organization (ULiège), Electric Measurements (ULiège), Data Structures and Algorithms (ULiège), Electronic 2 (EPFL).