QUENTIN GLORIEUX

LABORATOIRE KASTLER BROSSEL
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37 years old

OVERVIEW

Associate Professor, IUF Junior Fellow, Quantum Optics and Quantum Engineering experiments.

CURRENT AND PAST POSITIONS

IUF Junior Fellow 2018–2022
Institut Universitaire de France

Associate Professor of Physics 2013–
Sorbonne University – Science and Engineering Department, Paris

- Quantum Optics Research: fluids of light in exciton-polariton systems and warm atomic media, superfluidity, quantum simulation using atomic-based quantum memories
- Photonic Quantum Technologies Research: interactions between nano-emitters (SiV nanodiamonds, perovskite nanocrystals, colloidal quantum dots) and nanowaveguides (tappered fibers)
- Teaching: Quantum Mechanics, Optical engineering, Experimental Physics, and Scientific Computing

Marie Skłodowska-Curie Postdoctoral Fellow 2010-2013
National Institute of Standards and Technologies – NIST, Gaithersburg

- Laser Cooling & Trapping group of Prof. William D. Phillips and Paul D. Lett: research on four-wave mixing, atomic vapor photonic memory and quantum information in dispersive media

Invited Postdoctoral Fellow (6 months) 2012
Australian National University – ANU, Canberra.

- Quantum Optics group of Prof. Ping Koy Lam: research on quantum memory in cold atomic clouds

EDUCATION

Habilitation 2018
Sorbonne Université, France
Quantum Optics in Dense Atomic Media. From Optical Memories to Fluid of Light.

PhD in Physics 2007-2010
Université Paris Diderot, France.
Theory and Experiments on multimode entanglement using Four-Wave-Mixing in a hot atomic vapor
Thesis advisor: Prof. Thomas Coudreau. Laboratoire Matériaux et Phénomènes Quantiques

Master in Optics and Photonics 2006-2007
Ecole Polytechnique & Institut d'Optique, France
Academic/Research at ICFO - Prof. Juergen Eschner Group - Spain

Engineer Degree in Optics 2003-2007
Institut d'Optique – Graduate School, France

PENDING MANUSCRIPTS [ARXIV]

52. Dissipation-enhanced collapse singularity of a non-local fluid of light in a hot atomic vapor.
P. Azam, A. Fusaro, Q. Fontaine, J. Garnier, A. Bramati, A. Picozzi, R. Kaiser, **Q. Glorieux**, T. Bienaimé. arXiv:2103.06637, (2021).

51. Analogue cosmological particle creation in an ultracold quantum fluid of light.
J. Steinhauer, M. Abuzarli, T. Aladjidi, T. Bienaimé, C. Piekarski, W. Liu, E. Giacobino, A. Bramati, **Q. Glorieux**. arXiv:2102.08279, (2021).

50. Spontaneous generation, enhanced propagation and optical imprinting of quantized vortices and dark solitons in a polariton superfluid.
A. Maitre, F. Claude, G. Lerario, S. Koniakhin, S. Pigeon, D. Solnyshkov, G. Malpuech, **Q. Glorieux**, E. Giacobino, A Bramati. arXiv:2102.01075, Accepted in EPL (2021).

49. Controlled shock wave dynamics in a fluid of light.
T. Bienaimé, M. Isoard, Q. Fontaine, A. Bramati, A.M. Kamchatnov, **Q. Glorieux**, N. Pavloff. arXiv:2101.00720, Accepted in PRL (2021).

48. Blast waves in a paraxial fluid of light.
M. Abuzarli, T. Bienaimé, E. Giacobino, A. Bramati, **Q. Glorieux**. arXiv:2101.09040, Accepted in EPL (2021).

47. Short Bragg pulse spectroscopy for a paraxial fluid of light.
C. Piekarski, W. Liu, J. Steinhauer, E. Giacobino, A. Bramati, **Q. Glorieux**.
arXiv:2011.12935, (2020).

PEER-REVIEWED JOURNAL PAPERS [STATISTICS][ARXIV]

46. Parallel dark soliton pair in a bistable 2D exciton-polariton superfluid.
G. Lerario, L. V. Koniakhin, A. Maître, D. Solnyshkov, A. Zilio, **Q. Glorieux**, G. Malpuech, E. Giacobino, S. Pigeon, A. Bramati. Physical Review Research **2**, 042041(R), (2020).

