

Curriculum Vitae

Family name, First name: de' Medici, Luca
 Researcher unique identifier: ResercherID **H-5071-2011**
 Address: ESPCI, 10 Rue Vauquelin
 75231 Paris cedex 05
 E-mail Address: luca.demedici@espci.fr

Current Research Position

01/2020 - present Professor, ESPCI, Paris

Previous Research Positions

02/2017 - 12/2019 Associate Research Director, ESPCI, Paris
 11/2013 - 01/2017 Theory Scientist, European Synchrotron Radiation Facility
 11/2012 - 10/2013 Researcher - CNRS, LPEM, ESPCI Paris
 2009 - 2012 Researcher - CNRS (Personal Grant ANR "Retour Post-Doctorants 2009")
 Laboratoire de Physique des Solides, Orsay
 2008 - 2009 Post-Doc CNRS , Laboratoire de Physique des Solides, Orsay (Prof. [REDACTED])
 2008 Invited Researcher, Rome University "Sapienza"
 2006 - 2008 Post-Doc, Rutgers University (Prof. [REDACTED])
 2005 Exchange PhD Student ("Alliance" program) - Columbia University ([REDACTED])
 2002 - 2006 Allocataire de Recherche MENRT (PhD student)

Education

09/2006 Ph.D. in Physics, Université Paris-Sud. Highest grade ("Très honorable")
 Advisor: Prof. [REDACTED] (Ecole Polytechnique).
 06/2002 Master in Solid state physics and dense media, Ecole doctorale de la region parisienne.
 (ENS, Ecole Polytechnique, Université Paris-Sud, UPMC)
 05/2001 "Laurea in Fisica" (110/110 cum laude). Università di Roma "La Sapienza", Italy

Qualifications

07/2017 "Abilitazione scientifica nazionale" - Italian qualification for Full Professor
 02/2014 "Qualification à Professeur des Universités" - French qualification for Full Professor
 12/2013 "Abilitazione scientifica nazionale" - Italian qualification for Associate Professor
 12/2012 "Habilitation à diriger les recherches", Université Paris-Sud - French diploma for
 Research Director, "Hund's physics and Mott selectivity in d-electron materials", full marks
 02/2008 "Qualification à Maître de conférences" - French qualification for Assist. Professor

Referee Activity for International Journals and Funding Agencies

Nature Physics, Nature Communications, Physical Review Letters, Physical Review B, Europhys. Letters,
 DOE, ANR, DFG, NSERC, Fulbright

Committees

Assistant Professor (Maître des Conférences) hiring committees (France), PhD committees (U. Paris-Sud, U.
 Copenhagen, U Graz, U Diderot), Funding committee (Polish Foundation for Science)

Organization of scientific meetings

- 2019 "Cutting-edge Topics in Quantum Materials" International Conference (ParisEdge2019), ESPCI-Paris, September 2019, Main organizer and funder
- 2017 "Cutting-edge Topics in Quantum Materials" International Conference (ParisEdge2017), ESPCI-Paris, October 2017, Main organizer and funder
- 2014 Mini-symposium in "Condensed Matter Division international conference", CMD25-JMC14, August 2014, Paris, co-organizer.
- 2013 "The New Generation in Strongly Correlated Electron Systems" - Sestri Levante, Italy, July 2013, co-organizers: C. Giannetti (University of Brescia) and J. Bauer (Harvard University).
- 2010 "Edge Topics in Correlated Materials", International Conference, (ParisEdge2010), May 2010 Orsay and Paris, Main organizer.

Teaching Activities

- 2020 - present 196 hours/year of teaching and teaching assistance at the undergraduate, ESPCI, Paris courses: Quantum Physics, Numerical Approaches to electronic states.
- 2014-2019 90 hours of teaching and teaching assistance at the undergraduate level, ESPCI, Paris course: Quantum Physics.
- 2017 "Autumn School on Correlated Electrons" Forschungszentrum Jülich, Germany - Lecturer
- 2017 Sfb-ViCoM "Winter school on Magnetism", Wien, Austria - Lecturer
- 2015 "XIX Training Course in the Physics of Correlated Electron Systems", Vietri, Italy - Lecturer
- 1997-2000 450 hours of teaching assistance and design of didactic experiments, Rome University.

Supervision of graduate students

- 2020-2023 [REDACTED] - ESPCI/Université PSL
- 2017-2020 [REDACTED] - ESPCI/Université PSL
- 2015-2018 [REDACTED] - ESRF/Université de Grenoble J. Fourier
- 2009-2013 [REDACTED] - Université Paris-Sud, co-directed with M. Rozenberg,

Fellowships and Grants

- 2016 ERC Consolidator Grant, mark "A: high-quality and recommended for funding", funded (1.66 M€/5 yrs).
- 2015 ERC Consolidator Grant, mark "A: high-quality and recommended for funding", funds not available.
- 2009-2012 Grant "Retour des PostDoc 2009" from Agence Nationale de la Recherche (314 k€/3 yrs)
- 2008-2009 Post Doc funding on proposed project, RTRA-Triangle de la Physique
- 2002-2005 PhD Research French national fellowship ("Allocation de Recherche MENRT")
- 2001-2002 Fondazione "Angelo della Riccia", funding for postgraduate study abroad
- 1997-2000 Teaching Fellowship (Borsa di collaborazione), Università di Roma "La Sapienza"
- 1995-1996 Waiving of the university tuition fee for merit - Università di Roma "La Sapienza"

Research Keywords

Quantum field theory, Strongly correlated systems and materials. Dynamical Mean-Field Theory, Slave-variable mean-fields. Unconventional superconductors, Heavy fermions. Mott transition, orbital-selectivity, Hund's physics. Optical and transport properties of strongly correlated materials. Thermoelectricity.

Selected invited presentations to international conferences

- M2S - "Materials and Mechanisms for Superconductivity", Beijing, Aug 2018
- FISMAT 2017, ICTP, Trieste, Oct 2017
- MPI Dresden, "Strong Correlations and the Normal State of the High-Tc Superconductors", May 2016
- DPG Spring Meeting 2016, Regensburg, Germany

- **The Psi-K 2015 Conference**, Donostia - San Sebastian, Spain
- KITP Workshop **IRONIC14**, UCSB S. Barbara, invited participant (1 month) and speaker
- **APS March Meeting 2014**, Denver, Colorado
- "Bad Metal Behaviour and Mott quantum criticality", Pohang, South Korea, 2013.

among the total 33 invitations to international conferences and workshops, 10 contributions and 34 invited seminars (Oxford, Princeton, Collège de France, SISSA, NORDITA, Sherbrooke, Buenos Aires, Tokyo...)

Patents

"Traitement thermique d'un cable électrique", french patent FR-1551663 (2017) - PCT extension EP3262661.

Bibliometrics

(as of June 30th 2021, real time bibliometrics are accessible via this link: www.researcherid.com/rid/H-5071-2011)

