Daniele Zago

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Date of birth: 9 May 1996

WORK EXPERIENCE

Data Scientist — Oct 2024 – Present
Optit S.r.l. — *Bologna, Italy*
- Research and development of algorithms for periodic clustered vehicle routing problems
- Development of anomaly detection and forecasting models for energy demand

Statistical consultant — Jul 2023 – Oct 2023
Expin S.r.l. (affiliated to: University of Padua) — *Padua, Italy*
- Developed a sequential monitoring system for anomaly detection in vibrating string strain gauges
- Developed a novel algorithm for optimal alarm threshold selection using advanced optimization techniques

Teaching assistant — Oct 2022 – Dec 2022
Department of Developmental Psychology and Socialisation, University of Padua — *Padua, Italy*
- Teaching activities: lectures on introduction to R programming and data analysis

EDUCATION

University of Padua — Padua, Italy
Ph.D. in Statistical Sciences — *2021 – 2024*
- Advisor: prof. Giovanna Capizzi; Co-advisor: prof. Peihua Qiu
- Research topic(s): **online outlier detection** and **stochastic optimization**
- Thesis: "*Advanced Statistical Process Monitoring using Simulation-Based Algorithms*"

University of Florida — Gainesville, FL, USA
Visiting research scholar, supervisor: Prof. Peihua Qiu — *Jan 2023 – Dec 2023*

INFN — Bertinoro, Italy
Thirteenth INFN International School on Efficient Scientific Computing — *Oct 2022*
- Efficient C++ programming
- GPU programming with CUDA

University of Padua — Padua, Italy
M.Sc. in Statistical Sciences — *2019 – 2021*
- Final grade: **110/110 cum Laude**, GPA: **29.5/30**
- Thesis: "*Bayesian multiscale mixture models via Hilbert curve partitioning*"

University of Perugia — Perugia, Italy
Summer school in Mathematics — *Jul 2020*

University of Padua — Padua, Italy
B.Sc. in Statistics for Technology and Sciences — *2016 – 2019*
- Final grade: **110/110 cum Laude**, GPA: **29.2/30**

AWARDS

2025	ENBIS Knowledge Fund, ENBIS 2025 conference	*Piraeus, Greece*
2022	Young Travel Award, ISBA 2022 conference	*Montréal, Canada*
2018	Mille e una Lode Award 2018 *(top 3% of students)*	*University of Padua*
2017	Mille e una Lode Award 2017 *(top 3% of students)*	*University of Padua*

CONFERENCE PRESENTATIONS

Sep 2025	**Invited talk**. *ENBIS-25 Conference*	*Piraeus, Greece*
	Optimal constrained design of control charts using stochastic approximations	
Oct 2023	**Invited talk**. *2023 INFORMS Annual Meeting*	*Phoenix, AZ, USA*
	Optimal constrained design of control charts using stochastic approximations	

Sep 2022	**Poster presentation**. *Statistical methods and models for complex data*	*Padova, Italy*
	Profile monitoring based on adaptive parameter learning	
Jun 2022	**Poster presentation**. *2022 ISBA World meeting*	*Montréal, Canada*
	Bayesian nonparametric multiscale mixture models via Hilbert-curve partitioning	

PUBLICATIONS

Journal articles

Zago, D. (2025). StatisticalProcessMonitoring.Jl: A General Framework for Statistical Process Monitoring in Julia. *Journal of Statistical Software* 113, 1–45. doi: [10.18637/jss.v113.i07](10.18637/jss.v113.i07)

Zago, D., and Capizzi, G. (2024). Alternative Parameter Learning Schemes for Monitoring Process Stability. *Quality Engineering* 36, 560–574. doi: [10.1080/08982112.2023.2253891](10.1080/08982112.2023.2253891)

Zago, D., Capizzi, G., and Qiu, P. (2024). Optimal Constrained Design of Control Charts Using Stochastic Approximations. *Journal of Quality Technology* 56, 257–275. doi: [10.1080/00224065.2024.2323585](10.1080/00224065.2024.2323585)

Zago, D., Capizzi, G., and Qiu, P. (2025). An Improved Bisection-Type Algorithm for Control Chart Calibration. *Statistics and Computing* 35, 81. doi: [10.1007/s11222-025-10609-7](10.1007/s11222-025-10609-7)

Zago, D., Tian, Z., Capizzi, G., and Qiu, P. (2025). A General Framework for Monitoring Mixed Data. *Journal of Quality Technology*, 1–15. doi: [10.1080/00224065.2025.2512164](10.1080/00224065.2025.2512164)

SKILLS

PROGRAMMING	Python, Julia, R, SQL, C++, C, SAS, bash
TOOLS	git, Google Cloud, Microsoft Office
LANGUAGES	Italian (native), English (fluent, C2), German (moderate), Spanish (moderate)

REFERENCES

Giovanna Capizzi	**Peihua Qiu**
Full Professor and Head of Department	*Dean's Professor of Biostatistics*
Department of Statistical Sciences	Department of Biostatistics
University of Padua	University of Florida
giovanna.capizzi@unipd.it	pqiu@ufl.edu