Carmine Cerrone, Ph.D.

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SSD MATH-06/A - Ricerca operativa GSD 01/MATH-06 - RICERCA OPERATIVA

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Employment History

2022 - · · · ·	Associate Professor, University of Genoa Dept. of Economics.
2019 – 2022	Assistant Professor, (RTD-B) University of Genoa Dept. of Economics.
2016 – 2019	Research Fellow, (RTD-A) University of Molise Biosciences and Territory Dept.
2016 - 2016	Visiting Researcher, University of Maryland Dept. Decision, Operations & Information Technologies.
2015 – 2016	Research Fellow, IASI (Institute for Systems Analysis and Computer Science) CNR (Italy).
2014 – 2015	Research Fellow , University of Calabria Dept. of Mechanical, Energetic and Management Engineering.
2013 - 2014	Research Fellow, University of Salerno Dept. of Computer Science.
2013 - 2013	Research Fellow, University of Maryland Dept. Decision, Operations & Information Technologies.
2012 – 2013	Research Fellow, University of Salerno Dept. of Computer Science.

Professional Acknowledgements

2025	AI Innovation Award Winner of the Startup & Projects Show at ISC 2025 (Catania), awarded €10,000 for an AI-driven project proposal on optimizing software development through automated technical documentation generation
2025-2028	Steering Committee Member of the Italian Operational Research Society (AIRO) - elected in 2024.
2023	Full Professor ASN Habilitation as Full Professor in Operations Research from the Italian Ministry of Education.
2018	Associate Professor ASN Habilitation as Associate Professor in Operations Research from the Italian Ministry of Education.

Education

 Ph.D., Operations Research University of Calabria, Department of Electronics Informatics and Systematics. Thesis title: OMEGA OUR MULTI ETHNIC GENETIC ALGORITHM.
 Honours degree in Computer Science University of Salarno.

Honours degree in Computer Science University of Salerno. Thesis title: *The Vertex Cover Problem.*.

Editorial Activity

2018 - • • • •

Associate Editor, "Soft Computing" (Springer). In this role, I contribute to the editorial process of the "Soft Computing" journal, reviewing and assessing research submissions in the field of Combinatorial Optimisation, collaborating with authors and reviewers, and assisting in the publication process.



Editorial Activity (continued)

2020 – · · · · Editorial Board, "Advances in Computational Intelligence" (Springer).

2010 – · · · · Reviewer, for numerous scientific journals and international conferences, including: European Journal of Operational Research, Networks, Computers & Operations Research, Transportation Research Part B, Soft Computing, Applied Soft Computing, Journal of Optimisation, Sensors, Journal of Electrical and Computer Engineering, Discrete Applied Mathematics.

Affiliations

2022 - · · · ·	VeRoLog, EURO working group on Vehicle Routing and Logistics.
2022 - · · · ·	EU/ME, EURO working group on Metaheuristics.
2019 – · · · ·	CIELI, C.I.E.L.I Italian Centre of Excellence in Integrated Logistics.
2006 - · · · ·	AIRO, Italian association of Operations Research.

PhD

2024 – · · · ·	PhD Student Supervisor, for Maria Truvolo, PhD in Strategic Engineering and Decision Methods, University of Genoa.
2023	Member of the final PhD examination committee for student Dinh Nho Minh, University of Brescia. PhD thesis title: 'ANALYTICS FOR ECONOMICS AND MANAGE-MENT – AEM'.
2022 - · · · ·	Co-supervisor, along with Prof. Bruce Golden, for PhD student Jiaqi Wang, at University of Maryland.
	PhD Student Supervisor, for Raffaele Dragone, PhD in Strategic Engineering and Decision Methods, University of Genoa.
2022 - · · · ·	PhD course holder, Foundations of Programming for Problem solving in Python University of Genoa.
2021 - · · · ·	Doctoral Program Committee Membership, "Strategic Engineering and Decision Methods" University of Genoa.
2020	External Reviewer for Doctoral Thesis, Title: "Classification of Medical Images: Instance Space Optimization Models for Multiple Instance Learning" PhD in ICT, University of Calabria.
2018 - 2021	PhD Student Supervisor, for Andrea Di Placido, PhD in BIOSCIENCES AND TERRI- TORY, University of Molise Italy.
2016 - 2018	Doctoral Program Committee Membership, "BIOSCIENCES AND TERRITORY" University of Molise Italy.

