

# Haifei Zhang

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## Profile

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I am currently an Associate Professor (Maître de Conférences in French) at [Jean Monnet University](#) in Saint-Étienne, France. I conduct my research in the Data Intelligence team of the [Hubert Curien Laboratory](#) (UMR-CNRS 5516), a joint research unit of Jean Monnet University, CNRS, and the Institution of Optique Graduate School. I teach at [Télécom Saint-Étienne](#), a highly reputed engineering school.

My research primarily focuses on complex data analysis, graph representation learning, and trustworthy AI, with a particular interest in explainable AI (XAI), cautious classifiers, and uncertainty management in machine learning. I am dedicated to developing robust and interpretable AI models that enhance decision-making in high-stakes applications.

## Education

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| <b>University of Technology of Compiègne</b><br>PhD in Computer Science<br>Dissertation: Explainable Cautious Classifiers<br>Supervisors: <a href="#">Benjamin Quost</a> , <a href="#">Marie-Hélène Masson</a> | November 2020 - November 2023<br>France   |
| <b>University of Technology of Compiègne</b><br>Master's degree in Complex Systems   | September 2019 - September 2020<br>France |
| <b>University of Technology of Compiègne</b><br>Engineer's degree in Data Mining   | September 2017 - September 2020<br>France |
| <b>Shanghai University</b><br>Bachelor's degree in Information Engineering   | August 2014 - July 2017<br>China          |

## Employment

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|---|---------------------------------------|
| <b>Jean Monnet University</b><br>Associate Professor                                      | September 2024 - now<br>France        |
| <b>University of Technology of Compiègne</b><br>Temporary Lecturer and Research Assistant | November 2023 - August 2024<br>France |

## Teaching

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## Jean Monnet University

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| Deep learning                                | Spring 2025                                  |
| Design patterns                              | Spring 2025                                  |
| Introduction to Git                          | Spring 2025                                  |
| Web development with PHP                     | Fall 2024                                    |
| Advanced algorithms                          | Fall 2024                                    |
| <b>University of Technology of Compiègne</b> |  |
| Linear algebra basics                        | Fall 2023, Spring 2024                       |
| Data analysis and data Mining                | Spring 2022, Spring 2023, Spring 2024        |
| Statistical methods for engineers            | Fall 2021, Fall 2022, Fall 2023, Spring 2024 |

## Publications

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### Journal papers

1. **Haifei Zhang**, and Jinfeng Zhong. “Efficient and Effective Counterfactual Explanations for Random Forests.” *Expert Systems with Applications* 293 (2025): 128661. [[Paper Link](#)]
2. Nguyen, Vu-Linh, **Haifei Zhang**, and Sébastien Destercke. “Credal ensembling in multi-class classification.” *Machine Learning* 114.1 (2025): 1-62. [[Paper Link](#)]
3. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Cautious classifier ensembles for set-valued decision-making.” *International Journal of Approximate Reasoning* 177 (2025): 109328. [[Paper Link](#)]
4. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Cautious weighted random forests.” *Expert Systems with Applications* 213 (2023): 118883. [[Paper Link](#)]

### International conference papers

1. **Zhang, Haifei**. “SHADED: Shapley Value-Based Deceptive Evidence Detection in Belief Functions.” *International Conference on Belief Functions*. Cham: Springer Nature Switzerland, 2024. [[Paper Link](#)]
2. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Cautious Decision-Making for Tree Ensembles.” *European Conference on Symbolic and Quantitative Approaches with Uncertainty*. Cham: Springer Nature Switzerland, 2023. [[Paper Link](#)]
3. Nguyen, Vu-Linh, **Haifei Zhang**, and Sébastien Destercke. “Learning Sets of Probabilities Through Ensemble Methods.” *European Conference on Symbolic and Quantitative Approaches with Uncertainty*. Cham: Springer Nature Switzerland, 2023. [[Paper Link](#)]
4. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Explaining cautious random forests via counterfactuals.” *International Conference on Soft Methods in Probability and Statistics*. Cham: Springer International Publishing, 2022. [[Paper Link](#)]
5. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Cautious random forests: a new decision strategy and some experiments.” *International Symposium on Imprecise Probability: Theories and Applications*. PMLR, 2021. [[Paper Link](#)]

### National conference papers

1. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Explications contrefactuelles pour les forêts aléatoires prudentes.” *31èmes Rencontres Francophones sur la Logique Floue et ses Applications (LFA 2022)*. 2022. [[Paper Link](#)]
2. **Zhang, Haifei**, Benjamin Quost, and Marie-Hélène Masson. “Forêts aléatoires prudentes: une nouvelle stratégie de décision et quelques expériences.” *31èmes Rencontres Francophones sur la Logique Floue et ses Applications (LFA 2022)*. 2022. [[Paper Link](#)]

## *Review service*

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|---|------------|
| <b>ECAI</b>                                     | 2025, 2024 |
| <b>Knowledge-Based Systems</b>                  | 2025       |
| <b>Journal of Supercomputing</b>                | 2025       |
| <b>Forum for Economic and Financial Studies</b> | 2025       |