Charlotte Laclau

Associate professor
Qualification in sections 26, 27 and 61

Télécom Paris, LTCI
19 place Marguerite Perey, 91120 Palaiseau, France
✉ *charlotte.laclau@telecom-paris.fr*
Birthdate: November 9th, 1989

Professional appointments

2022– present **Associate professor**, Télécom Paris, Institut Polytechnique de Paris, LTCI, S2A team.
Working on statistical machine learning and data mining
- Fairness in Machine Learning
- Representation learning for graphs and text
- Game theory and Deep Learning

2018–2022 **Assistant professor**, Télécom Saint-Etienne/Hubert Curien Laboratory, Data Intelligence team.

2016–2018 **Post-doc. fellow**, Grenoble computer science laboratory, AMA team.
Working on ranking models for recommendation systems with two companies: Kelkoo and Purch (FUI Project).

2012 – 2016 **PhD in Computer Science, specialization in Data Science**, *Paris Sorbonne Cité University*, Machine Learning for Data Science (MLDS) team.
- PhD supervisor: Mohamed Nadif
- Subject: Hard and fuzzy block clustering algorithms for high dimensional data

2015 **Visiting PhD student**, *Canadian Grant (Big Data Project)*, University of Ottawa - Imagine Lab, 6 months.

2014 **Visiting PhD student**, *Mobility Grant*, Universidade Federal de Pernambuco - Centro de Informatica, 4 months.

Research activities

Ongoing Projets and Grants

Member of ANR Far See (2025), Facial Analysis and Regulation - Support for Ethics & Explainability .
Total: 165k euros

PI of ANR JCJC REFAIR (2023), Revisiting the foundations of algorithmic fairness for graphs.
Total: 165k euros

Member of ANR project Diké, Bias, fairness and ethics of compressed NLP models, Collaboration with University of Lyon 2 (ERIC) and NaverLabs Grenoble.
Total: 500k euros

Past Projects

Member of CNRS project UNDERNEATH, Understanding deep neural networks through game theory, Collaboration with I. Redko.
Total: 150k euros

Member of "AI meets Design" project financed by UJM Foundation, Design of art objects with Generative Adversarial Networks, Collaboration with ACCRA and CIEREC laboratories.
Total: 15k euros

Grant holder within IDEX Lyon/Saint-Etienne, *Impulsion*, Learning Representations for Dynamic Networks.
Total: 70k euros

Ongoing Student Supervision

Thesis (Co-supervision).

- 2025-Present R. Therezien co-supervised with Stephan Clemençon and Pavlo Mozharovskyi
- 2024-Present L. Davy co-supervised with Stephan Clemençon
- 2024-Present L. Marey co-supervised Bruno Sguerra (Deezer Research) and Tiphaine Viard
- 2023-Present P. Krzakala co-supervised with Florence d'Alché-Buc and Rémi Flamary
- 2023-Present - M. Perez co-supervised with Florence d'Alché-Buc
- 2022-Present R. Serrano co-supervised with Christine Largeron and Baptiste Jeudy
- 2022-Present - T. Leteno co-supervised with Christophe Gravier and Antoine Gourru

Past student supervision

Postdoc.

- 2020-2021 - J. Tissier: Representation learning for dynamic graphs (100%)

Research Engineer.

- jan. 2023-sep. 2023 - M. Perez: Graph Survival Analysis (100%)

Thesis (Co-supervision).

- 2021-2025 - F. Torba: Natural language processing in the context of responding to complex calls for tenders, co-supervised with C. Gravier
- 2016-2018 - S. Sidana: Recommendation systems for online advertising, co-supervised with M.R. Amini

Master's student internships (recent).

- T. Leteno: Exploring bias in compressed language models (2022)
- B. Ethève: Automatic diagnosis of symptoms of systemic sclerosis (SSc) (2021)
- N. Vesseron: Deep neural networks and congestion games (2021)
- D. Moorthy: IA for creativity (2020)
- R. Mittakola: Representation learning for dynamic PPI networks (2020)

Community service

Conferences.

- 2023: General co-chair CAp@Strasbourg within the PFIA platform days with Romaric Gaudel.
- 2022 SSFAM/MALIA@JdS: organisation of a session on geometry and machine Learning with Franck Iutzeler.
- 2022 @ECML-PKDD: Co-chair for the workshop/tutorial track; PC member for the conference track and the journal track
- 2021: CAp@Saint-Etienne, National Conference on Machine Learning, program and organisation comity
- 2018: SSFAM@SFdS session, 50èmes Journées de Statistique de la SFDS
- 2017: CAp@Grenoble, National Conference on Machine Learning, program and organisation comity

Reviewer.

