

## CURRICULUM VITAE

Frédéric Caupin

Born Oct. 20<sup>th</sup> 1976 in Douai (France)

Professor, 1<sup>st</sup> class

[frederic.caupin@univ-lyon1.fr](mailto:frederic.caupin@univ-lyon1.fr)

<http://ilm-perso.univ-lyon1.fr/~fcaupin/>

Institut Lumière Matière

Univ. Claude Bernard Lyon 1, CNRS, Univ. Lyon

 [85 publications](#) cited >3030x,

h=31 ([WoS](#), [Scopus](#)); >4340x, h=34 ([Scholar](#))

### CURRICULUM AND DIPLOMAS

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Nov. 2<sup>nd</sup> '09 **Habilitation à diriger des recherches**, Ecole Normale Supérieure :

*From helium to water: capillarity and metastability in two exceptional liquids*

1997 – 2001 **PhD Thesis**, University Paris 6, specialty Quantum Physics, Sébastien Balibar dir.:

*Cavitation in helium 3: a Fermi liquid at negative pressure*

1994 – 1998 Studies at Ecole Normale Supérieure

1996 – 1997 DEA in Quantum Physics (*summa cum laude*)

1995 – 1996 Maîtrise of Physics (*magna cum laude*)

Agrégation of Physical Sciences, specialty Physics (rank: 4<sup>th</sup>)

1994 – 1995 Licence of Physics (*magna cum laude*). Licence of Mathematics (*summa cum laude*). Maîtrise in Applied Mathematics (*with honors*)

1992 – 1994 Preparatory classes at Louis Le Grand, Paris

1991 – 1992 Terminale C at A. Châtelet high school, Douai. Baccalauréat C (*summa cum laude*)

### PROFESSIONAL EXPERIENCE

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Nov. 1<sup>st</sup> 2010 **Professor** at University Claude Bernard Lyon 1

April 2004 Short-term JSPS (Japan Society for the Promotion of Science) fellow

1 m collaboration with T. Minoguchi, Prof. D. Yoshioka lab, Tokyo Univ., Japan

**Maître de Conférences** at Ecole Normale Supérieure

Sept. 1<sup>st</sup> 2001 Confirmed Researcher NATO fellow. Visiting research associate,

1<sup>st</sup> sem. 2000 Prof. H.J. Maris lab, Brown Univ., Providence, RI, USA

**Agrégé Préparateur** at Ecole Normale Supérieure

1998 – 2001

### AWARDS AND RECOGNITION

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- 2021 Cécile DeWitt-Morette Great Prize from the [French Academy of Sciences](#)
- 2016 Helmholtz Award from [International Association for the Properties of Water and Steam](#)
- Outstanding Referee for [Rev. Sci. Instr.](#) (2011) and [American Physical Society](#) (2014)
- Junior member of Institut Universitaire de France (oct. 10 – oct. 15)
- 1993: Silver medal, 25<sup>th</sup> International Chemistry Olympiads
- 1992: 1<sup>st</sup> prize, Regional Chemistry Olympiads ; 1<sup>st</sup> prize Concours Général de Physique

### FUNDED RESEARCH HISTORY (as PI only)

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May 2020 **ANR-DFG H2D2OX**: *Light water, heavy water, and sodium chloride aqueous solutions*

- Nov. 2023 *under extreme conditions to shed light on water anomalies and structural properties.*

March 2018 **Hubert Curien Partnerships** with R. Grisenti, Goethe Univ., Frankfurt,

- Dec. 2019 and J. Hruby, Czech Acad. of Science, Prague.