45. Interferences between Bogoliubov excitations in superfluids of light.
Q. Fontaine, P-E. Larré, G. Lerario, T. Bienaimé, S. Pigeon, D. Faccio, I. Carusotto, E. Giacobino, A. Bramati, **Q. Glorieux**. Physical Review Research **2**, 043297, (2020).

44. Taming the snake instabilities in a polariton superfluid.
F. Claude, S. V. Koniakhin, A. Maitre, S. Pigeon, G. Lerario, D. D. Stupin, **Q. Glorieux**, E. Giacobino, D. Solnyshkov, G. Malpuech, A. Bramati. Optica **7**, 1660-1665, (2020).

43. Dark-soliton molecules in an exciton-polariton superfluid.
A. Maitre, G. Lerario, A. Medeiros, F. Claude, **Q. Glorieux**, E. Giacobino, S. Pigeon, A. Bramati. Physical Review X **10**, 041028, (2020).

42. Microcavity polaritons for quantum simulation.
T. Boulier, M. J. Jacquet, A. Maitre, G. Lerario, F. Claude, S. Pigeon, **Q. Glorieux,** A. Amo, J. Bloch, A. Bramati, E. Giacobino. Advanced Quantum Technologies, 202000052, (2020).

41. Highly photostable Perovskite nanocubes: toward integrated single photon sources based on tapered nanofibers.
S. Pierini, M. D'Amato, M. Goyal, **Q. Glorieux**, E. Giacobino, E. Lhuillier, C. Couteau, A. Bramati. ACS Photonics **7**, 2265−2272, (2020).

40. Polariton fluids for analogue gravity physics.
M. J. Jacquet, F. Claude, A. Maitre, T. Boulier, E. Cancellieri, C. Adrados, A. Amo, S. Pigeon, **Q. Glorieux**, A. Bramati, E. Giacobino. Phil. Trans. R. Soc. A. **378**, 20190225, (2020).

39. Nanofiber based displacement sensor.
C. Ding, M. Joos, C. Bach, E. Giacobino, E Wu, A. Bramati, **Q. Glorieux**. Applied Physics B **126**, 103, (2020).

38. Vortex stream generation and enhanced propagation in a polariton superfluid.
G. Lerario, A. Maitre, R. Boddeda, **Q. Glorieux**, E. Giacobino, S. Pigeon, A. Bramati. Physical Review Research **2**, 023049, (2020).

37. Hybrid device for quantum nanophotonics.
S. Pierini, M. D'Amato, M. Joos, **Q. Glorieux**, E. Giacobino, E. Lhuillier, C. Couteau, A. Bramati. Journal of Physics. **1537** 012005 , (2020).

36. Stationary quantum vortex street in a driven-dissipative quantum fluid of light.
S. V. Koniakhin, O. Bleu, D. D. Stupin, S. Pigeon, A. Maitre, G. Lerario, **Q. Glorieux**, A. Bramati, D. Solnyshkov, G. Malpuech. Physical Review Letters **123**, 215301, (2019).

35. Attenuation-free non-diffracting Bessel beams.
Q. Fontaine, H. Hu, S. Pigeon, T. Bienaime, E Wu, Giacobino E., A. Bramati, **Q. Glorieux**. Optics Express **27**, 30067, (2019).

34. Generating strong anti-bunching by interfering with coherent states.
R. Boddeda, **Q. Glorieux**, A. Bramati, S. Pigeon. Journal of Physics B **52**, 215401, (2019).

33. Fabrication and characterization of optical nanofiber interferometer and resonator for the visible range.
C. Ding, V. Loo, S. Pigeon, R. Gautier, M. Joos, E Wu, E. Giacobino, A. Bramati, **Q. Glorieux**. New Journal of Physics **21** 073060, (2019).

32. Full control of polarization in tapered optical nanofibers.
M. Joos, A. Bramati, **Q. Glorieux**. Optics Express, **27**, 18818 (2019).

31. Photonic crystal nanobeam cavities with optical resonances around 800 nm.
I. Saber, R. Boddeda, F. Raineri, D. Sanchez, G. Beaudoin, I. Sagnes, **Q. Glorieux**, A. Bramati, J.A. Levenson, K. Bencheikh. JOSA B, **36**, 1823 (2019).

