

# Curriculum vitae et studiorum

## Personal data

Name: Marco Olivieri  
Born in: Tivoli (RM) in 1992  
Nationality: Italian  
  
Email: [olivieri@mat.uniroma1.it](mailto:olivieri@mat.uniroma1.it)



## Languages

- Mother tongue: Italian
- Other languages: English

## Current position

PhD student, Department of Mathematics,  
“Sapienza” University of Rome.  
Advisors: M. Correggi, M. Falconi.

## Education and Degrees

- 2016: Master degree in Mathematics, University of Rome “La Sapienza”  
grade: 110/110 cum laude  
thesis: “The inverse spectral problem for quantum graphs”  
advisors: A. Teta, D. Finco;
- 2014: Bachelor degree in Mathematics, University of Rome “La Sapienza”  
grade: 110/110 cum laude  
thesis: “Black-Scholes equation”  
advisor: D. Benedetto;
- 2010: high school diploma, liceo scientifico “E.Majorana”  
grade: 100/100 cum laude.

## Research interests

- Effective limits of models of quantum particles interacting with quantized radiation.
- Semiclassical analysis in infinite dimensions.
- Spectral theory on quantum graphs.

## Publications

1. M. Correggi, M. Falconi, M. O., “Magnetic Laplacians as the Quasi-Classical limit of Pauli-Fierz-type Models”, preprint arXiv: 1711.07413 [math-ph], 2018, to appear in *J. Spectr. Theory*.
2. D. Finco, M. O., “On the inverse spectral problems for quantum graphs”, in *Advances in Quantum Mechanics: Contemporary Trends and Open Problems*, A. Michelangeli, G. Dell’Antonio eds., pp. 267-281, 2017.

## Visits

- 2018: visit to “Université de Rennes I”, France;  
invitation from: Z. Ammari.  
period: one week in April 2018.
- 2018: PhD student in visit at “University of Tübingen”, Germany;  
supervisor: S. Teufel.  
period: February-July 2018.
- 2016: research training fellowship for undergraduate students  
at SISSA, Trieste, Italy;  
supervisor: A. Michelangeli.  
period: one week in May 2016.

## Talks

- 2019: Contributed talk at the workshop  
“Spectral theory & semiclassical analysis”,  
in Institute Mittag-Leffler, Stockholm (Sweden);  
title: “Derivation of time-dependent point  
interactions from polaron models.”  
from a joint work with R. Carlone, M. Correggi, M. Falconi.
- 2018: Contributed talk at the conference

- “Gran Sasso Quantum Meetings: from many particle systems to quantum fluids”, in “GSSI”, Italy;  
 title: “Microscopic derivation for time-dependent point interactions in ionization models”,  
 from a joint work with R. Carlone, M. Correggi, M. Falconi.
- 2018: Talk in “Université de Rennes I”, France;  
 title: “Derivation of Magnetic Laplacians from Microscopic Models”,  
 from a joint work with M. Correggi, M. Falconi.  
 invitation from: Z. Ammari.
- 2018: Contributed talk at the conference  
 “Mathematical Challenges in Quantum Mechanics”,  
 in “Sapienza” University of Rome, Italy  
 title: “Quasi-classical limit for the Pauli-Fierz model”.  
 from a joint work with M. Correggi, M. Falconi.
- 2018: Talk in “Sapienza” University of Rome, Italy;  
 title: “The Mathematical theory of Mechanics: between Classical and Quantum”,  
 for the cycle “Young researcher seminar”.

### **Conferences**

- 2019: speaker and participant at the workshop  
 “Spectral theory & semiclassical analysis”  
 in Institute Mittag-Leffler, Stockholm (Sweden)  
 Contributed talk, title:  
 “Derivation of time-dependent point interactions from polaron models.”
- 2018: speaker and participant at the conference  
 “Gran Sasso Quantum Meetings: from many particle systems to quantum fluids”  
 in GSSI, L’Aquila (Italy)  
 Contributed talk, title:  
 “Microscopic derivation for time-dependent point interactions in ionization models.”
- 2018: participant at the conference  
 “Trails in Quantum Mechanics and Surroundings”  
 in Politecnico di Torino, Torino (Italy)
- 2018: participant at the conferences  
 “International Congress of Mathematical Physics (ICMP)”  
 and “Young Researchers Symposium”

- in Centre Mont-Royal, Montreal (Canada)
- 2018: speaker and participant at the conference  
 “Mathematical Challenges in Quantum Mechanics”,  
 “Sapienza” University of Rome (Italy)  
 Contributed talk, title:  
 “Quasi-classical limit for the Pauli-Fierz model.”
- 2018: participant at the conference  
 “Trails in Quantum Mechanics and Surroundings ”,  
 in “S.I.S.S.A.”, Trieste (Italy)
- 2017: participant at the one-day meeting  
 “The many aspects of Low Energy Physics”,  
 in “Federico II” University of Naples (Italy)
- 2017: participant at the summer school  
 “Insubria Summer School in Mathematical Physics”  
 in “University of Insubria”, Como (Italy)
- 2017: participant at the summer school  
 “Current topics in Mathematical Physics”  
 in “University of Zurich”, Zurich (Switzerland)
- 2017: participant at the conference  
 “Quantum Mean Field and Related Problems”  
 in “Université Paris 13”, Paris (France)
- 2017: participant at the conference “Spectral Days 2017”  
 in “Universität Stuttgart”, Stuttgart (Germany)
- 2016: participant at the International Indam workshop  
 “Contemporary Trends in the Mathematics  
 of Quantum Mechanics”

**Awards, grants, etc.**

- 2019: fellowship for internationalization  
 of “Sapienza” University of Rome,  
 for the project “Magnetic Schrödinger  
 Operators in Quantum Mechanics”,  
 in joint work with PhD L. Oddis,  
 obtained fundings for a visit of 3 months  
 at the “Université de Rennes 1” (France).
- 2018: fellowship for internationalization  
 of “Sapienza” University of Rome,  
 for the project “Effective Limits in Quantum Dynamics”,  
 in joint work with PhD M. Moscolari,

obtained fundings for a visit of 6 months  
at the “University of Tübingen” (Germany).

2018: fellowship “Progetti per Avvio alla Ricerca - Tipo 1, 2018”  
of “Sapienza” University of Rome,  
for the project “Dinamica effettiva come limite quasi-classico  
di modelli di interazione campo-particella”,  
obtained fundings for research activities.

2017: fellowship “Progetti per Avvio alla Ricerca - Tipo 1, 2017”  
of “Sapienza” University of Rome,  
for the project “Il limite semiclassico per il modello di  
interazione di Pauli-Fierz”,  
obtained fundings for research activities.

### **Teaching Activities**

2017: tutor for the course  
“Physical Mathematics”, Department of Mathematics,  
“Sapienza” University of Rome.

2017: tutor for the course  
“Mathematical and Computer Methods for Biology”,  
Department of Biology, “Sapienza” University of Rome.

2016: tutor for the course “Probability 1” for the  
project “laurea tutoring 2”, Department of Mathematics,  
“Sapienza” University of Rome.

### **Other skills**

Programming languages: C++, Fortran 90, Matlab.  
Good knowledge of Linux system and LaTeX.