Data Mining and Knowledge Discovery, Machine Learning Journal, Statistics and Computing, ICML, NeurIPS, IJCAI, ECIR, AIStat, SIGIR, EMNLP, ECML-PKDD.

Other

Present **Active member of the European Project ELIAS (European Horizon**.

- Co-organisation of the ELLIS PhD Symposium 2023
- Co-lead for one of the Work Package

2018-2020 **Co-head of the ATLAS research group, GdR MADICS**.

On Machine Learning applied to healthcare problems

- Co-organisation of two workshops
- Co-organisation of a 2-days training workshop in collaboration with the Institute for Brain and Spinal Cord.

2019-2021 **Elected member of the MALIA research group of SFDS**.

- Training course of DataViz with Python (JDS 2021)
- Organisation of a session on Privacy preserving Machine Learning (JDS 2020)
- Organisation of a session on Geometry and Machine Learning (JDS 2022)

2018-2021 **Vice-President of the Société Savante Francophone d'Apprentissage Machine (SSFAM)**.

Publications

Selected peer-reviewed conferences

Q. Bouniot, I. Redko, AN. Mallasto, C. Laclau, ..., S. Kaski., *From Alexnet to Transformers: Measuring the Non-linearity of Deep Neural Networks with Affine Optimal Transport.*, CVPR, 2025.

P. Krzakala, J. Yang, R. Flamary, F. d'Alché-Buc, C. Laclau, M. Labeau, *Any2Graph: Deep End-To-End Supervised Graph Prediction With An Optimal Transport Loss*, NeurIPS, 2024.

Serrano R., Laclau C., Jeudy B., Largeron C., *Reconstructing the Unseen: GRIOT for Attributed Graph Imputation with Optimal Transport*, To appear in ECML-PKDD, 2024.

Leteno T., Gourru A., Laclau C., Gravier C., *Fair Text Classification with Wasserstein Independence*, EMNLP, 2023.

Tissier J., Laclau C., *Understanding the Benefits of Forgetting when Learning on Dynamic Graphs*, ECML-PKDD, 2022.

Vesseron N., Redko I., Laclau C., *Deep Neural Networks Are Congestion Games: From Loss Landscape to Wardrop Equilibrium and Beyond*, AISTAT, 2021.

Laclau C., Redko I., Choudhary M., Largeron C., *All of the Fairness for Edge Prediction with Optimal Transport*, AISTAT, 2021.

Redko I. , Laclau C., *On Fair Cost Sharing Games in Machine Learning*, AAAI, 2019.

Balikas G., Laclau C., Redko I., Amini M.-R., *Cross-lingual Document Retrieval using Regularized Wasserstein Distance*, ECIR, 2018.

Selected journals

M. Perez, R. Romero, B. Kang, T. De Bie, J. Lijffijt., C. Laclau., *SimHawNet: a Modified Hawkes Process for Temporal Network Simulation.*, Data Mining and Knowledge Discovery, 2025.

Brault V., Devijver E., Laclau C., *Mixture of Segmentation for Heterogeneous Functional Data*, Electronic Journal of Statistics, 2025.

A. Burashnikova, M. Clausel, C. Laclau, F. Iutzeler, Y. Maximov, M-R. Amini., *Learning over no-Preferred and Preferred Sequence of items for Robust Recommendation*, Journal of Artificial Intelligence Research, 2021.

S. Sidana, M. Trofimov, O. Horodnytskyi, C. Laclau, Y. Maximov, M-R. Amini, *User preference and embedding learning with implicit feedback for recommender systems*, Data Mining and Knowledge Discovery, pages 1–25, 2021.

Laclau C. and Brault V., *Noise-free Latent Block Model for High Dimensional Data*, Data Mining and Knowledge Discovery, pages 1–25, 2018.

Pre-prints

Bouniot Q. et al., *Understanding Deep Neural Networks Through the Lens of their Non-linearity*, under review, available on arxiv.

Krzakala P., Yang J., Flamary R., d'Alché-Buc F., Laclau C., Labeau M., *End-to-end Supervised Prediction of Arbitrary-size Graphs with Partially-Masked Fused Gromov-Wasserstein Matching*, under review, available on arxiv.

Choudhary M., Laclau C. and Largeron C., *A Survey on Fairness for Machine Learning on Graphs*, under review, available on arxiv.

Current Teaching Activities

Since 2022 **Co-responsible for the Mastères spé. Big Data and Artificial Intelligence at Telecom Paris.**.

2022 - 2023 **IP Paris Data Science Master 2**.
Structured prediction, recent advances in Responsible IA.

2022– Present **Telecom Paris**.
Statistics, Sparse regression, exploratory data analysis, machine learning, advanced machine learning.