30. Imaging light scattered by a subwavelength nanofiber, from near field to far field.
G. Blanquer, V. Loo, M. Joos, **Q. Glorieux**, Y. De Wilde, V. Krachmalnicoff. Optics Express, **27**, 350 (2019).

29. Observation of the Bogoliubov dispersion in a fluid of light.
Q. Fontaine, T. Bienaime, S. Pigeon, E. Giacobino, A. Bramati, **Q. Glorieux**. Physical Review Letters - Editors' Suggestion, **121**, 183604 (2018).

28. Polarization Control of Linear Dipole Radiation Using an Optical Nanofiber.
M. Joos, C. Ding, V. Loo, G. Blanquer, E. Giacobino, A. Bramati, V. Krachmalnicoff, **Q. Glorieux**. Physical Review Applied, **9**, 064035 (2018).

27. CdSe/CdS dot–in–rods nanocrystals fast blinking dynamics.
M. Manceau, S. Vezzoli, **Q. Glorieux**, E. Giacobino L. Carbone, M. De Vittorio J. P. Hermier, A. Bramati. ChemPhysChem, **19**, 1 (2018).

26. Coherent merging of counter-propagating exciton-polariton superfluids.
T. Boulier, S. Pigeon, E. Cancellieri, P. Robin, E. Giacobino, **Q. Glorieux**, A. Bramati. Physical Review B, **98** (2), 024503 (2018).

25. Lattices of quantized vortices in polariton superfluids.
T. Boulier, E. Cancellieri, N. D Sangouard, R. Hivet, **Q. Glorieux**, E. Giacobino, A. Bramati. Comptes Rendus Académie des Sciences. CR. Physique **17**, 893 (2016).

24. Injection of Orbital Angular Momentum and Storage of Quantized Vortices in Polariton Superfluids.
T. Boulier, E. Cancellieri, N. D. Sangouard, **Q. Glorieux**, A. V. Kavokin, D. M. Whittaker, E. Giacobino, and A. Bramati. Physical Review Letters **116**, 116402 (2016).

23. Localised excitation of a single photon source by a nanowaveguide.
W. Geng, M. Manceau, N. Rahbany, V. Sallet, M. De Vittorio, L. Carbone, **Q. Glorieux**, A. Bramati, C. Couteau. Scientific Reports **6**, 19721 (2016).

22. Exciton Fine Structure of CdSe/CdS Nanocrystals Determined by Polarization Microscopy at Room Temperature.
S. Vezzoli, M. Manceau, G. Leménager, **Q. Glorieux**, E. Giacobino, L. Carbone, M. De Vittorio, A. Bramati. ACS Nano **9**, 7992 (2015).

21. Vortex chain in a resonantly pumped polariton superfluid.
T. Boulier, H. Tercas, DD. Solnyshkov, **Q. Glorieux**, E. Giacobino, G. Malpuech, A. Bramati. Scientific Reports **5**, 9230 (2015).

20. Quantum mutual information of an entangled state propagating through a fast-light medium.
J.B. Clark, R.T. Glasser, **Q. Glorieux**, T. Li, K.M. Jones, and P.D. Lett. Nature Photonics **8**, 515 (2014).

19. Effect of charging on CdSe/CdS dot-in-rods single-photon emission.
M. Manceau, S. Vezzoli, **Q. Glorieux**, F. Pisanello, E. Giacobino, L. Carbone, M. De Vittorio, A. Bramati. Physical Review B **90**, 035311 (2014).

18. Advanced quantum noise correlations.
U. Vogl, R.T. Glasser, J.B. Clark, **Q. Glorieux**, T. Li, N.V. Corzo, P.D. Lett. New Journal of Physics, **16**, 013011 (2014).

17. Rotation of the noise ellipse for squeezed vacuum light generated via four-wave mixing.
NV. Corzo, **Q. Glorieux**, AM. Marino, JB. Clark, RT. Glasser, PD. Lett. Physical Review A **88**, 043836 (2013).

16. Gradient echo memory in an ultra-high optical depth cold atomic ensemble.
B.M. Sparkes, J. Bernu, M. Hosseini, J. Geng, **Q. Glorieux**, P.A. Altin, P.K. Lam, N.P. Robins, B.C. Buchler. New Journal of Physics **15**, 085027 (2013).

