Chiara Camerota

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"We demand rigidly defined areas of doubt and uncertainty!"
The Hitchhiker's Guide to the Galaxy

Summary

Chiara Camerota holds an MSc in Statistics, Actuarial Science, and Financial Science (2019) and a Bachelor's in Statistics (2016) from the University of Florence. After two years in industry, she began a Ph.D. in Information Engineering at the University of Florence's Data Communication Networks System LAboratory (DaCoNetS). Her research integrates data analysis, computer vision, and practical applications in electrical engineering, industrial automation, and the Internet of Things (IoT). She is on track to complete her Ph.D. research program in October 2024. Chiara's publications have primarily focused on leveraging images' potential in unconventional fields, such as electrical fault recognition and anomaly detection.

Education

PhD in Information Engineering

Network Lab , St. Louis University — *Jan. 2024 – Jul. 2024*
- Visiting period

DaCoNets Laboratory, University of Florence — *Dec. 2022 – eta Mar. 2025*
- Topics: *Machine learning and data management for Internet of Things and Industrial applications*

DISIT Lab, University of Florencey — *Nov. 2021 – Dec. 2022*
- Study and development of IOT platforms and solution to process data in the framework of smart city and industry 4.0

Master in Statistics and Financial Science — *110/110 Summa cum laude*

University of Florence — *Sept. 2016 – Feb. 2019*
- Dissertation's title: *Graphical Models for circular data*

Bachelor in Statistics — *101/110*

University of Florence — *Sept. 2013 – Jul. 2016*
- Dissertation's title: *Non-parametric methods for circular data*

Publications

Journal

- Donati, Giovanni, Michele Basso, Graziano A. Manduzio, Marco Mugnaini, Tommaso Pecorella, and Chiara Camerota. "A convolutional neural network for electrical fault recognition in active magnetic bearing systems." Sensors 23, no. 16 (2023): 7023.

Conferences

- Camerota, Chiara, Lorenzo Pappone, Flavio Esposito, and Tommaso Pecorella. "Addressing Data Security in IoT: Minimum Sample Size and Denoising Diffusion Models for Improved Malware Detection"; 20th International Conference on Network and Service Management 2024
- Donati, Giovanni, Michele Basso, Marco Mugnaini, and Chiara Camerota. "A Convolutional Neural Network to Locate Unbalance in Turbomachinery Supported by AMBs." In 2024 IEEE International Workshop on Metrology for Industry 4.0 & IoT (MetroInd4.0 & IoT), pp. 274-279. IEEE, 2024.
- Bellini, Pierfrancesco, Chiara Camerota, and Paolo Nesi. "Automating Heterogeneous IoT Device Networks from Multiple Brokers with Multiple Data Models." In Global IoT Summit, pp. 226-238. Cham: Springer International Publishing, 2022.

Workshops

- Camerota, Chiara, Tommaso Pecorella, and Andrew D. Bagdanov. "The intrinsic convenience of federated learning in malware IoT detection." 1st Workshop on Wireless Networks Deployment and Management (WNDM), 2024
- Esposito, Flavio, Alessio Sacco, Chiara Camerota. "Towards Distributed Learning in Autonomous Networks". Reliability of Software-Driven Next-Generation Networks, 2023
- First International B5G Student Workshop, Madrid, July 2023

Experiences

- **Apr. 2021 - Nov. 2021** - DISIT Lab, University of Florence - Researcher for Snap4city.org
- **Nov. 2017 - Oct. 2019** - School of Economics, University of Florence - Statistic Student Tutor
- **Nov. 2017 - Mar. 2018** - School of Economics, VALMON S.R.L. - Support for the preliminary data analysis of the Selfie Survey

COMPANY EXPERIENCE

- **Jul. 2020 - Apr. 2021** - Framework's team, Terranova Software, Florence - Experience with complex testing delivery, project management framework (frontend and backend), configuration system, and CRM. Good understanding of Cloud Native, Microservice, and Portable Software
- **Nov. 2019 - Jun. 2020** - External Advisor for Gucci Guccio, MAS Management Network, Florence - Research and design of IoT project and experience with Agile Methodology, Digital integration, and Information systems