

Personal data

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|------------------------------|--|
| Title | Dr. |
| First name | Luiz Fernando |
| Name | de Oliveira Chamon |
| Current position | ELLIS–SimTech Independent research group leader (10/2022–09/2026) |
| Current institution, country | University of Stuttgart, Germany |
| Identifiers/ORCID | 0000-0001-7731-6650 |

Qualifications and Career

| Stages | Periods and Details |
|--|--|
| Degree program | <i>Polytechnic School of the University of São Paulo, Brazil</i> 02/2012–02/2015 M.Sc. in Electrical Engineering Dissertation: Combinations of Adaptive Filters Advisor: Cássio Guimarães Lopes |
| | <i>École Centrale de Lyon and INSA-Lyon, France</i> 01/2009–06/2009 Undergraduate exchange student of the M.Sc. in Acoustics program |
| | <i>Polytechnic School of the University of São Paulo, Brazil</i> 02/2006–05/2011 B.Sc. in Electrical Engineering (Electronic Systems) |
| Doctorate | <i>University of Pennsylvania, USA</i> 09/2015–12/2020 Ph.D. in Electrical Engineering Thesis: Constrained learning and inference Advisor: Alejandro Ribeiro |
| Stages of academic and professional career | <i>University of Stuttgart, Germany</i> 10/2022–present ELLIS–SimTech Independent research group leader |
| | <i>University of California, Berkeley, USA</i> 07/2021–09/2022 Postdoctoral fellow at the Simons Institute for the Theory of Computing |
| | <i>University of Pennsylvania, USA</i> 10/2020–06/2021 Postdoctoral researcher |

Engagement in the Research System

Women in STEM 04/2022
Judge of the [ENVISION research competition](#)

University of Pennsylvania 05/2020–12/2020
COVID-19 Research and Academic Safety Reporting Committee

University of Pennsylvania 06/2018–07/2018 and 06/2019–07/2019
Mentor for the research experience for undergraduate program [SUNFEST](#)

Reviewer/referee

IEEE Trans. on Signal Processing; IEEE Signal Processing Letters; IEEE Signal Processing Magazine; IEEE Journal of Selected Topics in Signal Processing; IEEE Trans. on Signal and Information Processing over Networks; IEEE Trans. on Automatic Control; IEEE Trans. on Control of Network Systems; and conferences, such as NeurIPS, ICML, IEEE ICASSP, IEEE CDC...