15. Spatially addressable readout and erasure of an image in a gradient echo memory.
J.B. Clark, **Q. Glorieux**, P.D. Lett. New Journal of Physics **15**, 035005 (2013).

14. Experimental characterization of Gaussian quantum discord generated by four-wave mixing.
U. Vogl, R.T. Glasser, **Q. Glorieux**, J.B. Clark, N.V. Corzo, P.D. Lett. Physical Review A **87**, 010101 (2013).

13. An ultra-high optical depth cold atomic ensemble for quantum memories.
B.M. Sparkes, J. Bernu, M. Hosseini, J. Geng, **Q. Glorieux**, P.A. Altin, P.K. Lam, N.P. Robins, B.C. Buchler. Journal of Physics, **467** 012009 (2013).

12. Generation of pulsed bipartite entanglement using four-wave mixing.
Q. Glorieux, JB. Clark, NV. Corzo, PD. Lett. New Journal of Physics **14**, 123024 (2012).

11. Extracting spatial information from noise measurements of multi-spatial-mode quantum states.
A.M. Marino, J.B. Clark, **Q. Glorieux**, P.D. Lett. European Physical Journal D **66**, 1 (2012).

10. Temporally multiplexed storage of images in a gradient echo memory.
Q. Glorieux, J.B. Clark, A.M. Marino, Z. Zhou, P D. Lett. Optics Express **20**, 12350 (2012).

9. Imaging using quantum noise properties of light.
J.B. Clark, Z. Zhou, **Q. Glorieux**, A.M. Marino, P.D. Lett. Optics Express **20**, 17050 (2012).

8. Quantum correlations by four-wave mixing in an atomic vapor in a nonamplifying regime: Quantum beam splitter for photons.
Q. Glorieux, L. Guidoni, S. Guibal, J.P. Likforman, T. Coudreau. Physical Review A Rapid Comm. **84**, 053826 (2011).

7. Time-resolved detection of relative-intensity squeezed nanosecond pulses in an ^{87}Rb vapor.
I.H. Agha, C. Giarmatzi, **Q. Glorieux**, T. Coudreau, P. Grangier, G. Messin. New Journal of Physics **13**, 043030 (2011).

6. Double-Λ microscopic model for entangled light generation by four-wave mixing.
Q. Glorieux, R. Dubessy, S. Guibal, L. Guidoni, J.P. Likforman, T. Coudreau, and E. Arimondo, Physical Review A **82**, 033819 (2010).

5. Strong quantum correlations in four wave mixing in ^{85}Rb vapor.
Q. Glorieux, T. Coudreau, L. Guidoni, J.P. Likforman. Proc. of SPIE **7727**, 772703 (2010).

4. Photoionisation loading of large Sr^+ ion clouds with ultrafast pulses.
S. Removille, R. Dubessy, **Q. Glorieux**, S. Guibal, T. Coudreau, L. Guidoni, J.P. Likforman. Applied Physics B **97** , 47 (2009).

3. Trapping and cooling of Sr+ ions: strings and large clouds.
S. Removille, R. Dubessy, B. Dubost, **Q. Glorieux**, T. Coudreau, S. Guibal, J.P. Likforman, L. Guidoni. Journal of Physics B **42**, 154014 (2009).

2. A standardised remote monitoring photographic capture system (RMPCS) for in-situ documentation of corrosion protection system tests.
J. Crawford, C. Degrigny, **Q. Glorieux**, P. Bugeja, D. Vella. Metals and Museums, 85-92, (2008).

1. Laser induced breakdown spectroscopy (LIBS): a new analytical technique for in situ study of painted artworks.
V. Detalle, **Q. Glorieux**, R. Bruder, D. L'Hermite, A. Semerok. L'Actualité Chimique, **98**, 104 (2007).

Dissemination articles

5. Et la lumière devint liquide. Sciences et Vie (Octobre 2017)
4. Rush a light wave and you'll break its data, say scientists. Science Daily (2014).
3. Physicists store short movie in a cloud of gas. MIT Technology Review (2012).
2. Short movies stored in an atomic vapor. Science Daily (2012).
1. Storing a short movie in an atomic vapor. SPIE NewsRoom (2012).

