

Camille Scalliet

Chargée de recherche CNRS

[Website](#)

[Google Scholar](#)

Date of birth: 7/11/92

Citizenship: French, British

Academic positions

- From 10/23 **Chargée de recherche CNRS**, Laboratoire de Physique de l'Ecole Normale Supérieure, Paris.
- 10/20-10/23 **Independent Research Fellow**, Department of Applied Mathematics and Theoretical Physics, University of Cambridge.
Funding : Herchel Smith Fellowship and College Research Fellowship.
- 10/19-10/20 **Postdoctoral Researcher**, *Soft Matter Theory Group*, Department of Applied Mathematics and Theoretical Physics, University of Cambridge.
Funding : ERC grant (to Prof. Michael E. Cates).

Education

- 09/16-09/19 **PhD in Theoretical Physics**, *Laboratoire Charles Coulomb et Université de Montpellier*, France.
Advisors : Ludovic Berthier, Francesco Zamponi.
- 2012 - 2016 **Normalienne student in Physics**, *Ecole Normale Supérieure de Lyon*, France.
2013 : Licence Sciences de la Matière parcours Physique mention très bien / 2015 : Master in Theoretical Physics mention très bien / 2015-2016 : Research project at Laboratoire Charles Coulomb, Montpellier.
- 2010 - 2012 **Classes préparatoires aux Grandes Ecoles PCSI-PC***, *Lycée aux Lazaristes*, Lyon, France.

Awards, Fellowships, Scholarships

Awards

- 2022 **Early Career Scientist Prize in Statistical Physics**, International Union for Pure and Applied Physics (IUPAP).
- 2021 **Rising Stars in Soft and Biological Matter**, NSF MRSEC (Princeton, Chicago and Delaware).
- 2018 **L'Oréal-UNESCO For Women in Science Fellowship**, EUR 15 000.

Independent Postdoctoral Fellowships

- 2020-2023 **Herchel Smith Fellowship**, [Herchel Smith Fund](#), University of Cambridge.
ca. GBP 200 000 : competitive salary + GBP 45, 000 research grant. Success rate ~5%.
- 2020-2023 **Junior Research Fellowship**, Sidney Sussex College, University of Cambridge.
ca. GBP 130,000, success rate ~1%.

Scholarships

- 2016-2019 **PhD scholarship**, French Education Ministry.
- 1/14-7/14 **Erasmus Scholarship**, Università La Sapienza, Rome, Italy.
- 2012-2016 **Elève fonctionnaire stagiaire (normalienne)**, Ecole Normale Supérieure de Lyon.

Peer-reviewed publications

- [18] S. Ciarella, D. Khomenko, L. Berthier, F. C. Mocanu, D. R. Reichman, **C. Scalliet**, F. Zamponi, *Finding two-level systems in glasses through machine learning*, Nature Communications 14, 4229 (2023).
- [17] C. Herrero, **C. Scalliet**, M. D. Ediger, and L. Berthier, *Two-step devitrification of ultrastable glasses*, Proceedings of the National Academy of Sciences 120 (16) e2220824120 (2023).
- [16] F. C. Mocanu, L. Berthier, S. Ciarella, D. Khomenko, D. R. Reichman, **C. Scalliet**, F. Zamponi, *Microscopic observation of two-level systems in a metallic glass model*, The Journal of Chemical Physics 158, 014501 (2023).

