Martina Contisciani

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Experience

Teaching Assistant
Dec. 2019 – Feb. 2022

University of Tübingen, Tübingen, Germany

- TA for Advanced Probabilistic Machine Learning and Applications (M.Sc) - WS 2019/2020, 2021/2022, SS 2021
- TA for Statistical Machine Learning (M.Sc) - SS 2020

Intern
Mar. 2019 – Sep. 2019

Max Planck Institute for Intelligent Systems - PIO Group, Tübingen, Germany

- Master's thesis project focused on modelling covariate information in community detection algorithms

Data Analyst
Jul. 2018 – Aug. 2018

Unox S.p.A. – IT Office, Cadoneghe (PD), Italy

- Project focused on the analysis of device usage data to improve the experience and profile of the customers

Education

PhD student
Oct. 2019 – Present

Max Planck Institute for Intelligent Systems - PIO Group, Tübingen, Germany

- Research focused on the analysis of network data using statistical tools
- Group: Physics for Inference and Optimization - Supervisor: Caterina De Bacco

Master's degree in Data Science
Oct. 2017 – Sep. 2019

University of Padua - Dept. of Mathematics, Padua, Italy

- Thesis: A New Approach for Community Detection in Multilayer Networks
- Final Grade: 110/110 cum laude

Bachelor's degree in Statistics for Business and Economics
Oct. 2014 – Sep. 2017

University of Padua - Dept. of Statistical Sciences, Padua, Italy

- Thesis: Automatic identification of time series and forecasting performances
- Final Grade: 110/110 cum laude

Publications

10. Safdari H., **Contisciani M.**, De Bacco C., (2023), Anomaly, reciprocity, and community detection in networks, *Phys. Rev. Res. 5, 033084*

9. Ruggeri N., **Contisciani M.**, Battiston F., De Bacco C., (2023), Community detection in large hypergraphs, *Science Advances 9, eadg9159*

8. Lotito Q. F., **Contisciani M.**, De Bacco C., Di Gaetano L., Gallo L., Montresor A., Musciotto F., Ruggeri N., Battiston F., (2023), Hypergraphx: a library for higher-order network analysis, *Journal of Complex Networks 11, cnad019*

7. De Bacco C., **Contisciani M.**, Cardoso-Silva J., Safdari H., Baptista D., Borges G. L., Sweet T., Young J.-G., Koster J., Ross C. T., McElreath R., Redhead D., Power E. A., (2023), Latent network models to account for noisy, multiply reported social network data, *Journal of the Royal Statistical Society Series A: Statistics in Society, qnac004*

6. **Contisciani M.**, Battiston F., De Bacco C., (2022), Inference of hyperedges and overlapping communities in hypergraphs, *Nature Communications 13, 7229*

5. **Contisciani M.**, Safdari H., De Bacco C., (2022), Community detection and reciprocity in networks by jointly modelling pairs of edges, *Journal of Complex Networks 10, cnac034*

4. Higham K., **Contisciani M.**, De Bacco C., (2022), Multilayer patent citation networks: A comprehensive analytical framework for studying explicit technological relationships, *Technological Forecasting and Social Change 179, 121628*

3. Safdari H., **Contisciani M.**, De Bacco C., (2022), Reciprocity, community detection, and link prediction in dynamic networks, *Journal of Physics: Complexity 3, 015010*

2. Safdari H.*, **Contisciani M.***, De Bacco C., (2021), Generative model for reciprocity and community detection in networks, *Phys. Rev. Res. 3, 023209* - *contributed equally

1. **Contisciani M.**, Power E. A., De Bacco C., (2020), Community detection with node attributes in multilayer networks, *Scientific Reports 2020 10:1 10, 1–16*

PRESENTATIONS

Seminars

[2022] *NetPLACE*, online

Invited presentations

[2023] *Young Seminars SIFS*, online

[2022] *Dept. of Statistical Sciences, University of Padua*, Padua (IT)

[2021] *Dept. of Statistical Sciences, University of Padua*, online

Contributed presentations

[2023] *NetSci 2023*, Vienna (AT) - *EUSN 2023*, Ljubljana (SI)

[2022] *NetSci 2022*, online - *EUSN 2022*, London (UK) - *CCS 2022*, Palma de Mallorca (ES)

[2021] *Networks 2021*, online - *EUSN 2021*, online

Poster presentations

[2020] *NetSci 2020*, online

SERVICE

Open Source Contributor: VIMuRe, hypergraphx (HGX), complex group interactions (XGI)
Reviewer: Communications Physics, Journal of Complex Networks
Organizer: ELLIS Doctoral Symposium 2021

AWARDS

[May 2018] **Hackathon about Speech Recognition**: 1st place position, *Unox S.p.A., Cadoneghe (PD), Italy*

SUMMER SCHOOLS

[2nd - 6th Sep. 2019] Model – Guided Data Science, *Lake Como School of Advanced Studied, Como, Italy*

SKILLS

Languages: Italian (mother tongue), English (upper-intermediate), German (intermediate)
Soft Skills: Conscientiousness, Agreeableness, Teamwork, Problem-Solving
Technologies: Python, R, MATLAB, SQL, TensorFlow, Keras, LaTeX, C, C#, HTML/CSS, Gephi, JDemetra+

Last update: October 19, 2023