

Gauthier PICARD

Professor, PhD., Hab.
Senior Research Scientist
AI and Multi-Agent Systems

Office National d'Études et de Recherches Aérospatiales
2 Avenue Marc Pélegrin Belin F-31055 Toulouse CEDEX 4, France
+33 (0) 5 62 25 26 54
gauthier.picard@onera.fr
gauthier-picard.info
gauthier-picard-27693522
0000-0002-9888-9906
TudKdPAAAAAJ

Education

- 2014 **HDR in Computer Science**, Université Jean Monnet, Saint-Etienne, France
Dissertation on "Adaptive multiagent systems: engineering and problem solving"
- 2004 **PhD in Computer Science**, Université Paul Sabatier, Toulouse, France
Dissertation on "Multiagent-oriented methodology for self-organizing systems"
- 2001 **Master in Artificial Intelligence**, Université Paul Sabatier, Toulouse, France
Dissertation on "Cooperative self-organization for collective robotics"
- 2000 **Maîtrise in Computer Science**, Université Paul Sabatier, Toulouse, France
- 1999 **Licence (BSc) in Computer Science**, Université Paul Sabatier, Toulouse, France
- 1995 **Baccalauréat in Maths & Physics**, Lycée Blaise Pascal, Clermont-Fd, France

Experience

- 2020+ **Senior Research Scientist (Directeur de recherche)**, ONERA, Toulouse, France
Head of the Artificial Intelligence Laboratory
- 2018+ **Full Professor in Computer Science**, Ecole des Mines, Saint-Etienne, France
On secondment to ONERA since 2020
- 2007-2018 **Associate Professor in Computer Science**, Ecole des Mines, Saint-Etienne, France
- 2006-2007 **Research Engineer**, IRIT, CNRS, Toulouse, France
- 2004-2006 **Assistant Lecturer (ATER) in Computer Science**, Université Paul Sabatier, Toulouse, France
- 2011-2004 **Teaching Assistant (Moniteur) in Computer Science**, Université Paul Sabatier, Toulouse, France
Temporary
- 2021+ **Adjunct Instructor in Computer Science**, ISAE-SUPAERO, Toulouse, France
- 2021+ **Adjunct Instructor in Computer Science**, Université Jean Jaurès, Toulouse, France
- 2018-2020 **Visiting Researcher**, IRIT, CNRS, Toulouse, France
- Associations**
- 2024-2028 **Board Member**, International Foundation for Autonomous Agents and Multi-Agent Systems (IFAAMAS)
- 2018-2025 **Board Member**, French Association for Artificial Intelligence (AFIA)

Research Interests

- **Multi-agents systems**, and more specifically adaptive multi-agent systems (AMAS)
- **Distributed optimization** by cooperation between agents
- **Resource and task allocation**, to coordinate agents
- **Hybrid AI and Decision-focused Learning**, to adapt and learn heuristics, constraints and criteria
- **Self-organisation**, as a mechanism to design artificial systems
- Application to **collective robotics**, **space systems**, **UAVs**

