

CURRICULUM VITAE

Personal Information

Family name: MESZAROS ("MESAROS" in publications) Gender: Male
Name: Andrej Birthday: 16/02/1982
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Google Scholar: <http://scholar.google.com/citations?user=cZBZo5EAAAAAJ>
arXiv, ORCID: http://arxiv.org/a/mesaros_a_1.html , ORCID: 0000-0002-5971-832X

Education and Research Experience

Oct 2018 - current Laboratoire de Physique des Solides, Université Paris-Saclay, CNRS, Orsay
CNRS CR CN (chargé de recherche)
May 2017 - Sep 2018 CNRS CDD researcher with Prof. Pascal Simon

Sep 2014 - Apr 2017 Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca NY
Postdoctoral researcher with Prof. Eun-Ah Kim

May 2011 - Sep 2014 Physics Department, Boston College, Chestnut Hill MA
Postdoctoral researcher with Prof. Ying Ran

Sep 2006 - Apr 2011 Lorentz Institute for Theoretical Physics, Leiden University, The Netherlands
PhD student with Prof. Jan Zaanen.
PhD Thesis:
"Dislocations in Stripes and Lattice Dirac Fermions"
Full text: <https://scholarlypublications.universiteitleiden.nl/handle/1887/16013>
Defense: October 6, 2010., awarded by Faculty of Science, Leiden University
Jury:
Prof. dr. J. Zaanen (Leiden University),
Prof. dr. J.M. van Ruitenbeek (Leiden University),
Prof. dr. C. Morais Smith (Utrecht University)
dr. C. F. J. Flipse (Technical University Eindhoven)
Prof. dr. C. W. J. Beenakker (Leiden University)
Prof. dr. A. Achúcarro (Leiden University)
dr. V. Vitelli (Leiden University)
<https://scholarlypublications.universiteitleiden.nl/access/item%3A2960890/view>

Oct 2001- Jul 2006 Faculty of Physics, Belgrade University, Serbia
Undergraduate and Master degree in theoretical physics

Mentoring

Postdoc

Oct 2023 – Oct 2026 [co-supervisor Prof. P. SIMON]:
Lena ENGSTRÖM [supervision 50%]
Mar 2024 – Jul 2024 Alfonso MAIELLARO [50%]

PhD

[co-supervisor Prof. P. SIMON]:
Oct 2026 - Benoît FANTON: Collective modes in flat-band superconductors [50%]
Oct 2026 - Axel GUILLE: Dynamics of magnetic impurities in superconductors [50%]
Oct 2025 - Simão CARDOSO: Defects in flat-band systems [50%]
Oct 2024 - Andrii SYROTA: Topological amorphous matter [50%]
Oct 2023 - Reda NABIL: Impurities in Dirac-like models [50%]
Oct 2020 – Dec 2023 Mateo ULDEMOLINS NIVELA [50%] – currently researcher at INRIA Paris
“Theoretical modeling and analysis of impurity-bound states in superconductors”
<https://theses.fr/2023UPASP119>
Oct 2019 - Dec 2022 Jean-Baptiste TOUCHAIS [50%] – currently postdoc at NCKU Taiwan
“New topological states from inhomogeneous spin-orbit coupling”
<https://www.theses.fr/2022UPASP162>
Oct 2017 - Oct 2020 Maxime GARNIER [50%] – Adjunct to head of Quantum Tech. program, INRIA
“Magnetic textures for topological superconductivity”
<https://www.theses.fr/2020UPASP027>
2011 - 2014 Daily supervision of doctorate student Bing YE, Boston College, MA

Internship

[co-supervisors C. Morice, J.-N. Fuchs, M. Hervé, P. Simon]
Mar 2026 M2: Benoît FANTON (3 months) [50%]
Mar 2026 M2: Axel GUILLE (3 months) [50%]
Mar 2026 M2: Emmanuel CALDERON (3 months) [30%]
Oct 2025 L1: Tom MAZERAND (3 years Research track) [100%]
Mar 2025 L3: Tamara EL-SAKKOUT (3 months) [50%]
Mar 2025 M2: Simão CARDOSO (3 months) [50%]
Mar 2024 M2: Andrii SYROTA (3 months) [50%]
Mar 2024 M2: André SOARES (3 months) [20%]
Mar 2024 M2: Alejandro LASSO CASTILLO (3 months) [20%]
Mar 2023 M2: Reda NABIL (3 months) [70%]
M2: Olivier FAYET (3 months) [30%]
M1: Elisa AUFFRAY (3 months) [30%]
Apr 2022 M1: Tangchao LIU (3 months) [70%]
Mar 2020 M2: Mateo ULDEMOLINS NIVELA (3 months) [50%]
M2: Anastasia SKURATIVSKA (3 months) [50%]
Mar 2019 M2: Jean-Baptiste TOUCHAIS (3 months) [50%]
M1: Mateo ULDEMOLINS NIVELA (3 months) [50%]
M1: Arfor HOUWMAN (3 months) [50%]
M1: Ramal AFROSE (3 months) [100%]
Mar 2017 M2: Ana-Marija NEDIĆ (3 months) [50%]

Tutorship

2023-current Monitoring Committee of a PhD project (Comité de Suivi Individuel):
7 PhDs from Université Paris-Saclay, École Polytechnique, Université Paris Cité

Teaching Experience

2021 - current Codeveloped, TD+exam, “Quantum Theory of Condensed Matter”, in master M2 QLMN program of Paris-Saclay University, 4x3hr per semester
2007 - 2009 Teaching assistant for 2 master courses at Leiden University, The Netherlands

Lectures and Outreach

July 2026 “Superconductivity and defects”, TIDES school on disordered superconductivity
May 2024 “Topological Superconductivity”, Lecture at École thématique GDR MEETICC Topo2024
2015 Developed “Liquid Crystals Kit” for CCMR Lending library, Cornell University
“Liquid Crystals”, Workshop for Teachers in Elementary&Middle schools, NYC
2001 – 2006 Lecturer of physics and mathematics for Astronomy Program at Petnica Science Center for gifted highschool students, Petnica, Serbia.

