

Paulo Eduardo Rauber

London, 2021
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 papers

- 2021 P. Rauber, A. Ummadisingu, F. Mutz, and J. Schmidhuber, "*Reinforcement Learning in Sparse-Reward Environments With Hindsight Policy Gradients*", *Neural Computation*.
- 2020 P. Rauber*, A. Ramesh*, and J. Schmidhuber, "*Recurrent Neural-Linear Posterior Sampling for Non-Stationary Contextual Bandits*", *arXiv preprint*.
- 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)*.
- 2017 J.F. Kruiger, P. E. Rauber, R. M. Martins, A. Kerren, S. Kobourov, and A. C. Telea, "*Graph Layouts by t-SNE*", *Computer Graphics Forum (CGF, Proceedings of EuroVis 2017)*.
- 2017 P. E. Rauber, A. X. Falcão, and A. C. Telea, "*Projections as Visual Aids for Classification System Design*", *Information Visualization*.
- 2016 P. E. Rauber, A. X. Falcão, and A. C. Telea, "*Visualizing Time-Dependent Data Using Dynamic t-SNE*", *EuroVis Short Papers*. **Honorable mention**.
- 2013 P. E. Rauber, A. X. Falcão, T. V. Spina, and P. J. de Rezende, "*Interactive Segmentation by Image Foresting Transform on Superpixel Graphs*", *SIBGRAPI*.

Teaching

- 2020– **Artificial Intelligence in Games (postgraduate)**.
Taught with D. P. Liebana.
- 2020– **Data Mining (postgraduate)**.
Taught intensively during one week.
- 2017-2019 **Deep Learning Lab (postgraduate)**.
Student satisfaction (2019): mean 9.07/10, median 10/10.

Supervision

- 2020- PhD theses: M. Conserva (2020-, with S. Lucas); R. Sasso (2021-).
- 2015- MSc theses: S. Feringa (2015, with A.C. Telea and M.H.F. Wilkinson); J.F. Kruiger (2016, with A.C. Telea); A. Ummadisingu (2018, with J. Schmidhuber); A. Ramesh (2019, with J. Schmidhuber); A. Freller (2020); K. S. S. Vamsi (2020); K. Ercetin (2020); W. Habli (2020); Y. Liu (2020); X. Yang (2020); X. Wu (2020); P. M. Sitch (2020); K. Horeau (2021); A. B. Ozcan (2021).
- 2015- BSc theses: F. Heikamp (2015, with A.C. Telea); A. Miah (2020); A. Singh (2020); R. Phillips (2020); P. Lucaci (2020); S. Abdiriziq (2021-); R. Badshah (2021-); M. Lala (2021-); Y. Rahman (2021-); I. Iktadar (2021-); S. Ali (2021-).

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).

Skills

- Languages Portuguese and English.
- Programming Python and C++ on GNU/Linux.

Personal

- Born 1989, Brazil.