Invited Talks at International Conferences

15. Les Houches School on Quantum Technology, Les Houches, France, 09/20
14. French-German WE-Heraeus-Seminar 2020 - Long Range Interacting Quantum Systems: from Cold Atoms and Molecules to Photons, Online Conference, 09/20
13. IQUPS School 2019 - Lecture on Quantum Engineering, Palaiseau, France, 12/19
12. BEC 2019 - Bose Einstein Condensate, San Feliu, Spain, 09/19
11. Simulating gravitation in condensed matter and optical systems, Trento, Italy, 07/19
10. ICQOQI'2019 – Quantum Optics and Quantum Information, Minsk, Belarus, 05/19
9. JMC 2018 - Condensed matter and cosmology, Grenoble, France, 08/18
8. Quantum Fluid of Light and Matter QFLM18, Les Houches, France, 06/18
7. Condensates of Light, Bad Honnef, Germany, 01/18
6. School on Nano and Quantum Optics, Les Houches, France, 10/17
5. Universal Aspects of Quantum Turbulence, Nice, France, 10/17
4. Fluid of Light international workshop, Edinburgh, UK, 10/16
3. Photonics West, San Franciso, USA, 02/15
2. ICCS14, Hong Kong, China, 12/14
1. OSA International Conference on Quantum Information ICQI 11, Ottawa, 06/11

Invited Seminars and Colloquia

30. LPL Seminar, LPL, Villetaneuse, France, 04/21
29. ICFP Seminar, ENS, Paris, France, 09/20
28. NanoBright workshop, IIT, Lecce, Italy, 06/19
27. IPCMS – Université de Strabourg, Strabourg, France, 06/19
26. LP2N – Université de Bordeaux, Bordeaux, France, 06/19
25. Institut Néel – Université de Grenoble Alpes, Grenoble, France, 04/19

24. InPhyNi – Université de Nice Côte d'Azur, Nice, France, 04/19
23. GdR Complexe – Institut Langevin, Paris, France, 04/19
22. Colorado State University, Fort Collins, CO, USA, 02/19
21. University of Trento, BEC-Center, Italy, 02/19
20. University of Stuttgart, Tillman Pfau group, Germany, 12/18
19. University of Vienna, CoQuS Colloquium, Austria, 11/18
18. Université Nice Cote d'Azur, InPhyNi, France, 04/18
17. East China Normal University, Shangai, China, 12/17
16. Mairie de Paris, Emergences seminar, Paris, France, 05/17
15. Herriot Watt University, Daniele Faccio group, Edinburgh, UK, 04/17
14. Niels Bohr Institutet, Københavns Universitet, Peter Lodahl group, 03/17
13. Herriot Watt University, Daniele Faccio group, Edinburgh, UK, 11/16
12. Stanford University, Jelena Vuckovic group, CA, USA, 02/15
11. INO-CNR BEC Center, Trento, Italy, 01/15
10. East China Normal University, Shangai, China, 12/14
9. University of Science and Technology, Heifei, China, 12/14
8. Université Technologique de Troyes, UTT, Troyes, France, 04/14
7. Ecole Normale Supérieure Seminar, France, 10/13
6. Université de Genève, Nicolas Gisin group, Switzerland, 05/12
5. Australian National University - Physics department, Canberra, Australia, 05/12
4. Harvard University, Mikhail Lukin group, Boston, USA, 08/10
3. MIT, Vladan Vuletic group, Boston, USA, 08/10
2. Caltech, Jeff Kimble group, Pasadena, USA, 08/10
1. NIST-JQI, Bill Phillips group, Gaithersburg, USA, 07/10

Organization of scientific meeting

- 2021 – **Organizer** of a Scientific School in Cargese, France on Quantum information and quantum technologies 10 invited lecturers - 80 participants - 6 days.
- 2021 – **Member of technical program committee**: Quantum Optics of Atoms, Molecules, and Solids for CLEO:2021, San Jose, USA.
- 2020 – **Organizer** of a Scientific School in Les Houches, France on Quantum technologies with light and matter 8 invited lecturers - 40 participants - 6 days.
- 2019 – **Organizer** of the Colloquium on Fluids of Light at the 2019 SFP Congress, Nantes, France. 650 participants - 4 days.

