

Curriculum Vitae



Marc BAADEN

Born on 23 mai 1972 in Strasbourg (France), married, two children
Dual nationality French and German

Current status

Senior principal investigator position as Research Director at CNRS (DR1)

Head of the Laboratory of Theoretical Biochemistry (LBT, UPR 9080): *international referent in theoretical biophysics*, Paris

Scientific Delegate at CNRS Chemistry (INC, INS 1620): *strategic leadership in AI/computing/data*, Paris

Administrative allocation: 80% assigned to UPR 9080 and 20% to INS 1620

Occasionally active as expert consultant (micro-enterprise Baaden Scientific)

Education, distinctions and awards

In Germany:

- School leaving examination ('Abitur', 1991), Valedictorian, Bilingual curriculum (German/French).
- Degree ('Diplom-Vorprüfung') in chemistry (1994), University of Karlsruhe.

In France:

- Degree in chemical engineering at EHICS (1997), Strasbourg, Tri-lingual curriculum (French, English, German) in chemistry, specialty: material sciences. Valedictorian. 6 months stay at Toshiba, Japan.
- Diploma thesis in physical chemistry (1997), Univ Louis Pasteur, specialty: spectroscopic methods.
- European PhD Thesis in theoretical chemistry (2000), ULP Strasbourg / ETH Zurich, summa cum laude.
- French Habilitation diploma ('Habilitation à Diriger les Recherches') : 10 Juin 2010.

Distinctions - awards

5 scientific awards (1997-2013) + 3 Scientific Excellence Bonuses (Awards: EHICS excellence, Strasbourg '97; thesis award Scientific Council ULP, Strasbourg '01; young researcher award Molecular Graphics and Modeling Group '03; young researcher award Physical Chemistry Division of the French Chemical Society '10; *HP Best presentation award*, Journée Aristote Collaborative Visualization '13; SEB: 2010-17; 2020-24)

Key highlights

- CNRS Research Fellow (2003) → LBT Director (2016) → Research Director DR1 (2018)
- 189 publications, H=47, 7577 citations → 12 supervised PhD theses
- Vice-president EuroHPC Panel → EU Expert (ERC, Pathfinder) → €10,5M funding
- 10 distributed software packages (>22,500 downloads)

Research and career path

1997 to 2000 : MNESR PhD fellowship awardee; teaching duties, then ATER position at ULP Strasbourg

2001 to 2003 : **EC Marie Curie Research Fellow** at Oxford University, Pr. Sansom's group

2003 to 2012 : **Chargé de Recherche CNRS** at LBT ; 1st class since 2007 ; Team leader since 2007

Since 2012 : **CNRS Research director** ; 1st class since 2018

2015 to 2016: Deputy head of the LBT laboratory (Head Ph. Derreumaux)

Since 7/'16 : **Head of the LBT** laboratory (currently 30 to 40 staff, 17 of them permanent)

Since 2019 : **Scientific Delegate** at CNRS Chemistry (section 15/computation, data, AI)

Skills

- * Biophysics and biological mechanisms, in particular membrane proteins
- * Structural bioinformatics, molecular dynamics simulations and high performance computing
- * Scientific visualization, virtual reality and interactive simulations

Publications (>180)

- International peer-reviewed journals : **119**
- Peer-reviewed conference proceedings : **21**
- Book chapters and writings : **11**
- Other (including outreach): **38**

Scientific community engagement: 42 international conferences (including CECAM, Lorentz, 2x Faraday Discussions, VCBM, IEEE VR) and 27 national events (including JTMS, SFCi, ORAP, Aviesan, GGMM, GEM, SFB)

Talks, conferences, seminars (>340)

- Author of 120 invited conferences and seminars (56 of which were at international conferences)
- Author or co-author of 74 oral communications at conferences (25 international and 49 national)
- Author or co-author of 151 poster communications

