Paolo Paronuzzi

Università di Bologna
Department of Electrical, Electronic and Information Engineering
"Guglielmo Marconi" - DEI
Viale Risorgimento, 2
40136 Bologna, Italy

Phone: 0039-051-2093858
Email: paolo.paronuzzi@unibo.it

Born: March 29, 1989 — Trieste, Italy
Nationality: Italian

Current position

December 2019 - present
Ricercatore a tempo determinato tipo a) (fixed-term junior assistant professor)
Department of Electrical, Electronic and Information Engineering
"Guglielmo Marconi" - DEI
Università di Bologna, Italy

Areas of specialization

Operations Research, Computer Science

Education

March 2020
Ph.D in Biomedical, Electrical and Systems Engineering - curriculum Operations Research
Alma Mater Studiorum - Università di Bologna, Italy
Thesis: "Models and algorithms for decomposition problems"
Advisor: Prof. Enrico Malaguti

March 2015
Master Degree in Industrial and Management Engineering
Alma Mater Studiorum - Università di Bologna, Italy
Grade: 105/110
Thesis: "New integer programming models for balanced Multi-Country KEP"
Area: Integer Linear Programming
Advisor: Prof. Andrea Lodi
Co-Advisors: Prof. Ana Viana and Prof. Enrico Malaguti

March 2012
Bachelor Degree in Information Engineering
Università degli Studi di Trieste, Italy
Grade: 97/110
Thesis: "Metodi di ottimizzazione del Piano Principale di Produzione (MPS) con obiettivo singolo e multiplo"
Area: Production management
Advisor: Prof. Elio Padoano

Publications

During his research activities, Paolo Paronuzzi worked with researchers affiliated with Italian and foreign institutions, other than Università di Bologna, and he worked with researchers belonging to other departments of his university on multi-disciplinary projects.

2022 G. Campana[1], E. Malaguti, M. Mele[1] and **P. Paronuzzi**, "Scheduling of semi-automatic carousels with fixed production sequences", *International Journal of Production Research*, published online, https://doi.org/10.1080/00207543.2022.2033336.

2021 F. Furini[2], I. Ljubić[3], E. Malaguti, and **P. Paronuzzi**, "Casting Light on The Hidden Bilevel Combinatorial Structure of the Capacitated Vertex Separator problem", *Operations Research*, published online, https://doi.org/10.1287/opre.2021.2110.

2021 V. Bo[4], M. Bortolini[1], E. Malaguti, M. Monaci, C. Mora[1], and **P. Paronuzzi**, "Models and algorithms for integrated production and distribution problems", *Computers and Industrial Engineering*, 154, 107003.

2021 **P. Paronuzzi**, "Models and algorithms for decomposition problems", *4OR-A Quarterly Journal Of Operations Research*, 19, 471-472.

2021 H. Schwaeppe[5], A. Moser[5], **P. Paronuzzi**, and M. Monaci, "Generation and Transmission Expansion Planning with Respect to Global Warming Potential", *2021 IEEE Madrid PowerTech*, Conference Proceedings.

2020 F. Furini[2], I. Ljubić[3], E. Malaguti and **P. Paronuzzi**, "On Integer and Bilevel Formulations for the k-Vertex Cut Problem", *Mathematical Programming Computation*, 12(2), 133-164.

2020 N. Thie[5], M. Franken[5], H. Schwaeppe[5], L. Bottcher[5], C. Muller[5], A. Moser[5], K. Schumann[6], D. Vigo, M. Monaci, **P. Paronuzzi**, A. Punzo, M. Pozzi[7], A. Gordini[7], K. B. Cakirer[8], B. Acan[8], U. Desideri[9] and A. Bischi[9] "Requirements for integrated planning of multi-energy systems", *2020 6th IEEE International Energy Conference (ENERGYCon)*, 696–701.

2020 **P. Paronuzzi**, "Models and algorithms for decomposition problems", *Alma Mater Studiorum Università di Bologna*, PhD Thesis, https://doi.org/10.6092/unibo/amsdottorato/9330.

2019 E. Malaguti, M. Monaci, **P. Paronuzzi** and U. Pferschy[10], "Integer Optimization with Penalized Fractional Values: The Knapsack Case", *European Journal of Operational Research*, 273(3), 874-888.

2019 A. Lodi[11], E. Malaguti, M. Monaci, G. Nannicini[12] and **P. Paronuzzi**, "Chance Constrained Problem with Integer Scenario Variables", *Technical Report OR-19-7*, http://or.dei.unibo.it/technical-reports.

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[1] DIN, Università di Bologna, Italy
[2] IASI-CNR, Rome, Italy - LAMSADE, Université Paris-Dauphine, Paris, France
[3] ESSEC Business School of Paris, France
[4] Plannet S.r.l., Reggio nell'Emilia, Italy
[5] IAEW, RWTH Aachen University, Germany
[6] Fraunhofer FIT, Munich, Germany
[7] OPTIT s.r.l, Bologna, Italy
[8] OEDAS, Eskişehir, Turkey
[9] DESTEC, Universitá di Pisa, Italy
[10] Department of Statistics and Operations Research, University of Graz, Austria
[11] CERC, Polytechnique Montreal, Canada - Cornell University, Ithaca, USA
[12] IBM Quantum, IBM T. J. Watson, USA

Talks

September 2021 — "Chance Constraint Problem with Integer Scenario Variables", *International Conference on Optimization and Decision Science - ODS2021*, Rome, Italy.

September 2019 — "Chance Constraint Problem with Integer Scenario Variables", *International Conference on Optimization and Decision Science - ODS2019*, Genova, Italy.

March 2019 — "New ILP formulations for k-Vertex Cut Problems", *IBM Research*, Yorktown Heights (NY), USA.

June 2018 — "New ILP formulations for the k-Vertex Cut Problem", *International Symposium on Mathematical Programming*, Bordeaux, France.

September 2017 — "Fractional Knapsack Problem with penalties: models and algorithms", *International Conference on Optimization and Decision Science - ODS2017*, Sorrento, Italy.

Teaching

2017-22 — Teaching Assistant of the course "Fondamenti di Ricerca Operativa", First cycle degree programme (L) in Engineering Management, Università di Bologna.

2020-22 — Teaching Assistant of the course "Algorithms for Combinatorial Optimization Problems", Second cycle degree programme (LM) in Computer Engineering, Università di Bologna.

Projects and collaborations

May 2022 — Visiting research period at TU of Dortmund, Faculty of Mathematics.
Supervisor: Prof. Christoph Buchheim.

2021 - present — Member of the research team for the study of VRP and IRP problems.
Partnership between DEI and Universtity of Calabria.

2019 - present — PlaMES: Integrated Planning of Multi Energy Systems, https://plames.eu.
Funding: European Commission, Horizon 2020. Project N° 863922.
Member of the research team.

January - June 2019 — Internship at IBM T.J. Watson research center,Yorktown Heights, New York.
Supervisor: Dr. Giacomo Nannicini.

October 2017 — Visiting research period at LAMSADE, Université Paris Dauphine.
Supervisor: Prof. Fabio Furini.

2015-2016 — Cybertec S.R.L., Via del Coroneo 5, Trieste.
Supply Chain Management Consultant.

DICHIARAZIONI SOSTITUTIVE DELL'ATTO DI NOTORIETÁ
(art. 47 D.P.R. n. 445/00)
Il sottoscritto PAOLO PARONUZZI codice fiscale PRNPLA89C29L424Q nato a TRISTE prov.TS il 29.03.1989 sesso M.
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Bologna, 29 Aprile 2022
Il dichiarante