







# DR. REMY CHAPUT

Ph.D. in Computer Science (Artificial Intelligence)



## PUBLICATIONS

- 2024 ● **Multi-objective reinforcement learning: an ethical perspective**  
International Workshop  MODeM, ECAI'24
- Timon Deschamps, Rémy Chaput, Laëtitia Matignon. Multi-objective reinforcement learning: an ethical perspective. Multi-Objective Decision Making Workshop, ECAI, Oct 2024, Santiago de Compostela, Spain. HAL : hal-04711682
- 2024 ● **Multi-objective reinforcement learning: an ethical perspective**  
National Conference  RJCIA'24
- Timon Deschamps, Rémy Chaput, Laetitia Matignon. Multi-objective reinforcement learning: an ethical perspective. RJCIA, Jul 2024, La Rochelle, France. HAL : hal-04711663
- 2024 ● **Adaptive reinforcement learning of multi-agent ethically-aligned behaviours: the QSOM and QDSOM algorithms**  
Technical Report  ArXiv
- Rémy Chaput, Olivier Boissier, Mathieu Guillermin. Adaptive reinforcement learning of multi-agent ethically-aligned behaviours: the QSOM and QDSOM algorithms. 2023. HAL : hal-04379426
- 2023 ● **Learning to identify and settle dilemmas through contextual user preferences**  
International Conference  ICTAI'23
- Rémy Chaput, Laëtitia Matignon, Mathieu Guillermin. Learning to identify and settle dilemmas through contextual user preferences. IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Nov 2023, Atlanta, United States. DOI : 10.1109/ICTAI59109.2023.00075. HAL : hal-04349804.
- 2023 ● **Ethical Smart Grid: a Gym environment for learning ethical behaviours**  
Journal Article  JOSS
- Clément Scheirlinck, Rémy Chaput, Salima Hassas. Ethical Smart Grid: a Gym environment for learning ethical behaviours. Journal of Open Source Software, 2023, 8 (88), pp.5410. DOI : 10.21105/joss.05410. HAL : hal-04187666.
- 2023 ● **Apprentissage de comportements éthiques multi-valeurs par combinaison d'agents juges symboliques et d'agents apprenants**  
Journal Article  ROIA
- Rémy Chaput, Jérémy Duval, Olivier Boissier, Mathieu Guillermin, Salima Hassas. Apprentissage de comportements éthiques multi-valeurs par combinaison d'agents juges symboliques et d'agents apprenants. Revue Ouverte d'Intelligence Artificielle, 2023, 4 (2), pp.41-66. DOI : 10.5802/roia.56. HAL : hal-04161020.

## CONTACT









## Languages

**French:** Native


**English:** Technical

## Research Interests







-  Machine Ethics
-  Human-Centered AI
-  Explainable AI
-  Neural-Symbolic (Hybrid) AI
-  Reinforcement Learning (Multi-Agent, Multi-Objective)
-  Multi-Agent Systems

See the latest version on [rchaput.github.io/cv/research/cv.pdf](https://rchaput.github.io/cv/research/cv.pdf)