International impact: expertise for funding agencies in 16 countries, representing France at PRACE/EuroHPC, active collaborations with 15 countries (resulting in joint publications): USA, Canada, Germany, China, Austria, Australia, Spain, Italy, Japan, Norway, Czech Republic, UK, Uruguay, India, Netherlands

Supervision of young scientists and teaching activities

* Research supervision and mentoring :

- Supervision or co-supervision of 12 PhD theses (11 defended) + 12 other PhD students (> 3 months)
- 17 M1-level trainees, 11 M2-level and 33 other internships
- 22 post-doctoral fellows (1 still in the lab, 20 working in research or industry)

* Involvement in teaching :

- more than a total of 906 hours in TD equivalence ; currently about 20 per year
- design of innovative teaching projects: RIGOLE interdisciplinary week, MOOC origins of life, Escape from PharmaZ board game with augmented reality application

Acquisition of grants and funding (selected examples from academia and industry in the last 5 years)

- * Managing partner of the Aquafoldamer project, ANR CE06, 2023 to 2027, 621k€ over 4 years.
 - * Managing partner of the Merlin project, ANR CE45, 2021 to 2025, 609k€ over 4 years.
 - * Managing partner of the SuperET project, ANR CE29, 2021 to 2025, 481k€ over 4 years.
 - * Managing partner of the MinOmics project, ANR CE45, 2019 to 2024, 559k€ over 4 years.
 - * Scientific leader of an industrial research project with UCB Biopharma, Belgium, 2016 to 2021, 199k€.
- €10.5M funding throughout career including 14 ANR projects and international industrial collaborations, involvement in the design of LABEX DYNAMO 1 & 2, EQUIPEX CACSICE and EU COFUND projects.

Innovation and software development: 10 software solutions distributed to the scientific community, some with industrial support: MolPlay, MDDriver, BioSpring, Epock, MDVerse and UnityMol, with >22,500 downloads and several awards (Sourceforge Community Award, Open Science Prize 2024).

Management activities: community responsibilities and main professional expertise activities

- * At laboratory level:
 - head of the laboratory since 2016 (deputy head since 2015)
 - team leader since 2007 (team size variable from 2 to 8 non-permanent members)
 - member of the Laboratory Council for 22 years
- * At university level:
 - member of the Scientific Council of the UFR Sciences du Vivant (2017 and 2018)
 - EAD team leader for the ED 388 doctoral school
 - member of selection committees 4x IR/IE/AI, 7x MCF/Prof/CPJ (sections 31 and 64)
 - member of 59 PhD, 8 HDR, 4 award, 4 internship panels, across 10 countries
- * At national level:
 - officer at CNRS Chemistry (AISSAI and DDOR Steering boards, CECAM liaison)
 - vice-chair of the ANR committee TSIA 2025 (AI in physical chemistry and STEM)
 - member of the National Committee for Scientific Research (section 13, 2008-2012)
 - member of HCERES committees (2016 to 2025)
 - president of the CT7 computing time committee of GENCI 2014 to 2020
 - president of the learned society GGMM (2013 to 2015); member of its executive board
 - elected member of the GDR3333 (liaison to supercomputing centres) since 2018
 - board member of the learned society « Groupe d'Etude des Membranes » since 2011
- * International:
 - recurring expert and auditor for the EU (ERC, PathFinder, ERN/ACSA/IDOM)
 - member of the Scientific Advisory board of ScalaLife, then BioExcel since 2012
 - representative of France to the PRACE Access Committee since 2016; Vice-chair of the committee since 2019; Now Vice-Chair of the EuroHPC SuperPanel and Extreme Panel
 - expert for research funding agencies (16 countries)
 - reviewer for several international journals (ca. 20 articles / year)

Consulting services for ca. 10 industry partners worldwide including Air Liquide, UCB BioPharma, Servier labs and other large corporations. Since 2020 this activity is managed by my own company 'Baaden Scientific'.