Institutional and Academic Appointments/Committees

2023 - · · · ·	WEB, Member of the Web Committee of the Department of Economics at the Univers of Genoa.	sity
2021 – · · · ·	AQ. Member of the Quality Control Commission of the CLEMT Program Council, U versity of Genoa.	ni-
2021 - 2022	Deputy Coordinator, of the CLEMT Program Council, University of Genoa.	
2016 – 2018	AQ Chair, of the Quality Management Unit of the Computer Science Program Coun University of Molise.	cil,

Organization of Events and Conferences

2025	Program Committee, WBO25 International Workshop on Big Optimization 2025, 31 July – 1 August 2025, Catania, Italy.
	Publicity & Social Chair, ISC25 International Summer Conference 2025, 19-20 June, Catania, Italy.
2024	Metaheuristics Competition Chair, MESS Metaheuristics Summer School, 15-18 July Catania Italy.
2023	Scientific Committee, NUMTA International Conference and Summer School "Numerical Computations: Theory and Algorithms", 14-20 June Calabria Italy.
2021	Metaheuristics Competition Chair, MESS Metaheuristics Summer School, 15-18 June Catania Italy.
2019	Scientific Committee, NUMTA International Conference and Summer School "Numerical Computations: Theory and Algorithms", 15-21 June Crotone Italy.
2018	Metaheuristics Competition Chair, MESS Metaheuristics Summer School, 21-25 July Acireale Italy.
2018	Scientific and Organizing Committee, ICCL International Conference on Computational Logistics, 1-3 October Vietri Sul Mare Italy.
2017	Organizing Committee, ODS Annual Meeting of AIRO, International Conference on Opti- mization and Decision Science, 4-7 September Sorrento Italy.
2017	Conference Chair, HMFMA International Workshop on Heuristics and Metaheuristics: Fundation, Methodology and Applications, 19-21 June Pesche-Agnone Italy.
2016	Program Committee, HM International Workshop on Hybrid Meta-heuristics, 8-10 June, Ply- mouth, United Kingdom.
2016	Organizing Committee, ISCO International Symposium on Combinatorial Optimization, 18- 20 May Vietri sul Mare Italy.
2012	Organizing Committee, AIRO Annual Meeting of the Italian Operations Research Association, International Conference on Optimization and Decision Science, 4-7 September Sorrento Italy.

Research Projects

- 2022 Principal Investigator, for the Research Projects of National Interest (PRIN): "Energy Consumption Optimization: REthinking SoluTion AlgoRiThms (ECO-RESTART)". The project was not funded but received a rating of 92/100.
- **Scientific Supervisor,** for the University of Genoa for third-party research activity related to the project SmartWarehouse, Optimization Algorithm Testing. Client: FourClicks SRL.
- 2018 Scientific Supervisor, for the University of Molise for third-party research activity related to the project: OPTIT, Development of Advanced Software Components. Client: OPTIT SRL.
- 2018 Scientific Supervisor, for the University of Molise for third-party research activity (€50,000) related to the project: sMARTE, Call for Large R&D Projects PON I&C 2014-2020, funded from PON 'Businesses and Competitiveness' resources 2014-2020, as specified in the Decree of the Ministry of Economic Development dated June 9, 2016. Client: NEXSOFT SPA.
- 2018 Scientific Supervisor, for the University of Molise for third-party research activity 'Optimized Movement of Product Issues, Returns, and Transfers,' commissioned by Starboard Solutions Corp, Traverse City, MI, USA.