- 2019 – **Organizer** of a Scientific School in Les Houches, France on Light-matter interaction 12 invited lecturers - 80 participants - 6 days.
- 2018 – **Organizer** of a Scientific School in Les Houches on Nano & Quantum Optics. 20 invited lecturers - 80 participants - 11 days.
- 2017 – **Member of program committee** for QCMC 2018 - Baton Rouge, USA.
- 2016 – **Member of the organizing committee** of the CNRS Physics days at Agay, France. 100 participants - 3 days.
- 2016 – **Co-Organizer** of the ANR Quandyde workshop on Quantum Fluids of Light at Sorbonne University, Paris. 30 participants - 2 days.
- 2010 – **Member of the organizing committee** of the LKB Scientific days at Chales, France. 150 participants - 3 days.

COMISSIONS OF TRUST

- 2020 – **Scientific Evaluator** for the FET Open European program.
- Since 2018 – **Scientific Evaluator** for the Marie Curie European fellowship program.
- 2017 – **Scientific Evaluator** for the ANR, french national funding agency.
- 2017 – **Scientific Evaluator** for the Caixa fellowship program.
- 2016 – **Scientific Evaluator** for the Grenoble University - AGIR funding program.
- 2015 – **Session Chair** at Photonics West 2015. Quantum Sensing and Photonic Devices.
- Since 2010 – **Reviewer** for Nature Physics, Nature Communications, Phys. Rev. Lett., Phys. Rev. A, Phys. Rev. B, Optics Express, Optica, EPJD, New Journal of Physics, Optics Letters, Scientific Reports, Applied Physics B, Applied Physics Letters.

FELLOWSHIPS AND AWARDS

- 2018 – IUF Junior Fellowship (5 years).
- 2016 – Invited Associate Professor at East China National University, Shanghai (1 month).
- 2014 – Paris Young scientist ”Emergences” award for starting an independent team.
- 2011 – Marie Curie IOF Postdoctoral fellowship (3 years).
- 2010 – NIST–JQI International Postdoctoral fellowship (2 years).

Teaching

- Since 2018. As an IUF Fellow, I am teaching only 64h/years since 2018. I am focusing my teaching activity on two courses: Scientific computing for Physicists and graduate lectures on Laser and quantum optics.
- 2018. **Main Online Instructor** for Quantum Mechanics course in the Virtual Exchange Program.
- Since 2013. **Teaching at the Physics Department of Sorbonne University**.
  192h of lectures per year.
  Undergraduate lectures in **Quantum Mechanics**, Wave Physics, Scientific computing.
  Undergraduate laboratory courses in **Optics**, Thermodynamics, Electronics.
  Graduate lectures in **Quantum Optics** and **Lasers**.
  Advisor for students who are half-time studying and half-time working as apprentice.
  Supervisor of the Quantum Mechanics class for undergraduate students ($\simeq$ 200 students).
- Since 2017. **Member of the academic council** in charge of the allocation of resources for teaching (number of hours, fundings, ECTS).
- 2012. **Online Instructor** to a Massive Online Open Course (MOOC) on Coursera.org : "Exploring Quantum Physics" under the supervision of V. Galitski and Charles Clark.
- 2007-2010. **Teaching Assistant** : 64h per year - Tutorials of Mathematics for biologists and physicians at Université Paris Nord.

PhD theses Supervision

1. Mathieu Manceau – PhD 2014 – Co-supervision, "Single CdSe/CdS dot-in-rods fluorescence properties." *UPMC*. Now Assistant Prof. at University Paris Nord.
2. Thomas Boulier – PhD 2014 – Co-supervision, "Controlled vortex lattices and non-classical light with microcavity polaritons." *UPMC*. Now Junior Research Chair at ENS, Paris.
3. Maxime Joos – PhD 2018, Supervision, "Hybrid devices : nanoparticles coupled to optical nanofiber" *Sorbonne University*. Now postdoc at UCSB.
4. Quentin Fontaine – PhD 2020, Supervision, "Paraxial fluid of light in hot atomic vapors." *Sorbonne University*. Now postdoc at C2N, Palaiseau.
5. Anne Maitre – PhD 2020 – Co-supervision, "Generation, propagation and control of quantized vortices and dark solitons in polariton superfluids." *Sorbonne University*
6. Chengjie Ding – PhD 2021 – CSC Fellowship – Co-supervision, "Nanofiber resonators for non linear optics." *Sorbonne University - East China Normal University*
7. Murad Abuzarli – PhD (graduation in 2021) – Supervision, "Photonic quantum simulations in quantum memories." *Sorbonne University*
8. Wei Liu – PhD – CSC Fellowship (graduation in 2022) – Supervision, "Optomechanical signature of superfluidity of light." *Sorbonne University*
9. Ferdinand Claude – PhD (graduation in 2022) – Co-supervision, "Analogue gravity experiments in exciton-polariton systems" *Sorbonne University*
10. Tangui Aladjidi – PhD (graduation in 2023) – Supervision, "3D quantum fluids of light in the paraxial geometry" *Sorbonne University*