- 2023 ● **AJAR: An Argumentation-based Judging Agents Framework for Ethical Reinforcement Learning**  
International Conference 📍 AAMAS'23  
Benoît Alcaraz, Olivier Boissier, Rémy Chaput, Christopher Leturc. AJAR: An Argumentation-based Judging Agents Framework for Ethical Reinforcement Learning. AAMAS '23: International Conference on Autonomous Agents and Multiagent Systems, International Foundation for Autonomous Agents and Multiagent Systems, May 2023, London, United Kingdom. DOI : 10.5555/3545946.3598956. HAL : hal-04127943.
- 2023 ● **Artificial Moral Advisors: enhancing human ethical decision-making**  
International Conference 📍 ETHICS'23  
Marco Tassella, Rémy Chaput, Mathieu Guillermin. Artificial Moral Advisors: enhancing human ethical decision-making. 2023 IEEE International Symposium on Ethics in Engineering, Science, and Technology (ETHICS), IEEE, May 2023, West Lafayette, United States. pp.1-5, DOI : 10.1109/ETHICS57328.2023.10155026. HAL : hal-04127849.
- 2021 ● **A Multi-Agent Approach to Combine Reasoning and Learning for an Ethical Behavior**  
International Conference 📍 AIES'21  
Rémy Chaput, Jérémy Duval, Olivier Boissier, Mathieu Guillermin & Salima Hassas (2021). « A Multi-Agent Approach to Combine Reasoning and Learning for an Ethical Behavior ». AIES '21: AAAI/ACM Conference on AI, Ethics, and Society, 21 mai 2021, Virtual Event USA (États-Unis), pp. 13-23. doi : 10.1145/3461702.3462515. HAL : emse-03318195.
- 2021 ● **Approche multi-agent combinant raisonnement et apprentissage pour un comportement éthique**  
National Conference 📍 JFSMA'21  
Rémy Chaput, Jérémy Duval, Olivier Boissier, Mathieu Guillermin & Salima Hassas (2021). « Approche multi-agent combinant raisonnement et apprentissage pour un comportement éthique ». Journées Francophones sur les Systèmes Multi-Agents, 30 juin 2021, Bordeaux (France). HAL : emse-03278353.
- 2021 ● **Explanation for Humans, for Machines, for Human-Machine Interactions?**  
Workshop 📍 Explainable Agency in AI, AAAI'21  
Rémy Chaput, Amélie Cordier, Alain Mille. Explanation for Humans, for Machines, for Human-Machine Interactions?. AAAI-2021, Explainable Agency in Artificial Intelligence WS, AAAI, Feb 2021, Virtual Conference, United States. HAL : hal-03106286.
- 2020 ● **Une perspective historique sur l'IA explicable**  
Technical Report 📍  
Alain Mille, Rémy Chaput, Amélie Cordier. Une perspective historique sur l'IA explicable Document préparatoire à un tutorial AFIA juillet 2020. [Rapport de recherche] LIRIS UMR 5205 CNRS/INSA de Lyon/Université Claude Bernard Lyon 1/Université Lumière Lyon 2/École Centrale de Lyon. 2020. HAL : hal-03352469

- 2020 ● **Apprentissage adaptatif de comportements éthiques**  
National Conference  JFSMA'20
- Rémy Chaput, Olivier Boissier, Mathieu Guillermin, Salima Hassas.  
Apprentissage adaptatif de comportements éthiques. 28e Journées Francophones sur les Systèmes Multi-Agents (JFSMA'2020), Jun 2020, Angers, France. HAL : hal-03012127.

## TEACHING

- 2024 ● **AI and Deep Learning**  CPE Lyon
- Lectures (*CM*, 8h) + Practical works (*TP*, 12h)
  - Co-responsible for this module
  - Level 3rd year of engineering cycle (Bac+5)
  - Introduction to AI, Machine Learning, well-known algorithms and techniques
- 2024 ● **Ethics of engineer**  Mines Saint-Étienne
- Visiting Lecturer (*CM*, 3h)
  - A 3-hour course I gave to engineers about the ethics of AI
  - Level 1st year of engineering cycle
  - Introduction to AI, societal impact of AI, discussion about ethical issues
- 2023 ● **Intelligent Agents**  University Claude Bernard Lyon 1
- Teaching Assistant (practical works - *TP*, 9h) in 2023
  - Level Master 2, specialty Artificial Intelligence
- 2022  
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2019 ● **Bases of Artificial Intelligence**  University Claude Bernard Lyon 1
- Teaching Assistant (practical works - *TP* since 2019, 52h; tutorials - *TD* since 2020, 15h)
  - Level Master 1
  - Problem modelling; Constraint solving
- 2023  
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2019 ● **Algorithmic and Object-Oriented Programming**  University Claude Bernard Lyon 1
- Teaching Assistant (practical works - *TP*, 76h ; tutorials - *TD*, 42h)
  - Organized projects, wrote examination papers
  - Level Bachelor 3
  - UML, Object-Oriented Programming, Java language
- 2021 ● **Bio-inspired Intelligence**  University Claude Bernard Lyon 1
- Teaching Assistant (practical works and projects - *TP*, 6h)
  - Supervised projects on genetic algorithms
  - Level Master 2
  - Python language



## ARTICLE PEER-REVIEW

- 2024 ● **IROS'24**  
Peer-reviewed 1 article for the IROS'2024 conference  
Domains: Reinforcement Learning, Robotics, Multi-Agent Systems
- 2023 ● **AAMAS'23**  
Peer-reviewed 1 article for the AAMAS'2023 conference as a sub-reviewer  
Domains: AI, Multi-Agent Systems
- 2023 ● **EXTRAAMAS**  
Peer-reviewed 2 articles for the EXTRAAMAS'23 workshop  
Domain: AI and Explainability
- 2022 ● **Digital Society**  
Peer-reviewed 1 article for a special edition of the Digital Society journal  
Machine Ethics, AI and Society
- 2022 ● **EXTRAAMAS**  
Peer-reviewed 2 articles for the EXTRAAMAS'22 workshop  
Domain: AI and Explainability