- [15] **C. Scalliet***, B. Guiselin*, L. Berthier,
Thirty milliseconds in the life of a supercooled liquid,
Physical Review X 12, 041028 (2022).
- [14] E. De Giuli, **C. Scalliet**,
Dynamical mean-field theory : from ecosystems to reaction networks,
J. Phys. A : Math. Theor. 55, 474002 (2022).
- [13] **C. Scalliet**,
Water Untangled,
Nature Physics 18, 1147-1148 (2022) - invited News & Views article.
- [12] B. Guiselin*, **C. Scalliet***, L. Berthier,
Microscopic origin of excess wings in relaxation spectra of deeply supercooled liquids,
Nature Physics 18, 468-472 (2022). Featured in a News&Views.
- [11] **C. Scalliet**, B. Guiselin, L. Berthier,
Excess wings and asymmetric relaxation spectra in a facilitated trap model,
The Journal of Chemical Physics 155, 064505 (2021).
- [10] D. Khomenko*, **C. Scalliet***, L. Berthier, D.R. Reichman, F. Zamponi,
Depletion of two-level systems in ultrastable computer-generated glasses,
Physical Review Letters 124, 225901 (2020), Featured in Physics.
- [9] **C. Scalliet**, L. Berthier, F. Zamponi,
Nature of excitations and defects in structural glasses,
Nature Communications 10, 5102 (2019).
- [8] M. Ozawa, **C. Scalliet**, A. Ninarello, L. Berthier,
Does the Adam-Gibbs relation hold in simulated supercooled liquids ?,
The Journal of Chemical Physics 151, 084504 (2019).
- [7] **C. Scalliet**, L. Berthier,
Rejuvenation and Memory Effects in a Structural Glass,
Physical Review Letters 122, 255502 (2019), Editor's Suggestion.
- [6] L. Berthier, M. Ozawa, **C. Scalliet**,
Perspective : Configurational entropy of glass-forming liquids,
The Journal of Chemical Physics 150 (16), 160902 (2019).
- [5] L. Berthier, E. Flenner, C. J. Fullerton, **C. Scalliet**, M. Singh,
Efficient swap algorithms for molecular dynamics simulations of equilibrium supercooled liquids,
Journal of Statistical Mechanics : Theory and Experiment 6, 064004 (2019).
- [4] **C. Scalliet**, L. Berthier, F. Zamponi,
Marginally stable phases in mean-field structural glasses,
Physical Review E 99, 012107 (2019).
- [3] **C. Scalliet**, L. Berthier, F. Zamponi,
Absence of Marginal Stability in a Structural Glass,
Physical Review Letters 119, 205501 (2017).
- [2] **C. Scalliet**, A. Gnoli, A. Puglisi, A. Vulpiani,
Cages and anomalous diffusion in vibrated dense granular media,
Physical Review Letters 114, 198001 (2015).
- [1] P. Oswald, **C. Scalliet**,
Measurements of the dielectric and viscoelastic constants in mixtures of 4,4'-n-octyl-cyanobiphenyl and biphenyl,
Physical Review E 89, 032504 (2014).

*equal contribution.

Conferences, workshops, seminars, and summer schools

Summary : 12 invited talks at international conferences, 15 seminars, 10 contributed talks.

Invited talks at international conferences

- 2023 StatPhys28, August 7-11, *Tokyo (Jp)*.
CECAM workshop Mesoscale modeling of driven disordered materials : from glasses to active matter, May 24-26, *Lausanne (Swz)*.
Early Career Researchers in Statistical Mechanics and Thermodynamics Workshop, April 26-28, *Edinburgh (UK)*.
XVI International Workshop on Complex Systems, March 13-17, *Andalo (It)*.
- 2022 “Machine Learning Glasses” workshop, November 7-11, *Paris (Fr)*.
Workshop : Viscous liquids and the glass transition XVIII, June 23-25, *Somnestationen (Dk)*.
IoP Theory of Condensed Matter Day, June 16, *Warwick (UK)*.
- 2021 Soft Matter for All, October 15, *online*, invitation after nomination as ‘Rising Stars in Soft and Biological Materials’.
Interdisciplinary Challenges in Non-Equilibrium Physics, April 12-16, *online*.
CECAM workshop Recent Advances on the Glass Problem, January 6-8, *online*.
- 2020 CMD2020GEFES International conference, August 31-September 4, *online*.
- 2019 APS March Meeting, March 4-8, *Boston (USA)*.

Seminars

- 2023 Forum de Physique Statistique, Laboratoire de Physique de l’ENS, June 21, *Paris (Fr)*.
Institut Lumière Matière, February 14, *Lyon (Fr)*.
- 2022 Mathematical physics seminar, Imperial College, November 30, *London (UK)*.
Edinburgh Statistical Physics and Complexity Webinar Series, October 4, *online*.
ETH Zurich Department of Materials, September 28, *Zurich (Swz)*.
Chemistry Department, January 27, *Cambridge (UK)*.
- 2021 Glass and Time, Roskilde Univ., November 24, *Roskilde (Dk)*.
Lennard-Jones Centre, October 4, *Cambridge (UK)*.
- 2020 Physics Department, November 25, *Bristol (online)*.
Cavendish Laboratory, January 28, *Cambridge (UK)*.
- 2019 Soft Matter Group DAMTP, October 22, *Cambridge (UK)*.
Laboratoire Interdisciplinaire de Physique, May 9, *Grenoble (Fr)*.
Institut Lumière Matière, May 8, *Université de Lyon (Fr)*.
- 2018 Department of Mathematics, April 24, *Duke University (USA)*.
Laboratoire de Physique Statistique, September 16, *ENS Paris (Fr)*.