Scientific Results

Category A

- [1] S. Paternain, M. Calvo-Fullana, **L. F. O. Chamon**, and A. Ribeiro. Safe policies for reinforcement learning via primal-dual methods. *IEEE Trans. on Autom. Control.*, 68[3], 2023. DOI: [10.1109/TAC.2022.3152724](https://doi.org/10.1109/TAC.2022.3152724). URL: <https://arxiv.org/abs/1911.09101>.
- [2] **L. F. O. Chamon**, S. Paternain, M. Calvo-Fullana, and A. Ribeiro. Constrained learning with non-convex losses. *IEEE Trans. on Inf. Theory*, 69[3]:1739–1760, 2023. DOI: [10.1109/TIT.2022.3187948](https://doi.org/10.1109/TIT.2022.3187948). URL: <https://arxiv.org/abs/2103.05134>.
- [3] A. Robey*, **L. F. O. Chamon***, G. J. Pappas, H. Hassani, and A. Ribeiro. Adversarial robustness with semi-infinite constrained learning. In *Conference on Neural Information Processing Systems (NeurIPS)*, 2021. URL: <https://arxiv.org/abs/2110.15767>. (* equal contribution).
- [4] **L. F. O. Chamon**, G. J. Pappas, and A. Ribeiro. Approximate supermodularity of Kalman filter sensor selection. *IEEE Trans. on Autom. Control.*, 66[1]:49–63, 2021. DOI: [10.1109/TAC.2020.2973774](https://doi.org/10.1109/TAC.2020.2973774). URL: <https://arxiv.org/abs/1912.03799>.
- [5] D. S. Kalogerias, **L. F. O. Chamon**, G. J. Pappas, and A. Ribeiro. Better safe than sorry: Risk-aware nonlinear Bayesian estimation. In *IEEE International Conference in Acoustic, Speech, and Signal Processing (ICASSP)*, 2020. URL: <https://arxiv.org/abs/1912.02933>.
- [6] **L. F. O. Chamon**, Y. C. Eldar, and A. Ribeiro. Functional nonlinear sparse models. *IEEE Trans. on Signal Process.*, 68[1]:2449–2463, 2020. DOI: [10.1109/TSP.2020.2982834](https://doi.org/10.1109/TSP.2020.2982834). URL: <https://arxiv.org/abs/1811.00577>.
- [7] **L. F. O. Chamon**, S. Paternain, and A. Ribeiro. Trust but verify: Assigning prediction credibility by counterfactual constrained learning, 2020. URL: <https://arxiv.org/abs/2011.12344>.
- [8] **L. F. O. Chamon** and A. Ribeiro. Probably approximately correct constrained learning. In *Conference on Neural Information Processing Systems (NeurIPS)*, 2020. URL: <https://arxiv.org/abs/2006.05487>.
- [9] M. Eisen, C. Zhang, **L. F. O. Chamon**, D. D. Lee, and A. Ribeiro. Learning optimal resource allocations in wireless systems. *IEEE Trans. on Signal Process.*, 67[10]:2775–2790, 2019. DOI: [10.1109/TSP.2019.2908906](https://doi.org/10.1109/TSP.2019.2908906). URL: <https://arxiv.org/abs/1807.08088>.
- [10] **L. F. O. Chamon** and A. Ribeiro. Approximate supermodularity bounds for experimental design. In *Conference on Neural Information Processing Systems (NeurIPS)*, pages 5403–5412, 2017. URL: <https://arxiv.org/abs/1711.01501>.

Category B

- [1] J. Cervino, **L. F. O. Chamon**, B. D. Haeffele, R. Vidal, and A. Ribeiro. Learning globally smooth functions on manifolds, 2022. URL: <https://arxiv.org/abs/2210.00301>.
- [2] I. Hounie, **L. F. O. Chamon**, and A. Ribeiro. Automatic data augmentation via invariance-constrained learning, 2022. URL: <https://arxiv.org/abs/2209.15031>.
- [3] B. A. Angélico, **L. F. O. Chamon**, S. Paternain, A. Ribeiro, and G. J. Pappas. Source seeking in unknown environments with convex obstacles. In *American Control Conference*, 2021. URL: <https://arxiv.org/abs/1909.07496>.
- [4] M. Calvo-Fullana, S. Paternain, **L. F. O. Chamon**, and A. Ribeiro. State augmented constrained reinforcement learning: Overcoming the limitations of learning with rewards, 2021. URL: <https://arxiv.org/abs/2102.11941>.
- [5] L. Ruiz, **L. F. O. Chamon**, and A. Ribeiro. Transferability properties of graph neural networks, 2021. URL: <https://arxiv.org/abs/2112.04629>.
- [6] **L. F. O. Chamon**. cs1: Learning under requirements with PyTorch, version 1.0, 2021. URL: <https://github.com/lfochamon/cs1>.
- [7] D. Lamb, **L. F. O. Chamon**, V. H. Nascimento, and A. Spirer. Sparse cascaded-integrator-comb filters, 2019. URL: <https://patents.google.com/patent/US10367477B2>. US10367477B2.

Academic Distinctions

- **2020:** Best student paper award at IEEE ICASSP 2020 for “The empirical duality gap of constrained statistical learning.”
- **2020:** Best paper award at IEEE ICASSP 2020 for “Better safe than sorry: Risk-aware nonlinear Bayesian estimation.”
- **2018:** Outstanding editorial board service (IEEE Transactions on Signal Processing).
- **2018:** Best Ph.D. colloquium award
(Dept. of Electrical and Systems Engineering, University of Pennsylvania).
- **2018:** Good citizen award for services to the department
(Dept. of Electrical and Systems Engineering, University of Pennsylvania).
- **2013:** IEEE Standard Education Committee grant.
- Travel grants to major conferences: IEEE ICASSP, IEEE CDC, NeurIPS, and USENIX NSDI.

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