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# Paulo Eduardo Rauber

## Main interests

Machine learning, reinforcement learning, recurrent neural networks.

## Background

2017–(2021) **Postdoctoral researcher**, *Dalle Molle Institute for AI Research (IDSIA, 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 at Unicamp and consequently invited to PhD.*

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

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).

2016 P. E. Rauber, A. X. Falcão, and A. C. Telea, *"Visualizing Time-Dependent Data Using Dynamic t-SNE"*, EuroVis Short Papers 2016. ***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 2013.

## Teaching

2017, 2018 *Deep learning lab*: introduction to deep learning using TensorFlow.

## Supervision

2018 A. Ummadisingu, *"Improving Sample Efficiency in Hindsight Policy Gradients"*, MSc thesis, University of Italian Switzerland, 2018. Supervisors: J. Schmidhuber and P. Rauber.

2016 J.F. Kruiger, *"Graph Layouts by t-Distributed Stochastic Neighbor Embedding"*, MSc thesis, University of Groningen, 2016. Supervisors: A.C. Telea and P.E. Rauber.

2015 S. Feringa, *"Comparison of Features Used in Automatic Skin Lesion Classification"*, MSc thesis, University of Groningen, 2015. Supervisors: A.C. Telea and M.H.F. Wilkinson. Advisor: P.E. Rauber.

## Skills

Languages Portuguese and English.

Programming Python (NumPy, TensorFlow) and C++ on GNU/Linux.

## Personal

Born 1989, Brazil.