Master theses Supervision

1. Salma Aziam – Master 2014, "Etude du couplage de nanocristaux à une fibre optique étirée." *UPMC*
2. Nicolas D. Sangouard – Master 2014, "Propriétés quantiques de la lumière émise par des polaritons dans un micropilier semiconducteur excité hors résonance." *ENS Cachan*
3. Pauline Boucher – Master 2015, "Superfluidity of light." *Ecole Polytechnique*
4. Antonine Rochet – Master 2015, "An Introduction to Quantum Fluid of Light." *UPMC*
5. Peyuan He – Master 2015, "Fabrication of microfiber knots and tips." *UPMC*
6. Stefano Pierini – Master 2016 – Co-supervision, "Experimental study of superfluidity effects in quantum fluids of light." *Universita de Firenze*
7. Dhruv Sharma – Master 2016, "Superfluidity of light." *Ecole Polytechnique*
8. Agostino Apra – Master 2017, "Superfluidity of light in a nonlinear atomic medium." *Sapienza, Universita di Roma*
9. Romain Gautier – Master 2017, "Étude théorique de microstructures photoniques basées sur des nanofibres optiques." *UPMC*
10. Ferdinand Claude – Master 2019, "Interactions between imprinted solitons in exciton-polariton systems." *Sorbonne University*
11. Sagnik Ghosh – Master 2019, "Feedback loop for an infinitely long fluid of light simulation." *Indian Institute of Science Education and Research (IISER), Pune*
12. Andrés Martínez de Velasco E. – Master 2019, "Numerical simulations for generating a defect potential in a fluid of light." *Freie Universität Berlin*
13. Huiqin Hu – CSC Fellowship 2019, "Scattering, thermalization and shockwaves in a fluid of light." *Sorbonne University - East China Normal University*
14. Tangui Aladjidi – Master 2020, "High resolution phase camera using the WHISH algorithm." *Ecole Polytechnique*
15. Clara Piekarski – Master 2020, "Bragg spectroscopy in a paraxial fluid of light." *Ecole Polytechnique*
16. Yuhao Liu – Master 2020, "Analogue gravity in polariton superfluids." *Sorbonne University*
17. Yanis Ghanem – Master 2020, "Hawking radiation in a polariton quantum fluid." *Institut d'Optique*

