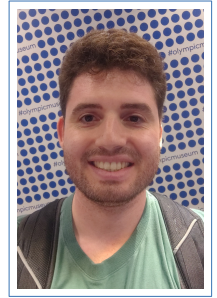# Rodrigo Veiga

Postdoctoral researcher

École Polytechnique Fédérale de Lausanne (EPFL)
Lab for Statistical Mechanics of
Inference in Large Systems (SMILS)
✉ rodrigo.veiga@epfl.ch

 Github   in Linkedin   ⓘ Orcid
 GoogleScholar   🌐 Web Site

Education 🎓

2017–2022 : **Doctor of Science, Physics**, *University of São Paulo*, São Paulo, Brazil.
Thesis: *Statistical Physics Analysis of Machine Learning Models*

2010–2012 : **Master of Science, Physics**, *University of São Paulo*, São Carlos, Brazil.
Thesis: *Effects of Correlated Hybridization in the Single-impurity Anderson Model* (in portuguese)

2006–2009 : **Bachelor of Science, Physics**, *University of São Paulo*, São Carlos, Brazil.

Publications ☰

Articles

2023 Elisabetta Cornacchia*, Francesca Mignacco*, **Rodrigo Veiga***, Cédric Gerbelot, Bruno Loureiro, and Lenka Zdeborová. Learning curves for the multi-class teacher–student perceptron. *Machine Learning: Science and Technology*, volume 4, page 015019. IOP Publishing, *Equal contribution, 2023.

2022 **Rodrigo Veiga**, Ludovic Stephan, Bruno Loureiro, Florent Krzakala, and Lenka Zdeborová. Phase diagram of stochastic gradient descent in high-dimensional two-layer neural networks. In *Advances in Neural Information Processing Systems NeurIPS*, volume 35, pages 23244–23255, 2022.

2020 **Rodrigo Veiga** and Renato Vicente. Restricted Boltzmann machine flows and the critical temperature of Ising models, *arxiv:2006.10176*, 2020.

2020 **Rodrigo Veiga**, Rodrigo Murta, and Renato Vicente. Age-structured estimation of COVID-19 ICU demand from low quality data, *arxiv:2006.06530*, 2020.

Conference Proceedings

2013 Valter Líbero and **Rodrigo Veiga**. Effects of correlated hybridization in the single-impurity Anderson model. In *APS March Meeting Abstracts*, volume 2013 of *APS Meeting Abstracts*, page R19.004, March 2013.

Research Experience ✎

🏛 École Polytechnique Fédérale de Lausanne (EPFL)

2022–present **Postdoctoral scientist**.
SMILS - Lab for Statistical Mechanics of Inference in Large Systems
Supervisor: Prof. Dr. Nicolas Macris

2021 – 2022 **PhD exchange internship**.
IdePHICS - Information, Learning and Physics Lab
Supervisor: Prof. Dr. Florent Krzakala

🏛 University of São Paulo (USP)

2017–2022 ***PhD student***.
IFUSP - Physics Institute
Supervisor: Prof. Dr. Renato Vicente
Project: Statistical physics and machine learning models

2010 – 2012 ***Master student***.
IFSC-USP São Carlos Physics Institute
Supervisor: Prof. Dr. Valter Líbero
Project: Effects of correlated hybridization in the single-impurity Anderson model

2008 – 2009 ***Undergraduate student project***.
IFSC-USP São Carlos Physics Institute
Supervisor: Prof. Dr. Valter Líbero
Project: Density functional theory applied to the antiferrimagnetic Heisenberg model

Computer skills </>

Programming	Python, Cython, R, Fortran, Wolfram Mathematica
Machine learning	PyTorch, Scikit-learn, Keras
OS	Linux 🐧

Languages 🌐

English	Fluent. TOEFL iBT 2019-06 score 95: Reading 23, Listening 25, Speaking 23, Writing 24
French	Basic
Portuguese	Native

Participation in events 👥

2023	Statistical Physics and Machine Learning Back Together; Cargèse, France.
2023	Mathematical Physics of Complex Systems; Cortona, Italy.
2022	NeurIPS, Conference on Neural Information Processing Systems; New Orleans, United States.
2021	EPFL CIS NeurIPS Mirror Event, *EPFL*; Lausanne, Switzerland.
2021	Mathematical and Scientific Machine Learning (MSML). *EPFL*; Lausanne, Switzerland.
2019	First School on Data Science and Machine Learning, *ICTP-SAIFR*; São Paulo, Brazil.
2017	Minicourse on Machine Learning for Many-Body Physics, *ICTP-SAIFR*; São Paulo, Brazil.
2012	II SIFSC - São Carlos Physics Institute Graduate Workshop, *IFSC-USP*; São Carlos, Brazil.
2011	Brazilian School on Statistical Mechanics, *IIP-UFRN*; Natal, Brazil.
2011	I SIFSC - São Carlos Physics Institute Graduate Workshop, *IFSC-USP*; São Carlos, Brazil.

References 💬

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Prof. Dr. Nestor Caticha
University of São Paulo
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Prof. Dr. Florent Krzakala
École Polytechnique Fédérale de Lausanne
✉ florent.krzakala@epfl.ch

Non-academic work experience 💼

2013–2017 ***Financial administrator***.
Primos Materiais para Construções Ltda, Brazil.