

# Eros Fanì

📅 July 13, 1997

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🌐 [erosfani.github.io](https://erosfani.github.io)

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🐙 [Github](#)



## Professional and teaching experience

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### Research Fellow Software Engineer

BASQUE CENTER FOR APPLIED MATHEMATICS (BCAM)

Bilbao, Spain  
Nov 2024 – Present

### MSc thesis supervisor

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

Turin, Italy  
Sep 2023 - Oct 2024

- Topic: Clustered Federated Learning
- Resulted in a publication at **ICML25**

### Teaching Assistant

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

Turin, Italy  
A.Y. 2022/23

- Graduate courses: Machine Learning and Deep Learning ◦ Advanced Machine Learning ◦ Data Analytics and Artificial Intelligence ◦ Web Applications I
- Undergraduate course: Computer Science

### MSc thesis supervisor

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

Turin, Italy  
Sep 2022 - Jul 2023

- Topic: Federated Visual Geo-Localization
- Resulted in a publication at **FedVision @ CVPR 2024**

### Teaching collaborator as an undergrad

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

Turin, Italy  
A.Y. 2018/19

- Undergraduate courses: Algorithms and Programming ◦ Mathematical Analysis I ◦ Mathematical Analysis II

## Education

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### Ph.D. candidate in Computer and Control Engineering

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

Turin, Italy  
Nov 2021 - present

- Thesis title: “**Addressing Heterogeneity in Federated Learning for Real-world Vision Applications**”
- Advisor: Prof. B. Caputo · Polytechnic University of Turin (PoliTo)
- Defense expected: **summer 2025**

### ELLIS Ph.D. program - Academic track

EUROPEAN LABORATORY FOR LEARNING AND INTELLIGENT SYSTEMS (ELLIS)

Turin, Italy  
Nov 2021 - present

- Primary Host: Prof. B. Caputo · Polytechnic University of Turin (PoliTo)
- Exchange Host: Prof. N. Quadrianto · University of Sussex (UoS)

### Visiting period at the University of Sussex for the ELLIS Exchange

UNIVERSITY OF SUSSEX (UOS), EUROPEAN LABORATORY FOR LEARNING AND INTELLIGENT SYSTEMS (ELLIS)

Brighton, United Kingdom  
May 2024 - Oct 2024

- Research Advisor: Prof. N. Quadrianto · University of Sussex (UoS)

### Visiting period at ELLIS Alicante

ELLIS ALICANTE, EUROPEAN LABORATORY FOR LEARNING AND INTELLIGENT SYSTEMS (ELLIS)

Alicante, Spain  
Sep 2024

- Research Advisor: Prof. N. Oliver · ELLIS Alicante

### MSc in Data Science and Engineering

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

- Final grade: **110/110 cum laude**
- Thesis title: **On the Challenges of Class Imbalance in Federated Learning for Semantic Segmentation**

Turin, Italy  
Oct 2019 - Oct 2021

### BSc in Computer Engineering

POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

- Final grade: **108/110**

Turin, Italy  
Oct 2016 - Jul 2019

### Young Talent Project

POLYTECHNIC UNIVERSITY OF TURIN (POLITO), CRT FOUNDATION

- Study program of excellence open only to the 2% top-tier students admitted to the PoliTo for the A.Y. 2016/17

Turin, Italy  
Oct 2016 - Jul 2019

### High school diploma

LICEO SCIENTIFICO STATALE M. CURIE

- Final grade: **100/100 cum laude**

Giulianova, Italy  
Sep 2011 - Jul 2016

## Additional courses

### Warm up your muscles: a ten-stage marathon to become the protagonist of your financial future [🔗](#)

MUSEO DEL RISPARMIO, INTESA SAN PAOLO

Feb 2025 - Apr 2025

### Fundamentals of Reinforcement Learning [🔗](#)

COURSERA, UNIVERSITY OF ALBERTA

Feb 2022

### Sample-based Learning Methods [🔗](#)

COURSERA, UNIVERSITY OF ALBERTA

Jan 2022

### Security Soft Start [🔗](#)

ONSTAIRS ACADEMY

Jun 2020

## Attended schools and programs

### Mediterranean Machine Learning (M2L) Summer School

AI EDUCATION FOUNDATION

Thessaloniki, Greece  
Aug 2023

### ELLIS Doctoral Symposium 2021

UNIVERSITY OF TÜBINGEN, MAX-PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS

Tübingen, Germany  
Oct 2021

### Vodafone IoT Academy

VODAFONE, POLYTECHNIC UNIVERSITY OF TURIN (POLITO)

Turin, Italy  
Jan 2020 - Jul 2020

### Summer Orientation School Sant'Anna

SCUOLA SUPERIORE SANT'ANNA

Volterra, Italy  
Jun 2015

### Summer School for Experimental Sciences

GRAN SASSO NATIONAL LABORATORIES (LNGS) OF THE ITALIAN NATIONAL INSTITUTE FOR NUCLEAR PHYSICS (INFN)

Assergi, Italy  
Jun 2014

## Publications

**E. Fanì**, et. al. "Resource-Efficient Personalization in Federated Learning With Closed-Form Classifiers". IEEE Access, 2025

IEEE ACCESS

A. Licciardi, ..., **E. Fanì**, et. al. "Interaction-Aware Gaussian Weighting for Clustered Federated Learning". Forty-second International Conference on Machine Learning, 2025.