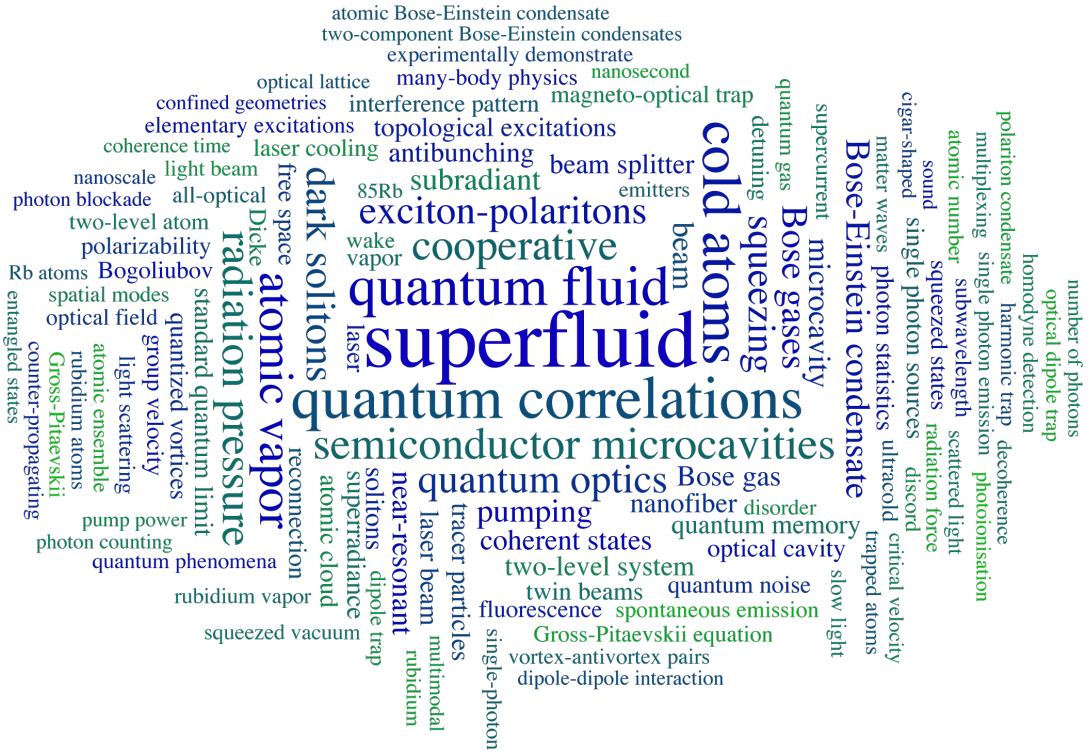
Institutional Responsibilities

- 2018 · Today – **Elected member** at the Science faculty board of Sorbonne University.
- 2016 · 2018 – **Supervisor** of the international mobility program for Master students at the Sorbonne Physics Department.
- 2014 · 2018 – **Board member** of the Laboratory Kastler Brossel executive and scientific committee.
- 2014 · 2019 – **Elected member** of the national CNU committee (Conseil National des Universités) - Atomic Physics & Optics division. Substitute Member.
- 2008 · 2010 – **Elected student member** of the Université Paris Diderot scientific committee.
- Since 2013 – **Member** of the LKB Dissemination and Outreach committee, organizer of the Quantum Optics internal seminar, co-organizer of Fete de la Science : a national general public event with lab visits and scientific hands-on demonstrations.

Funding [≈ 2.3M€ over 6 years including 1M1€ as PI or coordinator]

- Emergences Ville de Paris, "Nano^2 - Nanocrystals in nanofiber Fabry-Perot cavities", 238,000€, **PI**, (2014 - 2018).
- Ile de France Research program , "COSINE - Controlled Nanopositioning of Single Emitters in nanostructured environments", 121,000€, **PI**, (2015 - 2017).
- Agence Nationale de la Recherche (ANR) - Accueil Chercheur de Haut Niveau, "C-FLight – Correlated fluid of light : hydrodynamical and thermodynamical aspects", 440,000€, **Coordinator**, (2015 - 2019).
- Agence Nationale de la Recherche (ANR) - Projet collaboratif, "UNIQ – Unconventional Integrated nanophotonic sources with Quantum correlations", 155,000€, **Partner**, (2016 - 2020).
- Agence Nationale de la Recherche (ANR) - Projet collaboratif, "TeraMicroCav – Génération de rayonnement Téra-Hertz dans des microcavités semiconductrices", 168,000€, **Partner**, (2016 - 2020).
- Agence Nationale de la Recherche (ANR) - Projet collaboratif, "QFL - Quantum Fluids of Light", 237,000€, **Partner**, (2016 - 2020).
- European Quantum Technologies Flagship - Quantera, "PhoQuS - Photons for Quantum Simulation", 320,000€, **co-Investigator and WP leader**, (2018 - 2021).
- Institut Universitaire de France (IUF) Junior Fellowship, "Q-Flame - Quantum Fluids of Light in dilute Atomic Media", 255,000€, **PI**, (2018 - 2023).
- SIRTEQ - PME, "Vortex-Mix", 55,000€, **PI**, (2019-2021).
- SIRTEQ - Equipement Mi-Lourd, "Hydro-Live", 180,000€, **Partner**, (2020-2023).

SCIENTIFIC INTERESTS



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