

Roland Pellenq

Curriculum Vitae

Contact info

Tel : + 33 6 62 92 28 33

Email: Roland.Pellenq@cnrs.fr

Professional Preparation

- Aix-Marseille University (France), Hon. Master Degree in Physics, 1989
- Imperial College London (UK), PhD Physical Chemistry, 1994
- Université d'Orléans (France), Habilitation Diploma (HdR), 2000

Appointments

With the Centre National de la Recherche Scientifique (CNRS, France):

- Directeur de Recherche at CNRS (DRCE1), 2022 – present
- Directeur de Recherche at CNRS (1st class), 2012 – 2023
- Directeur de Recherche at CNRS (2nd class), 2007 – 2012
- Chargé de Recherche at CNRS, 1995 – 2007

With the Massachusetts Institute of Technology (MIT, US):

- Senior Research Scientist, Jan. 2011 – Jan. 2020
- Visiting Professor, July 2008 – Dec. 2010

Research

Author of 230+ publications in peer-reviewed scientific journals (including PNAS, Phys. Rev. Lett, Nat. Mat, Nat. Com. Nanoletters, Acta Materialia, Soft Matter, etc.), of 85+ conference proceedings, 11 chapters in books, **Editor** of 5 books and **Co-inventor** of the 1st MIT-CNRS patent, I develop multi-scale modeling approaches (starting from the scale of atomic processes including chemical reactivity) based on Statistical Physics applied to the study of porous and complex materials such as clays, cement paste, gels, geopolymers... at the interface between the Physics of colloids and the Physics of glasses and disordered materials with the ambition to make the link with the poro-mechanics of continuous media and engineering scales. Since 2016, I have also been involved in developing Urban Physics in order to establish the link between the texture of the city and phenomena such as the effect of urban heat islands or urban resilience to extreme phenomena such as hurricanes and flooding.

Synergistic Activities

At CNRS (France):

2023 – present: Head of the Theory and Simulation Group at the European Institute of Membranes, Montpellier, France.

2012 – 2020: Director of the International Research Laboratory CNRS / MIT - IRL3466, Multi-Scale Materials for Energy and Environment, <MSE>²

2020 – 2024 : Co-director (with Prof. Emanuela Delgado, Dpt of Physics, Georgetown University, Washington DC) of the CNRS International Research Network IRN « USERS, Urban Science and Engineering for Resilience and Sustainability »

2011 – 2019: Co-director (with Dr. Pierre Levitz, PHENIX, CNRS-Sorbonne U., Paris) of the CNRS International Research Network IRN « M2UN, Multiscale Materials Under the Nanoscope »

2012 – 2017: Director of the Laboratory of Excellence (LABEX) - French National Agency of Science, Interdisciplinary Center on Multi-scale Materials for Energy and environment (ICoME2)



At the George Washington University (Washington-DC, US):

2020 – 2023: Deputy-Director of the International Research Laboratory CNRS / George Washington University, *EPiDaPO*

At MIT (Cambridge, US):

2012 – 2020: Director of the International Research Laboratory CNRS / MIT / Aix-Marseille Université - IRL3466, Multi-Scale Materials for Energy and Environment, <*MSE*>²

2009 – 2020: Scientific Director of the Concrete Sustainability Hub @ MIT (CSHub@MIT), cement/concrete industry-academia partnership for the reduction of the environmental footprint of concrete (sponsored by Portland Cement Association and National Ready-Mix Concrete Association).

Others:

Since 2013: Member of the scientific council of CEA/DAM

Since 2013: Promotor of the Marseille Winter School on Porous Materials, Polytech AMU

Since 2016: Expert for the US-Department of Energy (DoE)

Since 2016: Expert for the ANR (French NSF)

2014 – 2019: Editor in chief, Journal of Nano and Micro Mechanics (JNM) edited by the American Society of Civil Engineering, ASCE, <https://ascelibrary.org/page/jnmoco/editorialboard>

2013 – 2018: President of the Francophone Carbon Society, SFEC.

Awards

2019: Laureate of the « Prix Special du Jury, Trophées de l’Innovation d’Aix-Marseille » *for his contribution to the international relations of Aix-Marseille Université*

2018: Laureate of the research Medal 2018 of the European Network ALERT – Geomaterials » *for his contribution to Research in Geomechanics*

2017: Laureate of the « Appreciation Award of the Engineering Mechanical Institute (EMI) of the US » *for his outstanding service to the community in the US and outside and dedication as co-chair of the EMI2018 conference*

2003: Laureate of the « Young Researcher Award » 3rd Festival of Scie&Tech of Marseille.

2002: Laureate of the « Young Researcher Award », Division de Physique-Chimie, Société Française de Chimie and Société Française de Physique

1993: Laureate of the « Post-Graduate Bonus » (Imperial College, London) for his PhD thesis

Scientific Production (May 2024)

With an h-factor > 70 and 15500 citations, I'm ranked among the 1% of the most cited scientists all-disciplines-considered (worldwide ranking by Stanford University).

<https://data.mendeley.com/datasets/btchxktzyw/2>.

Number of publications in peer review journals:	238
• Number of invited conferences:	93
• Number of publications in peer-review conference proceedings:	85
• Number of patents	1
• Number de wide audience publications / interviews (journals, radio, TV)	39
• Number of chapters in books	11
• Number of books as editor	5
• Number of oral presentations in symposia:	160
• Number of lab seminars:	50
• Number of posters in symposia	66