

TRAVE-MASSUYES Louise (ORCID: 0000-0002-5322-8418)

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• **CURRENT POSITION**

Directrice de Recherche, CNRS,
LAAS, Toulouse, France.

• **EDUCATION**

- 1998 HDR, Université Paul Sabatier, Toulouse, France
- 1984 PhD, INSA Toulouse, France
- 1982 MsC (Engineer): INSA Toulouse, France

• **INTERNATIONAL RECOGNITION**

- Chair « Anomaly Detection & Diagnosis » in the AI-cluster ANITI 2.0, 2024-2027.
- Dagstuhl Seminar on « Fusing Causality, Reasoning, and Learning for Fault Management and Diagnosis », January 2024.
- « Outlier irregular time series detection », invited talk at the 20th anniversary of the Institute for Software Technology at the Graz University of Technology, Austria, 14-15 Dec.23.
- Chair « Synergistic transformations in model based and data based diagnosis » in the Institute 3AI ANITI, «Artificial and Natural Intelligence Toulouse Institute », 2020-2023.
- « Lifetime Achievement Award » from the Diagnosis Principles (DX) community, 2019.
- Contributions of diagnosis to the general demand for AI in the industry (Invited plenary talk). In 30th International Workshop on Principles of Diagnosis (DX-19), Klagenfurt, Austria, November 2019. Also, in 32nd International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2019), Graz, Austria, July 2019.
- IFAC Service Award for contributing as Finance Chair to the organization of the IFAC World Congress, Toulouse, France, 9-14 July 2017, and as SAFEPROCESS Technical Committee member, 2018.
- Data mining and automated model building (Invited plenary talk). In IEEE INTERCON 2017, Cuzco, Peru, 15-18 August 2017.
- Dagstuhl Seminar on « Symbolic-Numeric Methods for Reliable and Trustworthy Problem Solving in Cyber-Physical Domains », Set-membership Identifiability and its application to Fault Detection and Identification (Invited talk), Dec. 2016.

• **SUPERVISION:** 32 PhD students (4 on-going), 6 post-Docs.

• **SCIENTIFIC PRODUCTION:** [Publications](#)

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

1. Kévin Ducharlet, Louise Travé-Massuyès, Jean-Bernard Lasserre, Marie-Véronique Le Lann, Youssef Miloudi. Leveraging the Christoffel function for outlier detection in data streams. International Journal of Data Science and Analytics, In press, pp.doi.org/10.1007/s41060-024-00581-2. (10.1007/s41060-024-00581-2)(hal-04630422)
2. Duong, L. T., Travé-Massuyès, L., Subias, A., & Barbosa Roa, N. (2021, August). Assessing product quality from the production process logs. The International Journal of Advanced Manufacturing Technology, 1-17. <https://hal.archives-ouvertes.fr/hal-03326882> DOI: 10.1007/s00170-021-07764-2
3. Roussel, S., Pucel, X., Bouziat, V., & Travé-Massuyès, L. (2020, July). Model-based synthesis of incremental and correct estimators for discrete event systems. In 29th Int. Joint Conf.on Artificial Intelligence and 17th Pacific Rim Int. Conf. on Artificial Intelligence (IJCAI-PRICAI-20), 1884-1890. <https://hal.archives-ouvertes.fr/hal-02982277> DOI : 10.24963/ijcai.2020/261
4. Barbosa Roa, N., Travé-Massuyès, L., & Grisales-Palacio, V. H. (2019, October). DyClee: Dynamic clustering for tracking evolving environments. Pattern Recognition, 94, 162-186. <https://hal.archives-ouvertes.fr/hal-02135580> DOI : 10.1016/j.patcog.2019.05.024
5. Travé-Massuyès, L. (2014). Bridging control and artificial intelligence theories for diagnosis: A survey. Engineering Applications of Artificial Intelligence, 27, 1-16. <https://hal.archives-ouvertes.fr/hal-01131188> DOI : 10.1016/j.engappai.2013.09.018

• **EDITORIAL ACTIVITIES**

- 2016-2024, Associate Editor of the Artificial Intelligence Journal (<https://www.journals.elsevier.com/artificial-intelligence>); 2013-2024, Member of the Editorial Board
- Since 2000, Member of the Technical Committee Safeprocess of IFAC (<http://tc.ifac-control.org/6/4>)

• **COLLABORATIONS:** Artificial Intelligence Group at the Data61 and the Australian National University, Australia; Universitat de Catalunya, Spain; Pontificia Universidad Catolica del Peru; Stellenbosh University, South Africa; Universidad Nacional de Colombia; Universidad de Sevilla, Universitat de Girona, Spain; Technische Universität Graz, Institute for Software Technology; Klagenfurt University, Joanneum Research, Austria; Ruhr-University Bochum, Bochum, Germany; Universidad de Los Andes, Facultad de Ingenieria, Merida, Venezuela.

• **TEACHING ACTIVITIES (current or planned):** lectures on theories of diagnosis and qualitative reasoning.