Jan. 2017- **PICS CNRS collaboration** with C. Valeriani, Univ. Complutense, Madrid

Dec. 2019 *Supercooled and stretched liquids: a combined experimental and numerical approach*

Feb. 2016- **Labex iMUST DynaCool**: *Dynamics in supercooled aqueous solutions : looking for*

Oct. 2019 *viscosity and molecular diffusion decoupling in water-rich mixtures*

Oct. 2009 **ERC Starting Grant WASSR**

- Sept. 2015 *Water anomalies in the stretched and supercooled regions*

March 2010 **ANR-NSF AnomWater**: *International Collaboration in Chemistry Origins of the*  
- Oct. 2013 *anomalous thermodynamics and dynamics of metastable liquid water*

## RESPONSABILITIES

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- **Mentoring** : 10 post-doctoral associates, 11 PhD students, 35 interns (15 M2, 12 M1, 8 L3)
- **Member of 17 PhD** (8 review, 4 abroad) **and 3 “habilitation” committees** (1 review)
- **Reviewer** of >220 papers for Nature (Nature, Phys., Mat. & Comm.), APS (Phys. Rev. Lett., B, E & X), AIP (J. Chem. Phys., Phys. of Fluids, Rev. Sci. Instr), ACS (JACS, J. Phys. Chem. Lett., J. Phys. Chem. B), RSC (PCCP, Soft Matter, Langmuir, Cryst. Eng. Comm.), JLTP, EPL...
- Member (2017 – ) commission documentation research, BU Lyon 1
- Member of the Scientific Committees of conferences: [9<sup>th</sup> Liquid Matter](#), Lisboa, 2014; [26<sup>th</sup> StatPhys.](#), Lyon, 2016; [10<sup>th</sup> Liquid Matter](#), Ljubljana, 2017
- Member (2011-2015) of College 6 (Structure and dynamics of liquids and glasses) of Institut Laue-Langevin, Grenoble, to select among proposals to use the neutron facility
- **Reviewer** for research funding agencies: France (8: ANR, Rhône-Alpes, Ville de Paris, Labex PALM), Europe (5: ERC, ERA Chemistry, CECAM), USA (3: DoE, NSF, Stanford), Italy (2 MIUR), Poland (2 NSC), Switzerland (2 FNS), Autriche (1 FWF), Canada (1 NFRF)

### Administrative duties :

- 2021 – Referee for ~100 1<sup>st</sup>-2<sup>nd</sup> yrs students: survey their registration, follow their progress
- 2019 – Member of the French National Committee for Universities, section 28
- 2010 – Member of the consulting committee for section 28 at UCBL
- 2008 – 2010 Representative of teaching and research staff at the Scientific Council of ENS
- 2006 – 2010 Member of the Council of Laboratoire de Physique Statistique
- 2003 – 2008 Member of the committee for section 28 at ENS
- 1999 – 2002 Representative of teaching and research staff  
at the Administrative and Scientific Councils of ENS
- 1997 – 2001 Representative of PhD students at the ENS Physics Department Council
- 1997 – 1998 Representative of science students, Administrative and Scientific Councils of ENS

## RESEARCH DISSEMINATION

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**85 publications** : 1 book chapter, 56 peer-reviewed papers, 29 peer-reviewed conference proceedings. cited >3030x, h=31 ([WoS](#), [Scopus](#)); >4340x, h=34 ([Scholar](#))

**International conferences**: 40 talks (29 invited), 13 posters. 28 seminars (11 abroad)

**Co-organizer** of [Water 2014](#): *Metastability and nucleation in water: theory, experiments, and applications*, Ecole de Physique des Houches; mini-colloquium *Dynamics in water and aqueous solutions* de [Condensed Matter in Paris](#), 2014; [WaterX](#): *Exotic properties of water under extreme conditions*, Nice, 2016 ; sessions *Thermophysical Properties of Polyamorphic Fluids* [20<sup>th</sup> symposium on thermophysical properties](#), Boulder, 2018, *Properties of Metastable and Glassy Systems* [21<sup>st</sup> symposium on thermophysical properties](#), Boulder, 2021

**Lectures** outside UCBL: Preci, 2016; DESY Water Week 2020; doctoral school, Rennes, 2021

**Broad audience conferences** at Espace des Sciences de Paris, ESPCI, sept. 2003 : *Bulles : son et lumière* and the Physics Olympiads, UCBL, déc. 2011 : *L'eau dans tous ses états*

**27 disseminations in medias** : Le Monde, France Culture, La Recherche, Science et Vie, Sciences et Avenir, Physics World, Physics, Journal du CNRS...