

Dr. Laura Foglia



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Last updated on May 17, 2024

ME AT A GLANCE

I am a physicist with a wide-ranging background in material science, lasers and research at large scale facilities. This broad education allows me to tackle problems beyond my direct area of expertise, and to recognize synergies, opportunities and hindrances at a glance. Indeed, I thrive on finding easy solutions to complex processes.

RESEARCH INTERESTS

- Time resolved Extreme Ultraviolet and Soft X-ray linear and non-linear techniques *current focus*: development of EUV spectropolarimetry for the investigation of chiral systems, consolidation of EUV Transient Grating Spectroscopy and extension to soft and hard X-rays.
- Collective excitations and properties of solids at the nanoscale (including ultrafast demagnetization, magnons, thermal transport, charge and energy transfer)

Born 16 November 1986, Savona, Italy
Nationality Italian, Spanish

PROFESSIONAL EXPERIENCE

Since May 2019 **Research scientist**, FERMI free electron laser, Elettra Sincrotrone Trieste

Development of state of the art FEL-based pump-probe and non-linear optical techniques for the investigation of condensed matter, methodology establishment and results interpretation.

- Design and implementation of instrument upgrades at the beamline endstations (EIS-TIMEX and EIS-TIMER)
- User support to prepare, perform, analyze and publish the results of experiments at the FERMI beamlines (130 beamtimes to date);
- Consolidation and expansion of the beamline's user community through establishment of research collaborations and scientific dissemination.

May 2016 **Postdoctoral researcher**, Elettra Sincrotrone Trieste

May 2019
Trieste, Italy

Investigation of femtosecond condensed matter dynamics exploring extreme ultraviolet Free Electron Laser light at FERMI.

- Principal investigator of several experimental campaigns (see scientific CV);
- Publication in peer-reviewed journals and conferences worldwide (scientific CV);
- Establishment of research collaborations.

Dec. 2015 **Postdoctoral researcher**, Fritz Haber Institute of the Max Planck Society

May 2016
Berlin, Germany

- Standardization and documentation of the developed experimental techniques;
- Training of new graduate students and transfer of knowledge;
- Finalization of publications and dissemination (see scientific CV).

Apr. 2011 **Doctoral research associate**, Fritz Haber Institute of the Max Planck Society

Dec. 2015
Berlin, Germany

Investigation of charge relaxation and energy dissipation processes in photoexcited semiconductors and functional heterostructures.

- Development of a new experimental technique (Electronic Sum Frequency Generation Spectroscopy).
- Maintenance of the laser systems and of all related optical setups;
- Programming of control software (temperature stabilization, equipment interfacing, data acquisition).

Nov. 2008
Jan. 2009
Genova, Italy

Internship in the R&D dept., [Columbus Superconductors S.P.A.](#)
Design and test of a MgB2 superconducting cable

EDUCATION

Apr. 2011

Dr. rer. nat., Technische Universität Berlin. Grades: magna cum laude (1)

Dec. 2015

Thesis: *Ultrafast dynamics and energy loss channels at a hybrid organic inorganic interface* (Available [online](#))

Berlin, Germany

Apr. 2009

Physics Diploma (M. Sc.), Freie Universität Berlin. Grades: sehr gut (1,4)

Apr. 2011

Thesis: *Transient reflectivity and coherent phonon generation: an ultrafast probe of the metal-to-insulator transition in VO₂* (Available [online](#))

Berlin, Germany

2007 – 2008

Erasmus Program, Freie Universität Berlin

Berlin, Germany

Duration of the scholarship: 10 months

Sept. 2005

B.Sc. in Physics, Università degli studi di Genova. Grades: 110 of 110

Feb. 2009

Thesis: *Isomerization of tetra-tert-butyl-azobenzene on Au(111) – Fluence and pulse length dependence of the cross section*

Genova, Italy

Measurements performed in the group of Prof. Martin Wolf at the Freie Universität Berlin, Germany

ACNKOWLEDGED MEMBERSHIPS

Since 2024

Reviewer of Laserlab Europe beamtime access requests

Since 2021

Linac Coherent Light Source (Menlo Park, CA)
Chair of the Machine and Instrumentation review panel

Since 2021

Elected representative of the Spanish residents
(consular district of Milano and Italy, 4-year mandate)

2022

Member of the scientific committee of the Science at FELs conference

2019-2020

Reviewer of the FP-RESOMUS fellowships
[FP-RESOMUS – a Fellowship Program of the NCCR MUST and RESOLV \(ethz.ch\)](#)

LANGUAGES

Italian

Native speaker

German

Fluent

TestDaf level 4 (C1 of the CEFR)

Spanish

Native speaker

English

Fluent

FCE grade A (C1 of the CEFR)

SOFT SKILLS

- Problem solving
- Creativity
- Critical thinking
- Team working
- Goal oriented

BEYOND WORK

Professional sailor until 2006 (participation to several European and world championships), currently passionate stand-up paddler, winter and summer hiker and free climber. Amateur seamstress, knitter and carpenter, I love to design and create daily life objects.