

## Personal information

Surname / First name

**Gelmetti, Ilario**

Address

Carrer Pere Martell, 13, 10<sup>a</sup>, 1<sup>a</sup> 43001, Tarragona, Spain

Telephone

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[iochesonome@gmail.com](mailto:iochesonome@gmail.com), [ilario@sindominio.net](mailto:ilario@sindominio.net)

Nationality

Italian

Date of birth

March 1988

## Occupational field

**Laboratory technician; Data scientist; Materials chemist; Junior network engineer**

## Non-academic grants

Dates

June 2019 – August 2019

Type of grant

Google Summer of Code

Title of the project

[Load-correlated distributed bandwidth analysis for LibreMesh networks](#)

Supervisors

Marcos Gutierrez, J sica Giudice

Name of organization

Freifunk and LibreMesh.

## Education

Dates

January 2015 – July 2019

Qualification awarded

**PhD.** Final evaluation excellent *cum laude* and international mention.

Thesis Title

Advanced Characterization and Modelling of Charge Transfer in Perovskite Solar Cells.

Supervisor

Prof. Emilio Jos  Palomares Gil

Principal subjects

Synthesis of organic and inorganic semiconductors; fabrication of perovskite solar cells (clean room, glovebox, spin coating, and thermal evaporation); characterization of materials (FTIR, PL, TEM, XRD, NMR), thin films (UV-vis, TAS, TRPL, AFM, SEM, ESEM-EDX, optical microscopy, profilometer) and complete devices (EIS, TPV, solar simulator, oscilloscope); coding for numerical modeling, data acquisition, and data analysis.

International Internship

3 months, Barnes Group, Department of Physics, Imperial College London, UK.

Name of organization

**Institute of Chemical Research of Catalonia (ICIQ)**, Tarragona, Spain.

Dates

October 2007 – October 2013

Qualification awarded

**Diploma of Science Class.** Final evaluation 70/70.

Name of organization

**Scuola Normale Superiore di Pisa**, Italy.

Dates

September 2010 – October 2013

Qualification awarded

**Master Degree in Organic Chemistry.** Final evaluation 110/110 *cum laude*.

Thesis Title

Synthesis and Characterization of Chiral Polythiophenes.

Thesis Supervisor

Dr. Silvia Destri; Prof. Lorenzo Di Bari

Thesis Laboratory

Institute for Macromolecular Studies, Consiglio Nazionale delle Ricerche, Milan, Italy.

Name of organization

Department of Chemistry and Industrial Chemistry, **University of Pisa**, Italy.

Dates

September 2007 – July 2010

Qualification awarded

**Bachelor of Science in Chemistry.** Final evaluation 110/110 *cum laude*.

Thesis Title

Synthesis of Conjugated Polymers and Quantum Dots for Photovoltaics Applications.

Thesis Supervisor

Dr. Valter Castelvetro

Name of organization

Department of Chemistry and Industrial Chemistry, **University of Pisa**, Italy.

Dates

September 2002 – June 2007

Qualification awarded

**Secondary school diploma.** Final evaluation 100/100.

Name of organization

ITIS G. Ferraris, Verona, Italy.

## Awards

National Chem. Olympiads  
National Physics Olympiads  
National Math. Olympiads

## Personal skills

Mother tongue

*Self-assessment*  
*European level<sup>(\*)</sup>*

**English**

**Spanish**

**Catalan**

Language certificates

General computer skills and competences

Coding skills and competences

Driving license(s)

Volunteering

Personal Interests

## Publications

## References

Organization  
Contacts

Organization  
Contacts

Fourth position in ranking of category C, Italian national selections, 2007.

Best experimental solution, Italian national selections, 2007.

Honourable mention, Italian national selections, 2006.

## Italian

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
B2	Independent user	C1	Proficient user	C1	Proficient user	B2	Independent user	B2	Independent user

<sup>(\*)</sup> Common European Framework of Reference (CEF) level

Certificat de nivell intermedi de català (level B2), Direcció General de Política Lingüística, September 2019

Git version control (advanced); Debian and Arch Linux system administration (advanced); cabled and wireless networks setup and administration using OpenWrt (advanced);  $\text{\LaTeX}$  markup (advanced); LibreOffice Writer, Calc and Impress (medium); GIMP and Inkscape drawing (medium).

BASH scripting (medium); coding in Python (medium, e.g. [development of PyPV acquisition data software](#)), coding in R (advanced, e.g. [development of data processing scripts](#)), coding in Matlab (medium, e.g. [contributions to Driftfusion](#)), coding in Lua (medium, e.g. [contributions to LibreMesh](#)).

Driving license class B.

Operazione Mato Grosso (2004-2007), eigenLab Pisa and eigenNet wireless community network (2009-2013), Manitese (2013), NinuxVerona wireless community network (founder, 2014), LibreMesh.org modular firmware for community networks (developer and community manager, 2013-present), TGNU Tarragona hacklab (co-founder, 2016-2018).

Renewable energy sources, open source software, computer security, wireless community networks, activism, cycling, climbing, problem solving, board games design.

Destri, S.; Barba, L.; **Gelmetti, I.**; Di Bari, L.; Porzio, W. *Macromol. Chem. Phys.* **2015**, *216* (7), 801–807.

**Gelmetti, I.**; Cabau, L.; Montcada, N. F.; Palomares, E. *ACS Appl. Mater. Interfaces* **2017**, *9* (26), 21599–21605.

Moia, D.; **Gelmetti, I.**; *et al.* *Energy Environ. Sci.* **2019**, *12* (4), 1296–1308.

**Gelmetti, I.**; Montcada, N.; *et al.* *Energy Environ. Sci.* **2019**, *12* (4), 1309–1316.

Prof. **Emilio José Palomares Gil**

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