Committees

<i>Chair</i>	Program Chair (MASSpace'24, OptLearnMAS'21, JFSMA'18, SASO'16, AIPower'16, ESAW'09, ESAW'08), Tutorial Chair (PFIA'19), Workshop Chair (SASO'15), Doctoral Consortium Chair (SASO'14), Steering Committee (ESAW), Session Chair (IICAI'07, ROADEF'11), Demo Chair (WI-IAT'11), Organisation Chair (SASO'12)
<i>Conferences</i>	ECAI'25, PRIMA'25, PAAMS'25, IWPSS'25, IJCAI'25, AAMAS'25, AAMAS'24, ECAI'24, IJCAI'24, JF-SMA'24, OptLearnMAS'24, PAAMS'24, OptLearnMAS'23, PAAMS'23, IJCAI'23, ECAI'23, JFSMA'23, AAMAS'23, AAMAS'23 Blue Sky Ideas, DARS'22, OptLearnMAS'22, ACSOS'22, EPIA'22, PAAMS'22, EXTRAAMAS'22, IJCAI-ECAI'22, The WebConf'22, AAMAS'22, AAAI'22, ACSOS'21, PAAMS'21, EXTRAAMAS'21, OptLearnMAS'21, AAMAS'21, IJCAI'21, AAAI'21, The WebConf'20, AAMAS'20, AAAI'20, ECAI'20, ICSOS'20, IJCAI'20, EPIA'19, PAAMS'19, EXTRAAMAS'19, CP'19, SASO'19, OPT-MAS'19, JFSMA'19, AAMAS'19, AAAI'19, ICAART'19, IJCAI'19, AAMAS'18, AAAI'18, ICAART'18, WWW'18 Demo Track, SmartIoT@AAAI'18, AISGSB@AAAI'18, IJCAI-ECAI'18, ICCS'18, CP'18, OPTMAS'18, IJCAI'17, OPTMAS'17, SASO'17, JFSMA'17, PRIMA'17, SASO^ST'17, MAS&S'16, IBERAMIA'16, OPTMAS'16, AAMAS'15, ISMIS'15, JFSMA'15, MAS&S'15, SASO'15, AHPC'14, AM-STA'14, AAMAS'14, MAS&S'14, ICRA'13, IJCAI'13, JFSMA'13, JFSMA'12, SASO'12, AOSE'12, MAS&S'12, PAAMS'12, AOSE'11, BADS'11, IDETC'11, IICAI'11, SASO'11, AAMAS'10, BADS'10, AOSE'10, SASO'10, WIVE'10, BADS'09, SARC'09, IICAI'09, IAMA'09, SASO'09 (posters), SARC'08, IICAI'07, RJCIA'07, EUMAS'05, ESAW'04, EUMAS'04
<i>Journals</i>	AIJ, JAIR, AMAI, COIN, JAAMAS, Journal of Control, FGCS, IJAOSE, ACM TAAS, ROIA, SIMPAT, WIC, IJPR
<i>Organization</i>	JFSMA'15, SASO'12, WI-IAT'11, EASSS'10, MALLOW'10, WI'09 Web Intelligence Summer School, ESAW'09, ESAW'08, JFSMA'07, ESAW'04

Supervision

<i>Master</i>	14 completed
<i>PhD</i>	6 ongoing, 7 completed
<i>Post-docs</i>	1 ongoing, 3 completed

PhD Jurys 36

PhD Reviews 17

Selected Publications

- [1] GUILLET, Victor, LESIRE, Charles, PICARD, Gauthier, and GRAND, Christophe (2025). “Extending Consensus-based Task Allocation Algorithms with Bid Intercession to Foster Mixed-Initiative”. In: *International Conference on Autonomous Agents and Multiagent Systems (AAMAS-25)*. IFAAMAS, 2025, pp. 932–940. URL: <https://www.ifaamas.org/Proceedings/aamas2025/pdfs/p932.pdf>. [Core A* – Pre-proceedings – 1 review phase]
- [2] PICARD, Gauthier (2023). “Multi-Agent Consensus-based Bundle Allocation for Multi-Mode Composite Tasks”. In: *International Conference on Autonomous Agents and Multiagent Systems (AAMAS-23)*. IFAAMAS, 2023, pp. 504–512. doi: [10.5555/3545946.3598677](https://doi.org/10.5555/3545946.3598677). URL: <https://dl.acm.org/doi/10.5555/3545946.3598677>. [AR=23%] [Core A* – Pre-proceedings – 1 review phase]
- [3] — (2022a). “Auction-based and Distributed Optimization Approaches for Scheduling Observations in Satellite Constellations with Exclusive Orbit Portions”. In: *International Conference on Autonomous Agents and Multiagent Systems (AAMAS-22)*. IFAAMAS, 2022, pp. 1056–1064. doi: <https://doi.org/10.5555/3535850.3535968>. [AR=26%] [Core A* – Pre-proceedings – 1 review phase]
- [4] — (2022b). “Trajectory Coordination based on Distributed Constraint Optimization Techniques in Unmanned Air Traffic Management”. In: *International Conference on Autonomous Agents and Multiagent Systems (AAMAS-22)*. IFAAMAS, 2022, pp. 1065–1073. doi: <https://doi.org/10.5555/3535850.3535969>. [AR=26%] [Core A* – Pre-proceedings – 1 review phase]
- [5] RUST, Pierre, PICARD, Gauthier, and RAMPARANY, Fano (2022). “Resilient Distributed Constraint Reasoning to Autonomously Configure and Adapt IoT Environments”. In: *ACM Transactions on Internet Technology* 22.4 (2022), pp. 1–31. doi: <http://dx.doi.org/10.1145/3507907>. [Q1, IF=4.67]