PERSONAL INFORMATION

Federico Trombetti

ABOUT ME

Hello!

I was born in Rome in 1995. I'm a full time Computer Science researcher at Sapienza, University of Rome, with a doctoral degree in the field.

I successfully completed my Ph.D. program at Sapienza in May, 2023.

I obtained a bachelor and master degree in Computer Science in the same university, in 2017 and 2019, respectively, both with an evaluation of 110/110 with honors.

I'm interested in research topics regarding Network Tomography, Networking Systems, Software Defined Networks and Internet of Things.

Over the past few months, I have been actively engaged in the IoT field, focusing on instructing students in the Master's Degree Internet of Things course at Sapienza University. My primary teaching objective has been to provide them with the necessary skills to develop and simulate robot-oriented solutions using tools such as ROS and Gazebo.

Boolean Network Tomography and SDNs have been my main focus prior to this, and they have spanned into multiple works and publications, some of which are still currently ongoing.

In the preceding months, I've also been working with physical network switches, developing a considerable amount of expertise with low-level communication protocols and infrastructure management.

I have knowledge of Machine learning techniques based on Bayesian Learning, and interest in developing more advanced skills if required by my research topics in the future.

Most of my work has been carried out during my PhD course at Sapienza, University of Rome, under the supervision of professor Novella Bartolini.

I consider myself able to tackle almost any given problem with the right amount of preparation beforehand, and can be quite flexible on the approach and the programming languages used to face any coming challenge that a project may present. Overcoming such challenges is usually the thing I enjoy the most in my work-time.

My first language is Italian, but I can comfortably understand and speak English. I've also been studying Japanese for the past months as self-taught, and I'm looking forward to adding it to my spoken languages in the years to come.

In my free time(?) I like to develop games, both as a programmer and as a pixel artist. I also like playing board games with friends.

PUBLICATIONS

2024 **F. Trombetti**, V. Arrigoni and N. Bartolini *"P2P Tomography for Internet-Wide Real-Time Monitoring"*. Submitted.

Novella Bartolini, Giuseppe Masi, Matteo Prata, **Federico Trombetti** *"Patrolling Heterogeneous Targets with FANETs"*. To appear at INFOCOM NetRobiCS 2024.

2023 V. Arrigoni, M. Finelli, **F. Trombetti**, N. Bartolini and T. He, *"Rule Installation Strategies in SDN: a Testbed-based Study on Latency Implications"*. Submitted.

V. Arrigoni, N. Bartolini, M. Finelli, and **F. Trombetti**, *"Minimizing Power Consumption in SDNs: Measurements and Optimization"*. Submitted.

2022 V. Arrigoni, N. Bartolini, A. Massini and **F. Trombetti**, *"A Bayesian Approach to Network Monitoring for Progressive Failure Localization,"* in IEEE/ACM Transactions on Networking, 2022, doi: 10.1109/TNET.2022.3200249.

2021 V. Arrigoni, N. Bartolini, A. Massini and **F. Trombetti**, *"Failure Localization through Progressive Network Tomography,"* IEEE INFOCOM 2021 - IEEE Conference on Computer Communications, 2021, pp. 1-10, doi: 10.1109/INFOCOM42981.2021.9488893.

V. Arrigoni, N. Bartolini, A. Massini, **F. Trombetti**, *"Static and Dynamic Failure Localization through Progressive Network Tomography,"*, arXiv preprint arXiv:2103.17221, 2021.

2020 N. Bartolini, T. He, V. Arrigoni, A. Massini, **F. Trombetti** and H. Khamfroush, *"On Fundamental Bounds on Failure Identifiability by Boolean Network Tomography,"* in IEEE/ACM Transactions on Networking, vol. 28, no. 2, pp. 588-601, April 2020, doi: 10.1109/TNET.2020.2969523.

2019 T. He, N. Bartolini, **F. Trombetti**, H. Khamfroush, L. Ma, T. La Porta. *"Service Placement for Detecting and Localizing Failures Using End-to-End Observations"*. Submitted.

EDUCATION

Current Full-time researcher at Sapienza, University of Rome

2019-2023 Computer Science PhD program at Sapienza, University of Rome.

March 2023 - June 2023 Taught ROS and Gazebo at the IoT Master Degree Course of Sapienza, University of Rome.

21/10/2019 Obtained Master Degree in Computer Science with an evaluation of 110/110, with honors.

June 2019 - November 2019 NATO scholarship for research on "Failure Localization via Boolean Network Tomography".

From June 2018 (ongoing) Working on research topics regarding Boolean Network Tomography and IoT with professor Novella Bartolini at Sapienza.

17/07/2017 Obtained bachelor degree in Computer Science with an evaluation of 110/110, with honors.

April-June 2017 Bachelor Thesis: Dynamic Programming in Big Data Frameworks. Solutions and implementations for the LCS problem both in Hadoop MapReduce and Apache Spark, with performance evaluation on AWS Cluster.

2015-2019 Studied Computer Science at Sapienza, University of Rome. Both Bachelor and Master course.

OTHER EXPERIENCES

Every January from 2015 to 2021 Took part in Global Game Jam Rome:

- 2015: link. Worked both as a programmer and artist.
- 2016: link. Worked as artist.
- 2017: link. Worked as artist.
- 2018: link. Worked as artist (pixel art side).
- 2019: link. Worked as a programmer.
- 2020: link. Worked mainly as sound maker. Helped also for both programming and pixel art.
- 2021: link. Worked both as a programmer and artist.

2013 Worked as a web programmer for Pane&Design.

AUTORIZZAZIONE AL TRATTAMENTO DEI DATI

Dichiaro che le informazioni riportate nel presente Curriculum Vitae sono esatte e veritiere.
Autorizzo il trattamento dei dati personali ai sensi del Regolamento UE 2016/679 (“GDPR”).
Autorizzo alla pubblicazione per ottemperare agli obblighi di pubblicità e trasparenza previsti dal D.lgs. n. 165 del 30.03.2001 e dal D.Lgs. n. 33 del 14.03.2013.