

Timothee Anne

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Keywords machine learning, evolutionary computation and robotics, quality diversity, multi-task optimization, adaptation, open-endedness, lifelong learning

Research topic I study machine learning and evolutionary computation as a means to design highly adaptive agents in complex environments.

Current position: Postdoc

April 2024 – *Large Language model for assistive AI in games*, IT University of Copenhagen.
Current Supervised by Sebastian Rizi.

Qualification (France)

2025 Qualifié aux fonctions de maître de conférences.

PhD Thesis

September 2020 – *Multi-task optimization and its application to robotics: first solve, then generalize*, Nancy, France, Université de Lorraine, in the Larsen team of LORIA/Inria Nancy-Grand Est. Supervised by Jean-Baptiste Mouret.

Publications

In Peer-Reviewed Journals

- 2025 **Harnessing Language for Coordination: A Framework and Benchmark for LLM-Driven Multi-Agent Control**, T. Anne, N. Syrkis, M. Elhosni, F. Turati, F. Legendre, A. Jaquier, and S. Rizi, in *IEEE Transactions on Games (Early Access)*, doi: 10.1109/TG.2025.3564042.
- 2022 **First do not fall: learning to exploit a wall with a damaged humanoid robot**, T. Anne, E. Dalin, I. Bergonzani, S. Ivaldi and J.-B. Mouret, in *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 9028-9035, doi: 10.1109/LRA.2022.3188884.

In Peer-Reviewed Conferences

- 2024 **Parametric-Task MAP-Elites**, T. Anne and J.-B. Mouret, *Companion Proceedings of the Conference on Genetic and Evolutionary Computation, GECCO 2024, Companion Volume, Melbourne, Australia, July 14-18, 2024. ACM.*, doi: 10.1145/3638529.3653993
- 2021 **Meta-Learning for Fast Adaptive Locomotion with Uncertainties in Environments and Robot Dynamics**, T. Anne, J. Wilkinson and Z. Li, *2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Prague, Czech Republic, pp. 4568-4575, doi: 10.1109/IROS51168.2021.9635840.

2020 **Fast Online Adaptation in Robotics through Meta-Learning Embeddings of Simulated Priors**, R. Kaushik, T. Anne, and J.-B. Mouret, *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Las Vegas, NV, USA, pp. 5269-5276, doi: 10.1109/IROS45743.2020.9341462.

[In Minimally Reviewed Venues \(Workshops, Posters, ...\)](#)

2023 **Multi-Task Multi-Behavior MAP-Elites**, T. Anne and J.-B. Mouret, *Proceedings of the Companion Conference on Genetic and Evolutionary Computation (GECCO '23 Companion)*, Association for Computing Machinery, New York, NY, USA, pp. 111–114, doi: 10.1145/3583133.3590730.

[Under review for ALIFE 2025](#)

2025 **Adversarial Coevolutionary Illumination with Generational Adversarial MAP-Elites**, T. Anne, N. Syrkis, M. Elhosni, F. Turati, F. Legendre, A. Jaquier, and S. Risi, in *arXiv*, 2505.06617.

Programm committe member

GECCO¹ 2024-2025

¹*Genetic and Evolutionary Computation Conference (about 500 participants, acceptance rate: about 35%) is one of the two main conferences about artificial evolution.*

Experience

Teaching assistant

2022–2023 **Algorithmic, Functional Programming, and Digital Tools**, *Université de Lorraine, FST, Nancy, France*
64 hours.

2021–2022 **Algorithmic, Functional Programming, System, and Digital Tools**, *Université de Lorraine, FST, Nancy, France*
64 hours.

2020–2021 **Algorithmic, Functional Programming, Computer Graphics, Introduction to AI, and Advanced Methodology**, *Université de Lorraine, FST, Nancy, France*
64 hours.

Research internships

January–June 2020 **Meta-learning for adaptive locomotion of a quadruped robot**, *Advanced Robotics Lab, University of Edinburgh, Edinburgh, United Kingdom*
Supervised by Zhibin Li.

September–December 2019 **Meta-learning for adaptive locomotion of a quadruped robot**, *Inria Nancy-Grand Est, Nancy, France*
Supervised by Jean-Baptiste Mouret.

May–August 2018 **Characterizing individual behaviors using Recurrent Neural Networks**, *Center for Information and Neural Networks (CiNet), National Institute of Information and Communication Technology (NICT), Osaka, Japan*
Supervised by Yukie Nagai and Anja Philippsen.

May–July 2017 **Comparative study of intrinsically motivated goal exploration algorithms**, *Inria Bordeaux Sud-Ouest, Team Flowers, Bordeaux, France*
Supervised by Pierre-Yves Oudeyer. Study of the use of Bayesian optimization for intrinsically motivated goal exploration.

Education

- 2019–2020 **Predoc**, *École Normale Supérieure de Rennes*, Bruz
One year composed of two internships before the PhD.
- 2016–2019 **Master in Computer Science, Magistère Informatique**, *École Normale Supérieure de Rennes and Université de Rennes 1*, Bruz and Rennes, France
- 2013–2016 **Post-secondary preparatory school, MPSI and MP***, *Lycée Malherbe*, Caen, France
Preparatory courses for French Grandes Écoles.
- 2012–2013 **Baccalauréat diploma (with distinction)**, *Lycée Fresnel*, Caen, France