

Paulo Eduardo Rauber

London, 2022
p.rauber@qmul.ac.uk
paulorauber.com

Research interests

Artificial Intelligence, Machine Learning, Reinforcement Learning.

Background

- 2020– **Lecturer in Artificial Intelligence**, *Game AI Research Group, Queen Mary University of London (United Kingdom)*.
- 2017–2020 **Postdoctoral Researcher**, *IDSIA, Swiss AI Lab (Switzerland)*.
Supervisor: Jürgen Schmidhuber.
- 2012–2017 **PhD in Computer Science**, *Joint degree at University of Campinas (Brazil) and University of Groningen (Netherlands)*.
Supervisors: A.X. Falcão, A.C. Telea, P.J. de Rezende, and J.B.T.M. Roerdink.
Admitted in first place to MSc program and consequently invited to PhD program.
- 2008–2011 **BSc in Computer Science**, *Federal University of Santa Catarina (Brazil)*.
More than three standard deviations above the mean on national graduate school admission exam.

Selected publications

- 2022 M. Conserva and P. Rauber, "*Hardness in Markov Decision Processes: Theory and Practice*", **Conference on Neural Information Processing Systems (NeurIPS)**.
- 2022 P. Rauber*, A. Ramesh*, M. Conserva, and J. Schmidhuber, "*Recurrent Neural-Linear Posterior Sampling for Non-Stationary Contextual Bandits*", **Neural Computation**.
- 2021 P. Rauber, A. Ummadisingu, F. Mutz, and J. Schmidhuber, "*Reinforcement Learning in Sparse-Reward Environments With Hindsight Policy Gradients*", **Neural Computation**.
- 2019 P. Rauber, A. Ummadisingu, F. Mutz, and J. Schmidhuber, "*Hindsight Policy Gradients*", **International Conference on Learning Representations (ICLR)**.
- 2017 P. E. Rauber, S. G. Fadel, A. X. Falcão, and A. C. Telea, "*Visualizing the Hidden Activity of Artificial Neural Networks*", **IEEE Transactions on Visualization and Computer Graphics** (TVCG, Proceedings of Visual Analytics Science and Technology 2016).

Supervision

- 2020– PhD theses: M. Conserva (2020–, with S. Lucas); R. Sasso (2021–, with S. Riis).
- 2015– MSc theses: 21 supervised successfully.
- 2015– BSc theses: 11 supervised successfully, 8 under supervision.

Teaching

- 2020– Artificial Intelligence in Games (postgraduate)
- 2020–2021 Data Mining (postgraduate)
- 2017–2019 Deep Learning Lab (postgraduate)

Grant proposals

- 2019 Developed a proposal accepted by the Swiss National Science Foundation with two collaborators from the Swiss AI Lab (NEUSYM, approx. 700,000 USD).