Paulo Eduardo Rauber

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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, 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).