Résumé of PAOLO G. RADAELLI August 2023

Education

- Laurea degree (MSc) General Physics Università degli Studi di Milano (Italy), March 1986. Final grade: 110/110 "Summa cum Laude". Dissertation Topic: "Renormalization Group for Lattice Gauge Theories with Z_n symmetry."
- Ph.D. Experimental Solid State Physics Illinois Institute of Technology, Chicago IL, Fall 1992. Dissertation Topic: "Oxygen ordering and superconductivity in pure and Ca-substituted REBa₂Cu₃O_{6+x} systems."

Honours

- Occhialini Medal (Sept 2023), Jointly awarded by the Institute of Physics and the Società Italiana Fisica.
- *Knight of the Star of Italy (July 2017)*, awarded by the President of the Italian Republic for services to the UK-Italy scientific cooperation.

Membership of professional societies

• Fellow of the Institute of Physics (2012), Member of the British Crystallographic Association, Member of the American Physical Society.

Recent Professional Positions

- Dr Lee's Professor of Experimental Philosophy, The Clarendon Laboratory, Department of Physics, Oxford University and Professorial Fellow at Wadham College, Sept 2008 –. Also, Associate Head of Physics, Sept 2010 Sept 2017, and Head of Condensed Matter Physics, Sept 2011 Sept 2017.
- Editor-in Chief, Advances in Physics (Taylor & Francis) September 2021 -
- STFC Fellow (formerly CCLRC Fellow and Band 2 Individual Merit) July 2003-Aug 2008.
- Crystallography and Engineering Group Leader, ISIS Facility Aug 2004 2008.

Advisory Roles

- Chair of the Science Council of the Institut Laue-Langevin (Grenoble, France) (2023, Vice Chair 2020 –)
- Chair of the User Working Group for beamline CSXID at the new Diamond-II project 2020 –
- *Member of the Scientific Advisory Board for the Max-Planck Institut* für Chemische Physik Fester Stoffe Dresden, 2015 2023
- Member of the HCÉRES Review Committee for CNRS institutes, France, 2018.
- Member of the UK-ESS Project Board, 2014 –, of the UK Committee on ESS, 2014 –, and of the Scientific Advisory Committee for the Italian contribution to ESS, CNR (Italy), 2016 –. PGR co-authored a of major review of the Italian neutron programme (2019).
- Member of the Science Advisory Committee of the Italian Embassy in the UK, 2014 -
- Member of the STFC Physical Sciences and Engineering Advisory Committee, 2012 2016
- Member of the Research Evaluation Committee at Institute for Basic Science (IBS), Korea, 2012 -

Other esteem indicators

- Main organiser and Programme Chair of the international Quantum Materials Symposium (2019). Chair of the Programme Committee of the International Conference on Neutron Scattering (2013). Member of the Programme Committee of the International Union of Crystallography Conference – IUCr 2015 and of the European Conference on Neutron Scattering – ECNS 2011.
- Since 2012, *15 invited talks at international and national conferences, workshops and symposia*, including the Alex Muller Workshop, Erice, August 2023, a Keynote Talk at EPDIC17 (Sibenik, May 2022), CPS-IOP symposium on Topological Materials (2020), APS March Meeting (2019), Gordon Research Conference on Multiferroics (2018), QMS2018 (Shanghai, China), QMS2020 (Maui, USA, held 2022), APS March Meeting Tutorial Session (Chicago, March 2022).
- Distinguished Visiting Scientists at the Max Plank Institute MPSD (Hamburg), 2017 -
- STFC Visiting Senior Fellow, Sept. 2008 -

Research Experience

- Throughout my career, I studied **magnetic**, electronic and structural effects in transition metal oxides and related compounds, employing a combination of scattering techniques on powders, single crystals and films. These include neutron scattering (including neutron spherical polarimetry) and synchrotron X-ray scattering and spectroscopy (including resonant X-ray scattering anomalous scattering and PEEM), complemented by electron diffraction, magnetic, transport, electrical and optical measurements, thermal analysis and electron microscopy (SEM, TEM).
- As a scientist and Group Leader at large-scale neutron facilities, I have contributed to the development
 of neutron diffraction instrumentation and techniques, including SuperD2B (ILL), Gem, WISH and
 other new instruments both on the first and on the second target station at ISIS. I also chair the User
 Group of the CSXID beamline(Diamond II), and sponsored the multi-national MANTID software project.

Recent teaching/examining experience

- Assessor (examiner) for the B6 3rd-year Condensed Matter Physics paper
- Head of Prelim Practical Course (General Physics) 2018 -
- Symmetry in Condensed Matter Physics, graduate course at the University of Oxford (since 2010).
- Condensed-Matter Physics: Structure and Dynamics, 4th year undergraduate option course at the University of Oxford (2009 2016).

Management and organisational experience

- 2010-2017: *Head of Condensed Matter Physics* (CMP), a sub-department of the Department of Physics at the University of Oxford with 25 academics and Advanced Fellows, 37 PDRAs and 93 DPhil students. PGR also *heads the Quantum Materials Theme*.
- Associate Head of Physics, in charge of research facilities and infrastructures for the whole Department.
- As ISIS Crystallography Group Leader, I have *supervised 15 scientists* in the CRY-ENG group, serving as *project scientist and project sponsor* for instrument valued at over £10M.

Training ad supervision

- Recognised with an Inaugural Award for Outstanding Research Supervision, Oxford University (MPLS), 2023.
- Since I moved to Oxford, *I have supervised 12 DPhil (PhD) students*. Two of them (Dr A. Hearmon and Dr N. Waterfield-Price), won the national PANalytical Thesis Prize.
- I have supervised many post-doc and junior members of staff, for example:
 - *Dr Roger D. Johnson* (PDRA 2011-2015) won the BCA Physical Crystallography Prize in 2014, a Royal Society URF in 2015 and the IoP/RSC BTM Willis Prize in 2018. He is now a lecturer at UCL.
 - Prof. Laurent Chapon was a junior collaborator at ISIS (2002–2008). He won the BCA Physical Crystallography Prize in 2008 and was Physical Sciences Director at the Diamond Light Source, now Director at APS (Chicago).

Grant and Project portfolio

As PI, £12.62 million, including

- Oxford Quantum Materials Platform Grant (EPSRC, 2015–2020, £2.2M).
- New concepts in multiferroics and magnetroelectrics, (EPSRC 2011–2015, £646,400).
- As Co-I, £11.77 million, including
- Halide segregation in hybrid perovskites for Si tandem photovoltaics (EPSRC 2017-2021, £1.2M)
- Centre for Applied Superconductivity (Oxfordshire Local Enterprise Partnership, 2015–2020, £6.5M)

Peer Review

• Member of the European Research Council ERC PE3 CoG evaluation panel (2011-2019), Divisional Associate Editor for Physical Review Letters (2002-2008), EPSRC Peer Review College 2006-present.