06 79 23 86 47
lucas.gautheron@gmail.com
lucasgautheron.github.io
29/01/1995

Lucas Gautheron

Education

2022-2025 **PhD student**, *University of Wuppertal*, Germany, Dynamics of a research program in high-energy physics: the case of supersymmetry (Research Training Group 2696, "Transformations of science and technology since 1800: topics, processes, institutions ") [*on-going*]

2021-2022 **M.A**, *Université Paris-Cité*, Paris, History and Philosophy of Science [Class rank: 1st]
Thesis : "Too beautiful to be false, or too beautiful to be true? Searching supersymmetry at the *Large Hadron Collider*". Supervisors: Olivier Darrigol, Elisa Omodei.

2014-2018 **Master 1**, *Ecole Normale Supérieure de Cachan*, Cachan, Fundamental Physics
Full scholarship. Experimental and theoretical physics, mathematics. Options: Symmetries and path integrals; Astrophyics and Cosmology.

2012-2014 **PCSI/PC***, *Lycée Berthollet*, Annecy
"Classe préparatoire aux grandes écoles"

Research

Mar 2023 to Feb 2024 **Research Assistant (part time)**, *Laboratoire de Sciences Cognitives et Psycholinguistique (LSCP - DEC - École Normale Supérieure)*, Paris
Project: investigating correlations between speech heard and produced by young infants, using long-form recordings.

Feb 2023– Jul 2023 **Visiting PhD student**, *Medialab, Sciences Po Paris*

Sep 2020 to Nov 2021 **Engineer**, *Laboratoire de Sciences Cognitives et Psycholinguistique (LSCP - DEC - École Normale Supérieure)*, Paris
Study of language acquisition across cultures through naturalistic long-form audio recordings. Supervised by Alejandrina Cristia.

Oct 2016 – Jan 2017 **Research Internship**, *Laboratoire Univers et Théories (LUTH - INSU - CNRS)*, Paris Meudon
Influence of the nuclei distribution on the electron capture rates and neutrino scattering in core-collapse supernovae. Supervised by Micaela Oertel.

May 2016 – Jul 2016 **Research Internship**, *Laboratoire de Physique Nucléaire et des Hautes Énergies (LPNHE - IN2P3 - CNRS)*, Paris
Diphoton analysis and phenomenology for the ATLAS experiment. Supervised by Lydia Roos. [signal modeling & parametrization, effective field theories]

Oct 2015 – Jan 2016 **Research Internship**, *Laboratoire d'Annecy-Le-Vieux de Physique Théorique (LAPth - IN2P3 - CNRS)*, Annecy-Le-Vieux
Sketching the History of Modern Cosmology. Supervised par Richard Taillet.

May 2015 – Jul 2015 **Research Internship**, *Laboratoire d'Annecy-Le-Vieux des Particules (LAPP - IN2P3 - CNRS)*, Annecy-Le-Vieux
Particle physics for the ATLAS experiment. Supervised by Stéphane Jézéquel.

Publications

[1] A. Cristia, **L. Gautheron**, and H. Colleran. "Vocal input and output among infants in a multilingual context: Evidence from long-form recordings in Vanuatu". In: *Developmental Science* (Feb. 2023). DOI: 10.1111/desc.13375. URL: https://doi.org/10.1111/desc.13375.

[6] **L. Gautheron** and E. Omodei. "How research programs come apart: the example of supersymmetry and the disunity of physics". In: *Quantitative Science Studies [accepted]* (May 2023). URL: https://arxiv.org/abs/2304.03673.

[9] **L. Gautheron**, N. Rochat, and A. Cristia. "Managing, storing, and sharing long-form recordings and their annotations". In: *Language Resources and Evaluation* (Feb. 2022). DOI: 10.1007/s10579-022-09579-3. URL: https://link.springer.com/10.1007/s10579-022-09579-3.

[10] M. Lavechin, M. de Seyssel, **L. Gautheron**, E. Dupoux, and A. Cristia. "Reverse Engineering Language Acquisition with Child-Centered Long-Form Recordings". In: *Annual Review of Linguistics* 8.1 (Jan. 2022), pp. 389–407. DOI: 10.1146/annurev-linguistics-031120-122120. URL: https://www.annualreviews.org/doi/full/10.1146/annurev-linguistics-031120-122120.

Contributed Talks

[2] **L. Gautheron**. "Impérialisme scientifique en physique des hautes-énergies: faut-il écouter les théoriciens?" Congrès de la Société française de Philosophie des Sciences, Nanterre, France. June 2023. URL: https://sps2023nanterre.sciencesconf.org/.

[3] **L. Gautheron**. "La désunité de la physique des hautes-énergies". XIVe Congrès de la Société française d'histoire des sciences et des techniques: symposium "La physique de l'après Seconde guerre mondiale, entre ruptures et continuités", Bordeaux, France. Apr. 2023. URL: https://sfhst-2023.sciencesconf.org/.

[4] **L. Gautheron**. "Probing Socio-Epistemic Dynamics in High-Energy Physics Using the Inspire HEP Database". Big Data & HPS. May 2023. URL: https://scientoconference.com/bigdatahps2023/.

[7] **L. Gautheron**. "The many faces of supersymmetry: Supersymmetry across subcultures of High-Energy Physics, 1971–2019". 2022 History of Science Society Annual Meeting: group session on Historical Epistemology of Particle Physics and Quantum Gravity, Chicago, IL, United States. Nov. 2022. URL: https://hssonline.org/page/hss22.

[8] **L. Gautheron**. "Who trusts supersymmetry? Probing quantitative methods for investigating research orientations in High-Energy Physics". 4th International Spring School of the Epistemology of the Large Hadron Collider: The History, Philosophy and Sociology of Large Scale Experiments, Wuppertal, Germany. Mar. 2022. URL: https://www.lhc-epistemologie.uni-wuppertal.de/events/events/spring-school-2022-1.

Seminar Talks

[5] **L. Gautheron**. "Too beautiful to be false, or too beautiful to be true: supersymmetry and the future of high-energy physics". 2JM seminar, Sciences Po, Paris. May 2023.

Journalism

Dec 2019 to Nov 2020 — **President, Publication Manager**, *Société de Production Le Média*, Montreuil
Management of a production company with more than 12 full-time equivalent workers. Marketing procedures optimization, development of revenue forecasting models and audience data analysis.

September 2018 to Sep 2020 — **Journalist**, *Le Média*, Montreuil
Specializing in data journalism and book reviews https://www.lemediatv.fr/auteurs/lucas-gautheron-9DAnWoo5Tlav1trWgg_Qlw/articles.

Programming

Jul 2013 — **Developer**, *Électricité réseau Distribution de France (ErDF)*, Annecy
- Design of an archive database and search system (PHP/MySQL)
- Automated retrieval of large amounts of data from other company-wide applications.

Mars 2011 à 2014 — **Developer**, *AssaultCube*
Development of a C++ 3D video game as part of an international team of volunteers

Skills

Computer

Programming	Python, C, C++, Fortran, Arduino
Scientific software	stan, numpy, scipy, cvxpy, scikit-learn, ROOT/RooFit

Data	Pandas, SQL, HDF
Web	PHP, HTML, JS, CSS
Video	Adobe Premiere Pro

Languages

English	Toefl IBT: 104
French	Native
Spanish	Beginner