



# Luca Martinoia

PH.D. STUDENT IN THEORETICAL PHYSICS

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## Experience

### Postdoctoral researcher

UNIVERSITY OF PADOVA, LABORATORY OF INTERDISCIPLINARY PHYSICS (LIPH)

- Supervisors: Samir Suwais, Amos Maritan, Sandro Azaele

[Padova, Italy](#)

July 2024 – to date

### Postdoctoral researcher

UNIVERSITY OF GENOA, PHYSICS DEPARTMENT

- Supervisor: Nicodemo Magnoli

[Genoa, Italy](#)

February 2024 – to date

### Visiting Researcher

UNIVERSITÉ LIBRE DE BRUXELLES

- Visiting Ph.D. student, supervised by Riccardo Argurio

[Bruxelles, Belgium](#)

October 2022 – December 2022

## Education

### Ph.D. in Theoretical Physics

UNIVERSITY OF GENOA, PHYSICS DEPARTMENT

- Advisor: Andrea Amoretti
- Postgraduate school (online): *SFT 2021 – Lectures on Statistical Field Theories*, GGI – Florence, Italy – 8 to 19/02/21
- Workshop (online): *Emergent Hydrodynamics in Condensed Matter and High-energy Physics*, Max Planck Institute for the Physics of Complex Systems – Dresden, Germany – 2 to 6/05/22
- Workshop: *Holographic perspectives on chiral transport*, ECT\* – Trento, Italy – 13 to 17/03/23
- Workshop: *Hydrodynamics at all scales*, NORDITA – Stockholm, Sweden – 16 to 23/09/23

[Genoa, Italy](#)

October 2020 – to date

### Master's degree in Theoretical Physics

UNIVERSITY OF GENOA, PHYSICS DEPARTMENT

- Grade: 110/110
- Thesis title: *Anomalous hydrodynamic description of thermoelectric transport in a Weyl semimetal*

[Genoa, Italy](#)

2014 – 2020

### Bachelor's degree in Physics

UNIVERSITY OF GENOA, PHYSICS DEPARTMENT

- Grade: 110/110 *cum laude*

[Genoa, Italy](#)

2011 – 2014

## Publications – Google Scholar – INSPIRE

The authors are listed alphabetically. Titles are DOI links.

### Relaxation terms for anomalous hydrodynamic transport in Weyl semimetals from kinetic theory

JOURNAL OF HIGH ENERGY PHYSICS 02, 071 (2024)

September 2023

A. Amoretti, D.K. Brattan, *L. Martinoia*, I. Matthaiaakakis, J. Rongen

### Restoring time-reversal covariance in relaxed hydrodynamics

PHYSICAL REVIEW D 108, 5 (2023)

September 2023

A. Amoretti, D.K. Brattan, *L. Martinoia*, I. Matthaiaakakis

### Leading order magnetic field dependence of conductivities in anomalous hydrodynamics

PHYSICAL REVIEW D 108, 1 (2023)

July 2023

A. Amoretti, D.K. Brattan, *L. Martinoia*, I. Matthaiaakakis

### Non-dissipative electrically driven fluids

JOURNAL OF HIGH ENERGY PHYSICS 05, 218 (2023)

May 2023

A. Amoretti, D.K. Brattan, *L. Martinoia*, I. Matthaiaakakis

### Destroying superconductivity in thin films with an electric field

PHYSICAL REVIEW RESEARCH 4, 3 (2022)

September 2022

A. Amoretti, D.K. Brattan, N. Magnoli, *L. Martinoia*, I. Matthaiaakakis, P. Solinas

### Hydrodynamic magneto-transport in holographic charge density wave states

JOURNAL OF HIGH ENERGY PHYSICS 11, 011 (2021)

November 2021

A. Amoretti, D. Areán, D.K. Brattan, *L. Martinoia*

## Seminars and Posters

### **Cortona Young 2021**

GALILEO GALILEI INSTITUTE

- Video-poster: *Thermoelectric conductivities in Charge Density Waves states from hydrodynamics*

*Florence, Italy*

9 – 11 June 2021

### **Department Retreat seminar**

UNIVERSITÉ LIBRE DE BRUXELLES, PHYSICS DEPARTMENT

- Talk title: *A new class of hydrostatic theories*

*Bruxelles, Belgium*

8 November 2022

### **CMD30-FisMat2023 joint conference**

UNIVERSITY OF MILAN, PHYSICS DEPARTMENT

- Talk title: *On Frames and Magneto-Transport in Anomalous Hydrodynamics*

*Milan, Italy*

4-8 September 2023

## **Memberships**

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### **Associate Researcher**

ISTITUTO NAZIONALE FISICA NUCLEARE

- Associate Researcher with the Italian Institute for Nuclear Physics (INFN), Statistical physics program

*Genoa, Italy*

2020 – to date

### **Associate Researcher**

EUROPEAN CENTER FOR THEORETICAL STUDIES IN NUCLEAR PHYSICS AND RELATED AREAS

- Associate Researcher with the European Center for Theoretical Studies in Nuclear Physics and Related Areas (ECT\*)

*Trento, Italy*

2023 – to date