ICML25

**E. Fanì**, et. al. "Accelerating Heterogeneous Federated Learning with Closed-form Classifiers". Forty-first International Conference on Machine Learning, 2024.

ICML24

M. Dutto, ..., **E. Fanì**, et. al. "Collaborative Visual Place Recognition through Federated Learning". FedVision Workshop in Conjunction with the IEEE/CVF Conference on Computer Vision and Pattern Recognition, 2024.

FEDVISION CVPR24

**E. Fani**, et. al. “Fed3R: Recursive Ridge Regression for Federated Learning with strong pre-trained models”. International Workshop on Federated Learning in the Age of Foundation Models in Conjunction with NeurIPS, 2023.

FL@FM NEURIPS23

**E. Fani**, et. al. “FedDrive v2: an Analysis of the Impact of Label Skewness in Federated Semantic Segmentation for Autonomous Driving”. 5th Italian Conference on Robotics and Intelligent Machines, 2023.

I-RIM23

D. Shenaj\*, **E. Fani**\*, et. al. “Learning Across Domains and Devices: Style-Driven Source-Free Domain Adaptation in Clustered Federated Learning”. IEEE/CVF winter conference on applications of computer vision, 2023.

WACV23

L. Fantauzzo\*, **E. Fani**\*, et. al. “FedDrive: Generalizing Federated Learning to Semantic Segmentation in Autonomous Driving”. IEEE/RSJ International Conference on Intelligent Robots and Systems, 2022.

IROS22

\*Equal contribution.

## Pre-print

G. D. Németh, **E. Fani**, et. al. “Diversity-Driven Learning: Tackling Spurious Correlations and Data Heterogeneity in Federated Models”, 2025.

## Peer-reviewing

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Conference on Neural Information Processing Systems ( <b>NeurIPS</b> )	2025, 2024
European Conference on Artificial Intelligence ( <b>ECAI</b> )	2025
• Invited as Program Committee Member	
IEEE/CVF Computer Vision and Pattern Recognition Conference ( <b>CVPR</b> )	2025
Transactions on Machine Learning Research ( <b>TMLR</b> )	2024
European Conference on Computer Vision ( <b>ECCV</b> )	2024
• Awarded as <b>Outstanding Reviewer</b>	
IEEE International Conference on Development and Learning ( <b>ICDL</b> )	2023
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases ( <b>ECML-PKDD</b> )	2023
IEEE International Conference on Robotics and Automation ( <b>ICRA</b> )	2023
Learning from Limited and Imperfect Data workshop of the European Conference on Computer Vision ( <b>L2ID-ECCV</b> )	2022
IEEE Robotics and Automation Letters ( <b>RA-L</b> )	2022

## Honors, awards and achievements

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<b>Outstanding Reviewer award at ECCV24</b>	Sep 2024
EUROPEAN CONFERENCE ON COMPUTER VISION 2024, EUROPEAN COMPUTER VISION ASSOCIATION (ECVA)	
<b>Scholarship award for the participation to the Mediterranean Machine Learning (M2L) Summer School</b>	Aug 2023
AI EDUCATION FOUNDATION	
• Selected as one of the <b>top 10 students</b> among 805 applicants (top 1.25%) and 180 participants (top 5.55%)	
<b>Granted the WACV23 registration fee waiver</b>	Nov 2022
IEEE/CVF WINTER CONFERENCE ON APPLICATIONS OF COMPUTER VISION 2023	
<b>Two-times RoboMensa National Winner</b>	2015 - 2016
MENSA ITALIA – THE HIGH I.Q. SOCIETY	
• Logic Contest · <b>1<sup>st</sup> place</b> in both Individual and Teams categories	

<b>Two-times National Finalist at the Italian Mathematics Olympic Games in Teams</b> ITALIAN MATHEMATICAL UNION	2015 - 2016
<b>Three podiums at the RomeCup Rescue Secondary National Finals</b> DIGITAL WORLD FOUNDATION	2014 - 2016
• <b>1<sup>st</sup></b> place (2016) – <b>2<sup>nd</sup></b> place (2014, 2015)	
<b>National Finalist at the Italian Informatics Olympic Games</b> MINISTRY OF INSTRUCTION, UNIVERSITY AND RESEARCH (MIUR)	2015
<b>National Finalist at the Mathematical Games of the Mediterranean</b> ITALIAN ACADEMY FOR THE PROMOTION OF MATHEMATICS	2013

## Languages

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**Italian** - native

**English** - full professional proficiency

**Spanish** - beginner

## Coding skills

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Python, C, PyTorch, Numpy, Scikit-Learn, WandB, Matplotlib, HTML, HTML5, HTML Bootstrap, CSS, Jax, FedJax, Haiku, Flax, Flower, Java, C++, Bash, Matlab, Javascript, ReactJS, Vite, PHP, R, Apache Spark, Apache Hadoop