## RESEARCH PROJECTS

- 2024 | 2023 ● **ACCELER-AI**  
Project funded by Agence Nationale de la Recherche (ANR-22-CE23-0028)
  - Multidisciplinary and multi-university consortium.
  - Communication of the project to national and international seminars.
  - Mentoring 1x Master intern and 1x Ph.D student.
- 2022 | 2019 ● **Ethics.AI**  
Regional project, funded by Pack Ambition Recherche (Auvergne-Rhône-Alpes)
  - Multidisciplinary and multi-university consortium.
  - Participation in and organization of meetings.
  - Drafting minutes, writing reports.
  - (Co-)Supervision of interns: 5x Master 2nd year, 1x Master 1st year.



## PROFESSIONAL EXPERIENCE

- Now | 2024 ● **Associate Professor**  
**CPE Lyon** 📍 Lyon, France  
Teacher at the CPE engineering school. Responsibilities include:
  - Organizing courses, handling external teachers.
  - Preparing courses' syllabus.
  - Preparing and supervising lectures, practical works (mainly in 4Y and 5Y courses).
  - Research on AI and Ethics-related subjects.

2024  
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2023

## Post-doctorate researcher

LIRIS

📍 Lyon, France

Member of the [ACCELER-AI](#) ANR project. Responsibilities include:

- Reviewing state of the art in Multi-Agent and Multi-Objective Reinforcement Learning.
- Publishing scientific articles; communicating in conferences.
- Designing and running experiments.
- Mentoring a Ph.D. student.
- Teaching at Bachelor and Master level.

Python3   Reinforcement Learning  
Ethical Artificial Intelligence   Multi-Agent System

2023

## Research engineer

LIRIS

📍 Lyon, France

Research engineer in the Ethics.AI project. Responsibilities include:

- Implementation of an [open-source simulator of ethical Smart Grid](#).
- Publishing scientific articles; participating to seminars.
- Reporting on the project's results; developing a [website](#).

Python3   Reinforcement Learning  
Ethical Artificial Intelligence   Multi-Agent System

2022  
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2019

## Ph.D. student

LIRIS

📍 Lyon, France

Ph.D. student in the Ethics.AI project. Responsibilities include:

- Organizing project meetings; preparing the agenda, taking the minutes.
- Reviewing the state of the art on Machine Ethics; positioning our approach.
- Developing the use-case and implementation of our approach.
- Publishing scientific articles; communicating in conferences and seminars.
- Mentoring 5x research interns (Master 2) and 1x project (Master 1).
- Teaching courses at the University, at Bachelor and Master level.

Python3   Reinforcement Learning   Machine Ethics  
Multi-Agent System   Neural-Symbolic Learning  
Explainable AI

2019

## Research internship

LIRIS

📍 Lyon, France

Research internship in a lab. Responsibilities include:

- Reviewing state of the art; proposing solutions.
- Implementing proof-of-concepts learning algorithms.

Python3   Reinforcement Learning   Machine Ethics  
Multi-Agent System

2018

## Research project

LIRIS

📍 Lyon, France

6-months research project as part of the curriculum (Master's orientation project - POM). Title: *Multi-label categorization for large web-based raw biography texts*, under the supervision of Dr. Frédéric Armetta and Dr. Marc Bertin. Responsibilities include:

- Improving an existing algorithm for multi-label classification of documents.
- Running experiments to validate the algorithm performances, and compare to baselines.
- Reviewing the SOTA and writing a scientific article.

Natural Language Processing   Memory Networks  
Deep Learning   Multi-label classification  
Imbalanced datasets



## EDUCATION

2022  
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2019

## Doctorate in Computer Science

Université Claude Bernard Lyon 1, LIRIS

📍 Lyon, France

Thesis subject: *Learning behaviours aligned with moral values in a multi-agent system: guiding reinforcement learning with symbolic judgments*

Jury members:

- Parisa Ghodous (*President*)
- Grégory Bonnet (*Reviewer*)
- Marija Slavkovik (*Reviewer*)
- Alain Dutech (*Examiner*)
- Juan A. Rodríguez-Aguilar (*Examiner*)
- Salima Hassas (*Supervisor*)
- Olivier Boissier (*Co-supervisor*)
- Mathieu Guillermin (*Co-supervisor*)

2019  
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2017

## Master in Computer Science, specialty Artificial Intelligence

Université Claude Bernard Lyon 1

📍 Lyon, France

2017  
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2014

## Bachelor in Computer Science

Université Claude Bernard Lyon 1

📍 Lyon, France