

Curriculum Vitae – February 2025

Christophe SALOMON

Research Director Emeritus at Laboratoire Kastler Brossel
Ecole Normale Supérieure,
24 rue Lhomond, 75005, Paris, France.

Academic Qualifications

- 1973-76 Engineering school: Ecole Centrale des Arts et Manufactures de Paris (France).
- 1979 3rd Cycle Thesis: high resolution saturation spectroscopy with waveguide CO₂ lasers.
- 1984 PhD, Paris 13 University: Ramsey fringes and high-resolution spectroscopy in the infrared.
Advisor: C. Bordé.

Previous Academic Positions

- 1980 CR2, Research Associate at CNRS, France. LPL, Paris 13 University, Villetanneuse.
- 1984 Post-doctoral stay: JILA, University of Colorado, group of J. Hall.
- 1985 CR1, Research Associate, first class, at CNRS. Laboratoire Kastler Brossel, Ecole Normale Supérieure, Paris.
- 1990 Research Director 2nd class at CNRS.
- 2000 Research Director 1st class at CNRS. Head of laser cooling group with J. Dalibard.
- 2013- 2020 Research Director (exceptional class) at CNRS. Head of ultracold Fermi gas group at ENS, 2008-2020.

Research Interests

Laser cooling and trapping of atoms, laser cooled atomic clocks, precision measurements and fundamental tests. Bose and Fermi quantum gases.

Prizes, Honors

- 2024 chevalier dans l'ordre des Palmes Académiques, FR
- 2020 Doctor Honoris Causa University of Neuchâtel, CH
- 2017 Elected at the French Academy of Sciences
- 2017 ERC Advanced Research Grant laureate of the European Union (2017-2021)
- 2014 Fellow of the American Physical Society. Galileo Ferraris memorial lecture award, INRIM (IT).
- 2012 Grand Prize Louis D. from Institut de France
- 2011 Médaille Jules Haag, société française de microtechnique et chronométrie
- 2011 A. von Humboldt -Gay-Lussac Award
- 2008 ERC Advanced Research Grant laureate of the European Union (2009-2013)
- 2005 "Three physicists" prize, ENS (FR). Cold atoms and quantum gases.
- 2000 Mergier-Bourdeix Grand Prize of the French Academy of Sciences.
- 1993 European Time and Frequency Prize: fountain clocks.
- 1993 Philip-Morris Prize: cold atom clocks.
- 1988 Science and Defence Young Researcher Prize.

Publication record: 194 papers in peer-reviewed journals, over 23500 citations, h-index: 69 (source Google scholar). Most cited papers: Laser cooling of cesium below 3 microkelvins, Ramsey resonance in a Zacharias fountain, Quantum projection noise in an atomic fountain: A high stability cesium frequency standard, Measurement of the hydrogen 1s-2s transition frequency by phase-coherent comparison with a microwave fountain clock, New limits on the drift of fundamental constants from laboratory measurements.

Formation of matter-wave bright solitons, Bloch oscillations of atoms in an optical potential, Quasi-pure Bose-Einstein condensate immersed in a Fermi sea, Experimental study of the BEC-BCS crossover region in lithium 6, Weakly bound dimers of fermions, Thermodynamics of the unitary Fermi gas, Dual Bose Fermi superfluids.

324 invited talks in international conferences. 211 colloquia and seminars.