

WALLON Samuel



Civil status:

Date of birth: 15 October 1969 in Boulogne sur Mer.
Nationality: French
Marital status: Married, four children

Status: Professor
Paris-Saclay University (Physics Depart., section 29) .

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Cursus:

1989-1992: Ecole Polytechnique.
Internship at SPhT (CEA Saclay) with Alain Billoire, André Morel, Vincent Pasquier (on Potts model)
Physics prize of Ecole Polytechnique.
Graduated from Ecole Polytechnique, Palaiseau, 1992.

1992-1993: DEA (Master) of Theoretical Physics, Ecole Normale Supérieure, Paris, 1993.
Internship at Institut d'Astrophysique de Paris with Robert Mochkovitch (on gamma burst in GR).

1993-1996: PhD student at SPhT (CEA Saclay).
Defended 17 September 1996 (Orsay University), *Congratulations from the jury* (highest distinction).

2009: Habilitation to conduct research (HDR), the highest degree in French university system.
Defended 8 December 2009 (Orsay University).

Professional experience:

1996-1997: *Humboldt fellow*, Institut für Theoretische Physik II, Hamburg University (DESY) with Jochen Bartels.

1997-2020: **Associate Professor**, Pierre et Marie Curie University (UPMC).

1997-1998: Permanent member of IPN's Theoretical Physics Division (Orsay and its Paris branch (LPTPE)).

1998-2000: Permanent member of LPNHE/LPTPE, visitor at LPTMS and then at LPT (Orsay).

2001-2019: Permanent member of LPT (Orsay).

2012-2020: Senior Associate Professor.

Since 2020: **Head of IJCLab's Theoretical Physics Division.**
Professor at Paris-Saclay University (promoted 1st class in 2024)

Teaching experience:

1993-1996: Physics lecturer, Orsay University. Math examiner, Lycée Janson de Sailly.

1997-2020: Associate Professor in physics (UPMC, now Sorbonne University).

Bachelor: Tutorials, Lab work in various bachelor levels.

Master: Tutorials (Master 1 UPMC) and lectures (Master 1 of the Ecole Normale Supérieure, Paris and UPMC).
Tutorials (Master 2 ICFP of Theoretical Physics at Ecole Normale Supérieure, Paris).
Lectures (Master 2 ICFP of Theoretical Physics at Ecole Normale Supérieure, Paris, and Master 2 NPAC at Orsay).

PhD: Winter school of the “GDR Nucléon” (French research network).
Four series of lectures at the Doctoral Schools ED 107 and ED 517.
Lectures at the Zagreb School on Theoretical Physics.

Since 2020: Professor at Paris-Saclay University.

Bachelor: Lectures/tutorials in double degree Math/Phys. (1st year) and double degree Phys./Chemistry (3rd year).
Tutorials in 2nd year: physics degree, engineering “Polytech” degree ; preparation for selective exams.

Master: Lectures/tutorials in Master 1 *General Physics* and *Erasmus Mundus Lascaia*.
Lectures in Master 1 *Physics* at the Ecole Normale Supérieure, Paris-Saclay and Paris-Saclay University.

Responsibilities and management:

- Referee: *Physical Review Letters, Physical Review D, Phys. Lett. B, Nuclear Physics B, European Physical Journal C, JHEP, Progress in Particle and Nuclear Physics, Few-Body Systems, Mod. Phys. Lett. A.*
- Expertise: ERC Starting Grant, CEA-Eurotalents (France), National Science Centre (Poland), National Fund for Scientific and Technological Development (Chili).
- Organization: Member of the *International Advisory Committee of Baryon 2013* and *Baryon 2016*.
Convener of the session *Small-x, Diffraction and Vector Mesons* session, *DIS 2013*.
Co-organizer of 12 workshops and international conferences, of 4 national workshops and conferences.
Founder and Chair of 5 international schools « QCD » at Orsay (2012, 2014, 2016, 2018, 2025).
- Project management: *PI* of 3 projects PHC-Polonium France/Poland (2011-2012, 2016-2017, 2019-2021).
PI of the PEPS-PTI (2013-2014) « PHENO-DIFF » and PRC CNRS-SIBERIE (2013) « DIFF-QCD ».
PI of the ANR Dense-QCD (2006-2010).
Head of LPT's team of the ANR *PARTONS* (2013-2016).
- Research management: Scientific animator of the Paris-Saclay GIS « La Physique des deux Infinis » (P2I) (2008-2011).
Member of the Board and Selection Committee of the *Labex P2IO* (2013-2014).
Deputy head of the French national network *GDR PH-QCD*; coord. of « hadron 3D » (2011-2014).
Head of the French national network GDR QCD (2016-2020).
- Management: Member of the *Expert Commission* of the 29th section of Orsay University (2001-2004).
Member of the LPT's *Laboratory Council* (2010-2019).
Member of the working group *Physics of the 2 infinities* for the future Paris-Saclay University (2013).
Member of the *Enlarged Scientific Council of the Faculty of Physics* of UPMC (2013-2018).
Member of the **DPhN's Scientific Council** (CEA/IRFU) (2014-2018).
Member of the **Labex P2IO Board of Directors** (2015-2019).
Member of the *Teaching Council* of Faculty of Physics of UPMC (2015-2017).
Paris-Saclay correspondent for the Master 2 Theoretical Physics ICFP, ENS Paris (2016-).
Elected member of the **CNRS national evaluation and hiring committee, section 02** (2016-2021).
Co-leader of the merging project CSNSM-IMNC-IPNO-LAL-LPT towards IJCLab (2018-2019).
Associate Scientific Director of IJCLab, Head of the Theoretical Physics Division (1/1/2020-).
Member of *physics degree committee* of the Physics Graduate School of Paris-Saclay (2021-).
Member of the Council of the Physics Graduate School of Paris-Saclay (2021-).
Elected member of the *Specialist Advisory Board*, Paris-Saclay University, sections 29-34 (2022-).
Member of the Board of Directors of the Doctoral School STFCM of Cosenza University (2022-).
- Recruitment panels: Invited external member of the CNRS hiring committee, section 01 (2017).
Associate professor hiring committees, Tours Univ. (2018) and Nantes Univ. (2022).
Hiring committee for a professor position, Paris-Saclay University (2021).
- Other panels: Oral examiner for the entrance competition to the French Ecoles Normales Supérieures (2006-2012).
Thesis and HDR thesis committee (not counting my own students): 12 PhDs and 3 HDR.
3rd year committee, ENS d'Architecture de Paris Malaquais (2015). Various Master committees.

Mentoring:

- Master:* M1: F. Nortier (14), F. Wade (15), S. Verma, I. Soudi (16), R. Lefèvre (18), A. Goudeau (22), S. Mandal (24)
M2: B. Ducloué (11), L. Leduc (12), R. Boussarie (13), E. Li (20), F. Buttafuoco, J. Yarwick (23), D. Perez (24).
- PhDs :* M. Segond (04-07), M. El Beiyad (07-10), A. Besse (10-13), B. Ducloué (11-14), R. Boussarie (13-16), E. Li (20-23), J. Yarwick (23-), D. Perez (24+); 3 long PhD internships: A. Perri (13), M. Fucilla (21-23), G. Gatto (23).
- Post-Docs:* F. Schwennsen (08-09), G. Chirilli (09-10), K. Semenov (09-11), C. Lorcé (11-13), L. Almeida (12-13), V. Vila (21), S. Nabeebaccus (21-24), C. Flett (22-24), J-M. Morgado Chavez (22-24).

Outreach: **Film** “*Les mystères du proton*” (CEA/IRFU/DPhN and IJCLab) (2024)

Scientific work: 160 publications (INSPIRE : 8700+ citations, hHEP=41) among which :

- 56 articles in peer-reviewed journals (+3 submitted).
- 89 articles in peer-reviewed conference proceedings and other conference papers.
- 16 technical reports and experience proposals.

Awards: Research investment bonus (Sorbonne Université, 2010-2020); RIPEC-C3 bonus (Paris-Saclay, 2022-).

Research topics: *particle physics, hadronic physics*

- Unitarization and gluonic saturation in high-energy QCD.
- QCD phenomenology in the perturbative Regge limit.
- Exclusive medium and high-energy processes: multidimensional nucleon tomography, spin physics.
- Factorization of hard processes: proofs, radiative corrections, power corrections, threshold resummations.
- Non-perturbative methods: AdS/QCD matching, quasi and pseudo distributions on the lattice.