



Matthieu Dabrowski
Post-doctoral researcher
at Aarhus University
Qualified for the duties of lecturer
in Computer Sciences
according to the French National
Counsel of Universities

Born the 06/04/1998 (28 years old) in Lille (France)
Pollenvænget 30, 2.8, 8381 Tilst, Denmark
+45.66.56.44.52
mdabrowski598@gmail.com
<https://matthieudabrowski.wordpress.com/>

Skills :

IT / Office automation :

- Programming Languages : C, C#, Java, Python, HTML, Javascript, CSS, R, Linux OS
- Python libraries : OpenCV, PyTorch, sklearn, pandas
- IDE and tools : Code::Blocks, PyCharm, VisualStudio, Git, LaTeX, suite Office, outils Google, InkScape

Research :

- Publications and presentations in international conferences
- Literature monitoring
- Expertise in Deep Learning, Artificial Vision, Physics-Informed Neural Networks, Posture Prediction
- Experience in dataset construction and Graph Neural Network

Teaching :

- Teaching experiences at IMT Nord Europe (France) and University of Lille (France)
- Creation and correction of evaluations
- Supervision of students during their research projects

Language skills :

- French : native speaker
- English : C1
TOEIC passed with 985 pts
- Spanish : B1
- Portuguese : B1

Other skills :

- Driving license

Current employment :

JUNE 2026 – JUNE 2027

Post-doctoral researcher / Aarhus University

Post-doctoral researcher at Aarhus University on the EthioNature project, which goal is the enhancement of groundwater recharge via the inference of soil moisture from remote sensing data and sparse ground-based measurements.

Key skills : teamwork, scientific rigor and curiosity, Physics-Informed Neural Networks, adaptation to a multidisciplinary environment

Previous professional experiences :

MAY 2025 – MAY 2026

Post-doctoral researcher / IMT Nord Europe

Post-doctoral researcher at IMT Nord Europe on human pose prediction from feet pressure values obtained through connected insoles. This work implied the realization of a dataset containing ground truths on human poses and feet pressure values.

Key skills : teamwork, scientific rigor, graph neural networks, dataset construction, posture prediction

- **One article accepted in an international conference (CVPR)**

OCTOBER 2024 – MAY 2025

Temporary Teaching and Research Assistant / University of Lille

Teaching fellow for various courses at the University of Lille, in Automaton and Regular Expressions, Web Technologies, Distributed Systems... Languages used : Java, C, Python, HTML, Javascript..

Key skills : teamwork, pedagogy, listening, oral expression

160 hours of teaching time

SEPTEMBER 2022 – AUGUST 2024

Teaching fellow / IMT Nord Europe

Teaching fellow for various courses at IMT Nord Europe, in Object-Oriented Programming, Introduction to Computer Sciences, Algorithmics, Numerical Methods for Mathematics, and Data Science. Languages used : Java, C, Python.

Key skills : team work, pedagogy, listening, oral expression

142 hours of teaching time

MARCH – AUGUST 2021

End of Studies Project / Altran Technologies

Internship in the R&D department of Altran Technologies in Wasquehal (France), with the subject of the internship being the conception of a recommendation and decision-making assistance system.

Key skills : autonomy, scientific rigor, coherence, data analysis, scientific curiosity, Natural Language Processing, Neural Networks, R&D

JANUARY – APRIL 2020

R&D mission / IMT Mines Alès and Altran Technologies

Student R&D project for and in collaboration with Altran Technologies on Sentiment Detection in texts, in Alès (France).

Key skills : autonomy, scientific rigor, coherence, data analysis, scientific curiosity, Natural Language Processing, Neural Networks.

JULY 2019

Research internship / LGEI laboratory in IMT Mines Alès

Internship in a research team in Alès (France) on themes of hydrogeology and neural networks.

Key skills : autonomy, scientific rigor, coherence, data analysis, scientific curiosity, Neural Networks.

Education :

OCTOBER 2021 – DECEMBER 2024

PhD / University of Lille (France)

Thesis presented the 9th of December 2024

Subject : *Physics-Inspired Deep Learning methods for air quality inference*

Key skills : Deep Learning, Physics-Informed Neural Networks, Artificial Vision, scientific rigor, scientific curiosity, writing scientific articles, integration in a research team

- One article published in a journal (Geoscientific Model Development)
- One article published in an international conference (IJCNN)
- One article in revision phase (for the Neurocomputing journal)

SEPTEMBER 2018 - SEPTEMBER 2021

Engineering Diploma / IMT Mines Alès in Alès (France)

Gives the grade of Master

Specialty : Computer Science and Artificial Intelligence

SEPTEMBER 2016 – JULY 2018

Elite College Preparatory Program at Faidherbe Highschool in Lille (France)

Main courses were Physics, Chemistry, Mathematics

Contacts for reference :

Thesis co-supervisor :

Pr Jérôme Riedi

jerome.riedi@univ-lille.fr

Thesis instructor :

Dr José Menesson

jose.menesson@imt-nord-europe.fr

Publications :

Dabrowski M., Mennesson J., Riedi J., and Djeraba C.:

Double-task physics-informed neural network for the prediction of PM2.5 concentration, in: **Neurocomputing**, vol.682, pp. 133436. IF : 6.7.

Dabrowski M., Mennesson J., Riedi J., Nabat P., and Djeraba C.:

Knowledge-inspired fusion strategies for the inference of PM2.5 values with a Neural Network, in: **Geoscientific Model Development (GMD)**, vol. 18, n°12, pp. 3707-3733, 2025. IF : 4.

Publications in proceedings of international conferences :

Dabrowski M., Ben Jemaa O., Allaert B.:

HUMAPS-4D : A Multimodal Dataset for HUMAN Motion Analysis with Physiological and Semantic informations, in: **Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)**, pp. 21188-21197. Impact Score : 24.22.

Dabrowski M., Mennesson J., Riedi J., and Djeraba C.:

Semi-supervised GAN with sparse ground truth as Boundary Conditions, in: **2023 International Joint Conference on Neural Networks (IJCNN)**, pp. 1–9. Impact Score : 1.18.

Communications in international conferences without proceedings :

Dabrowski M., Mennesson J., Riedi J., Nabat P., and Djeraba C.:

An explainable neural networks model for the inference of PM2.5 values from satellite observation of aerosols, communication in an international conference without proceedings : **AGU23 (American Geophysical Union 2023)**

Synthesis of teaching activities :

- **Temporary Teaching and Research Assistant** at the University of Lille from October 2024 to May 2025, **160 hours** of teaching
- **Teaching fellow** at IMT Nord Europe from September 2022 to August 2024, **142 hours** of teaching
- Thematics include Algorithmics, Object-Oriented Programming, Machine Learning, Distributed Systems, Web Programming...
- Supervision of **students research projects** (Master 1 and Master 2)

Participation to research-adjacent activities :

- **Review of articles** for the **International Joint Conference on Neural Networks (IJCNN)** (session 2024)
- **Scientific mediation** : participation to the **Xperium** initiative (University of Lille, 2021-2022) and to **Science Day** (IMT Nord Europe, 2025)

Hobbies and personal centers of interest :

- Sport practiced : Rock-climbing
- Science-fiction and fantasy literature
- Management of a student theater club until 2020
- Table-top role-playing games (such as Dungeons&Dragons)