

Franck Mamalet

Nationality: French

- **CURRENT POSITION**

2018 Senior Expert in Artificial Intelligence, IRT Saint Exupéry/ Smart Technologies / France

- **EDUCATION**

- 2010 PhD INSA de Lyon/ LIRIS (Laboratoire d'InfoRmatique en Image et Systemes d'information), France. Supervisor: Christophe Garcia
- 1997 Master, ASIME (Architecture de Systèmes Intégrés et Micro-électronique) / Université Paris VI / France
- 1997 Engineer of "Corps des Mines/Telecom", Ecole Nationale Supérieure des Télécoms-Paris / France
- 1995 Engineer of Ecole Polytechnique, Ecole Polytechnique / France

- **RESPONSABILITIES AND MAJOR PROJECTS/ COLLABORATIONS**

- DEEL, Dependable and Explainable Learning, ANITI/ France, Head of the AI Certification Workgroup
- Project Leader of SERVAT project, MultiObject tracking with online learning, DGA Rapid/ with LAAS-CNRS / France
- Axone project, Smart sensor with AI feature extraction, DGA Rapid/ with GlobalSensing Technologies /France
- Visioland project, Vision Based Landing, ANR / with Onera, Airbus, Inria, IRCCyN / France
- QUAERO-MSSE, Multimedia Search Services for European Portals / with 28 partners / Franco-German collaborative program
- Face detection and tracking / with LIRIS (Lyon) / France
- RNRT/TEMPOVALSE, Expérimental MPEG-4 videophone with labial animation / with LIS, ICP (Grenoble), Ecole Supérieure des Telecommunications (Paris) , ST Microelectronics, Philips R&D, / France

- **SUPERVISION:** 7 PhD students (+1 on-going)

- **SCIENTIFIC PRODUCTION: 9 international journal papers, 25 international conference papers**

- **5 MOST RELEVANT PAPERS (10 last years)**

1. E.M. Achour, F Malgouyres, F Mamalet, "Existence, Stability and Scalability of Orthogonal Convolutional Neural Networks", Journal of Machine Learning Research (JMLR), Vol. 23, pp 1-56, 2022
2. Mathieu Serrurier, Franck Mamalet, Alberto González-Sanz, Thibaut Boissin, Jean-Michel Loubes, and Eustasio del Barrio. Achieving robustness in classification using optimal transport with hinge regularization. In IEEE Conference on Computer Vision and Pattern Recognition, (CVPR) 2021,
3. Louis Béthune, Thibaut Boissin, Mathieu Serrurier, Franck Mamalet, Corentin Friedrich, and Alberto Gonzalez-Sanz. Pay attention to your loss: understanding misconceptions about 1-lipschitz neural networks. In Advances in Neural Information Processing Systems (NeurIPS) 2022
4. Franck Mamalet, Christophe Garcia, "Simplifying convnets for fast learning", International Conference on Artificial Neural Networks, pp 58-65, 2012
5. Moez Baccouche, Franck Mamalet, Christian Wolf, Christophe Garcia, Atilla Baskurt, "Sequential deep learning for human action recognition", International workshop on human behavior understanding, pp 29-39, 2011

- **TEACHING ACTIVITIES (last 5 years):**

- 2021/2022 – AIBT Mastère (Artificial Intelligence & Business Transformation): AI certification, and AI Robustness modules

Mathieu Serrurier (ORCID: 0000-0002-8959-1091)

Nationality: French

- **CURRENT POSITION**

2007 Associate professor université Paul Sabatier, IRIT

- **EDUCATION**

- 2015 HdR computer science, Université Paul Sabatier, France
- 2005 computer science, Université Paul Sabatier, France

- **RESPONSABILITIES AND MAJOR PROJECTS/ COLLABORATIONS (last 5 years)**

- Member (co-chair) of the “Robust and fair machine learning” ANITI 1 chair (chair holder: Pr. Jean-Michel Loubès)
- Creation and participation in the first joint computer science and mathematics team at Toulouse (AOC team). Co-head of the team from 2016 to 2020
- DEEL, Dependable and Explainable Learning, ANITI/ France. I participated in the creation of the team and am currently one of its core members.
- INSERM/ STROMAGIC Team for frugal medical image segmentation and cells automatic labeling
- Météo France for short term extreme weather prediction with deep neural networks, DEEP4CAST project and ANR POESY
- Collaboration with ENEDIS for the Predictive maintenance for low-voltage electrical networks.
- Collaboration with Office National des Forêts (ONF) on the automatic detection and counting of rare bird species in the Pyrenees.

- **SUPERVISION:** 5 PhD students (+4 on-going), 2 post-Docs.

- **SCIENTIFIC PRODUCTION:** 10 international journal papers, 45 international conference papers

- **5 MOST RELEVANT PAPERS (10 last years)**

1. Mathieu Serrurier, Franck Mamalet, Alberto González-Sanz, Thibaut Boissin, Jean-Michel Loubès, and Eustasio del Barrio. Achieving robustness in classification using optimal transport with hinge regularization. In IEEE Conference on Computer Vision and Pattern Recognition, (CVPR) 2021,
2. Louis Béthune, Thibaut Boissin, Mathieu Serrurier, Franck Mamalet, Corentin Friedrich, and Alberto Gonzalez-Sanz. Pay attention to your loss: understanding misconceptions about 1-lipschitz neural networks. In Advances in Neural Information Processing Systems (NeurIPS) 2022
3. Louis Bethune, Paul Novello, Thibaut Boissin, Guillaume Coiffier, Mathieu Serrurier, Quentin Vincenot, and Andres Troya-Galvis. Robust one-class classification with signed distance function using 1-lipschitz neural networks. In International Conference on Machine Learning, ICML 2023
4. Eduardo Hugo Sanchez, Mathieu Serrurier, and Mathias Ortner. Learning Disentangled Representations via Mutual Information Estimation. In 16th European Conference on Computer Vision - ECCV 2020
5. Mathieu Serrurier and Henri Prade. Entropy evaluation based on confidence intervals of frequency estimates : Application to the learning of decision trees. ICML 2015

- **TEACHING ACTIVITIES (last 5 years):** full teaching service (machine learning and deep learning)

- 2021-- Head of double Licence computer science/mathematics
- 2016--2022 Head of Licence 3 Science et Ingénierie des Données (SID)