Responsibilities

Sep 2019 – Sep 2026 The organizer of Theory group seminar (cca 180 speakers, room+online)
“Séminaire de la Théorie de la Matière Condensée sur le Plateau”
Jan 2026 – current Elected member of the Laboratory Council at LPS
Jan 2026 – current Adjoint of responsible for Axe 2 of research at LPS (“Low-dimensional phenomena”)
Jul 2023 Co-organizer of a Mini-Colloquium at the 150-year Congress of SFP
2018 - current Participant in 4 funded projects (ANR) with experimental groups

Awards

2024 “Frontiers of Science Award” in Condensed Matter Physics category, awarded for impactful original work
<https://www.icbs.cn/site/pages/index/index?pageId=2cd3eaea-5f56-4cb1-9276-5a3a9ca39223>
2013 Excellence in Reviewing Award, *Annals of Physics*
2004 The award and one year scholarship of the Dr. Djordje Živanović fund for the best two students of Faculty of Physics, Belgrade

Invited Talks at International Conferences and Workshops

2025 “Real-space response to impurities: Extracting band topology”,
Workshop on Geometry and Topology Beyond Perfect Crystals, NORDITA, Stockholm

- 2024 *"Real-space shape of impurity states in 2D superconductors"*,
International Workshop on Ultrafast spectroscopy and 2D materials,
Sorbonne University, Paris
- 2024 *"Quasiparticle focusing of Yu-Shiba-Rusinov states in 2D superconductors"*,
Superstripes conference, Ischia, Italy
- 2023 *"Domain walls in spin-orbit coupling in graphene"*,
Superstripes conference, Ischia, Italy
- 2019 *"Excitations due to defects in topological superconductors"*,
Superstripes conference, Ischia, Italy
- 2018 *"Excitations due to defects in topological superconductors"*,
New Platforms for Topological Superconductivity with Magnetic Atoms, MPI
PKS Dresden
- 2017 *"In-gap excitations due to defects in topological superconductor with spin-orbit
coupling"*, S-hybrids COST workshop, Les Arcs
- 2017 *"Neural Network approach to nanoscale cuprate charge density modulations"*,
Superstripes conference, Ischia, Italy
- 2016 *"Commensurate features of Cuprate Charge Density Modulations"*,
Superstripes conference, Ischia, Italy

Contributed talks and Seminars

- 2026 *"Defect-bound states: Real-space shape, and extracting band topology"*,
Uppsala University
- 2025 *"Detecting band topology via impurities"*, International Workshop, Sorbonne
University, Paris
- 2024 *"Topological defects"*, LPTMC, Paris
- 2022 *"Topological defects in spin-orbit coupling"*, LOMA, Bordeaux
- "Quasiparticle focusing of bound states in superconductors"*, GDR MEETICC,
Ax-les-Thermes
- 2018 *"Anyons on topological defects"*, Institut Néel, Grenoble
- 2017 *"Excitations on topological defects in 2D superconductors with spin-orbit coupling"*,
GDR Physique Quantique Mésoscopique, Session plénière, Aussois
- "Creating fractionalized particles using topological defects"*, Laboratoire de
Physique Théorique de la Matière Condensée, UPMC, Paris
- 2016 *"Universality of commensurate 4a-period charge density modulations throughout the
cuprate pseudogap regime"*, APS March Meeting, Baltimore, Maryland
- 2015 *"Short-ranged charge modulations in cuprates: r-space or k-space?"*, LPTMC,
UPMC, Paris
- "Pairing instabilities of a Non-Fermi liquid in the presence of nematic and gauge
fluctuations"*, APS March Meeting, San Antonio, Texas
- 2014 *"Correlated Phases in quarter doped Honeycomb Lattice"*, APS March Meeting,
Denver, Colorado
- 2013 *"A classification of symmetry enriched topological phases with exactly solvable
models"*, APS March Meeting, Baltimore, Maryland
- "Changing topology by knotting in the three-dimensional Toric Code"*, APS March
Meeting, Baltimore, Maryland
- 2012 *"Dislocations and their braiding in topological insulators"*, APS March Meeting,
Boston, MA
- 2011 *"Electronic states of graphene grain boundaries"*, APS MM, Dallas, Texas

2010

"Dislocations in Graphene, Cuprates and Topological Insulators", Physics Department, Boston College, Chestnut Hill, Massachusetts

"Local electronic liquid crystallinity and topological defects, application to high T_c cuprate STM data", APS March Meeting, Portland, Oregon

"Gravitational parallel transport and Berry phases of Dirac fermions in graphene containing dislocations and disclinations", FOM Veldhoven Meeting, The Netherlands