Contributed talks

- 2022 CECAM Workshop ‘New frontiers in liquid matter’, July 4-7, *Paris (Fr)*.
- 2021 11th Liquid matter conference, July 19-23, *online*.
APS March Meeting, March 18, *online*.
- 2020 Complex Fluids 2020 Symposium, December 10-12, *online*.
APS March Meeting, March 2-6, *online*.
Edwards Centre for Soft Matter mini-conference, January 10, *Cambridge*.
Journées de Physique Statistique, January 31-February 1, *Paris (Fr)*.
Unifying Concepts in Glass Physics, June 11-15, *Bristol (UK)*.
APS March Meeting, March 13-17, *New Orleans (USA)*.
- 2016 Workshop : Nonlinear Response in Complex Matter, September 26-30, *Primosten (Croatia)*.

Organized events

- 2022 Edwards Centre for Soft Matter mini-conference, February 4, *online*.
- 2020 Edwards Centre for Soft Matter mini-conference, December 4, *online*.
- 2019 Workshop : Two-level systems in glasses, November 25-27, *Paris (Fr)*.

Workshop : Gardner Day, January 19, *Montpellier (Fr)*, Organisor.

Poster presentations

- 2019 Simons Collaboration Annual Meeting, March 7-10, *New York (USA)*, Poster.
- 2018 Simons Collaboration Annual Meeting, March 8-9, *New York (USA)*, Poster.
- 2017 Simons Collaboration Annual Meeting, March 9-10, *New York (USA)*, Poster.
- CECAM Workshop Glass and Jamming Transitions, January 8-12, *Lausanne (Swz)*, Poster.

Summer schools

- 2021 Glassy Systems and Inter-Disciplinary Applications, June 28-July 7, *Cargese (Fr)*, Invited tutorial.
- Beg Rohu Summer School : Stat. Mechanics and Emergent Phenomena in Biology, May 31-June 12, *Quiberon (Fr)*, Poster.
- 2019 Beg Rohu Summer School : Glasses, Jamming and Slow Dynamics, June 24-July 6, *Quiberon (Fr)*, Poster.
- 2017 Boulder School : Frustrated and Disordered Systems, July 3-28, *Boulder (USA)*, Poster.

Internships

- 2015 **Research project**, University of Montpellier, France, 8 months.
Numerical investigation of the Gardner transition in finite dimensional glasses, with Ludovic Berthier.
- 2014 **Master - 2nd year**, Gulliver Lab, ESPCI Paris, France, 16 weeks.
Revisiting the coffee-ring effect with colloids and confocal microscopy, with Olivier Dauchot.
- 2014 **Master - 1st year**, Institute for Complex Systems, Rome, Italy, 16 weeks.
Elastic cages and anomalous diffusion in vibrated dense granular media, with Andrea Puglisi.
- 2013 **Bachelor**, Ecole Normale Supérieure de Lyon, France, 8 weeks.
Effect of a rigid nonpolar solute on the viscoelastic properties of a nematic liquid crystal, with Patrick Oswald.

Academic activities

Peer-review

Reviewer for Nature Physics, Nature Communications, Proceedings of the National Academy of Sciences, Physical Review (Letters, E, Fluids), The Journal of Chemical Physics, Soft Matter, J. Stat. Mech. : Theory and Experiments, Materials Today Physics, and Oxford University Press.

Organizational

- 2022- **Council member of the Lennard-Jones Centre**, Univ. of Cambridge.
- 2020-2022 **Organizer of the weekly Soft Matter group seminar**, DAMTP, Univ. of Cambridge.
- 2021-2022 **Member of the first Equality Diversity Inclusion working group**, Sidney Sussex College, Cambridge.
First working group aimed at writing the Equality, Diversity and Inclusion Policy Framework of the College.

Teaching and supervision

- Feb 2023 - **Internship supervision**, Raphael Urfin (M1, ENS, Paris).
- July 2023 Title : *Large Ecosystems with an Allee effect and non-reciprocal interactions*.
- Nov 2021 - **Research project supervision**, Kimlam Nguyen (Part III, Trinity College, Cambridge).
- May 2022 Title : *Understanding the giant speedup of particle-swap algorithms*.
- 2020-2022 **Admission interviewer in Mathematics and Natural Sciences**, Sidney Sussex College, University of Cambridge.
Interviewer for prospective undergraduate students, 20 h/year
- 2020-2021 **Volunteer for the 'For Girls in Science' program by the Fondation L'Oréal**.
Free tutoring in Mathematics, Physics, Chemistry for underprivileged high school girls, 2h/week
- 2016-2019 **Teaching Assistant**, University of Montpellier (64 h/year), Undergraduate tutorials (Classical Mechanics) and Practical Physics (Optics and Light).