Teaching Activities

2021 – 2025	 -Python Algorithms & Optimization, University of Genoa, (language: English). -Operation Research for strategic decisions: models, methods and game theory, University of Genoa, (language: English). -Ricerca Operativa, University of Genoa, (language: Italian).
2019 – 2021	 -Operation Research for strategic decisions: models, methods and game theory, University of Genoa, (language: English). -Ricerca Operativa, University of Genoa, (language: Italian).
2018 – 2019	 -Metodi di Ottimizzazione, University of Molise. -Geometria, University of Molise. -Logistica, University of Molise. -Matematica, University of Molise.
2017 – 2018	 -Metodi di Ottimizzazione, University of Molise. -Logistica, University of Molise. -Matematica, University of Molise.
2016 – 2017	 -Metodi di Ottimizzazione, University of Molise. -Ricerca Operativa, University of Molise. -Matematica, University of Molise.
2016 – · · · ·	Bachelor's and Master's Thesis. Supervisor and Co-Supervisor for dozens of under- graduate and graduate theses.

Invited Seminars

2018	May , Institute of Systems Analysis and Computer Science "Antonio Ruberti" CNR. Speaker at the seminar: "On the Close Enough Traveling Salesman Problem".
2017	December, Université de Lorraine (France), Laboratory LCOMS. Invited speaker at the seminar: "Carousel Greedy: A Generalized Greedy Algorithm.".
2009	October, University of Maryland (US). Speaker at the seminar: "Multi-Ethnic Genetic Algorithm".

Research Publications

Journal Articles

C. Cerrone, R. Dragone, and A. Sciomachen, "Optimising transportation plans for multi-warehouse, multi-product systems: Mitigating the impact of new purchase and sales orders," *Soft Computing*, pp. 4359–4376, 2025.

- **C. Cerrone**, A. Sciomachen, and M. Truvolo, "Min-cost route problems for multimodal sustainable logistics cooperation," *Soft Computing*, pp. 1–14, 2025.
- **C. Cerrone** and D. D. Russo, "An exact reduction technique for the k-colour shortest path problem," *Computers & Operations Research*, vol. 149, p. 106 027, 2023.
- A. Di Placido, C. Archetti, **C. Cerrone**, and B. Golden, "The generalized close enough traveling salesman problem," *European Journal of Operational Research*, vol. 310, no. 3, pp. 974–991, 2023.
- J. Wang, B. Golden, and **C. Cerrone**, "Carousel greedy algorithms for feature selection in linear regression," *Algorithms*, vol. 16, no. 9, p. 447, 2023.
- D. Ambrosino and **C. Cerrone**, "A rich vehicle routing problem for a city logistics problem," *Mathematics*, vol. 10, no. 2, p. 191, 2022.



F. Carrabs, **C. Cerrone**, and R. Cerulli, "A memetic algorithm for the weighted feedback vertex set problem," *Networks*, vol. 64, no. 4, pp. 339–356, 2014.



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C. Cerrone, R. Cerulli, and A. Raiconi, "Relations, models and a memetic approach for three degree-dependent spanning tree problems," *European Journal of Operational Research*, vol. 232, no. 3, pp. 442–453, 2014.

C. Cerrone, B. Dussault, B. Golden, and E. Wasil, "Multi-period street scheduling and sweeping," *International Journal of Metaheuristics*, vol. 3, no. 1, pp. 21–58, 2014.

Conference Papers

- 1 R. Dragone, R. Battaglia, and **C. Cerrone**, "Integrating human-centric ai in fashion industry optimization: A step towards industry 5.0.," Springer International Publishing, 2025, pp. 59–71.
- **2 C. Cerrone**, R. Dragone, and A. Sciomachen, "A branch bound algorithm for the rainbow spanning forest problem.," Springer International Publishing, 2024, Accepted.
- **C. Cerrone**, M. Truvolo, R. Dragone, and R. Battaglia, "The trigger arc tsp: Optimise the picking process in warehouses with compactable storage systems," in *Decision Science Alliance International Summer Conference*, Springer, 2024, pp. 279–289.
 - **C. Cerrone**, A. Di Placido, and D. D. Russo, "A genetic algorithm for minimum conflict weighted spanning tree problem," Springer International Publishing, 2019, pp. 445–455.
 - D. D. Russo, **C. Cerrone**, and A. Di Placido, "The mixed-constrained routing problem-a combination of cearp and cetsp," 2019.
 - **C. Cerrone**, M. Gentili, C. D'Ambrosio, and R. Cerulli, "An efficient and simple approach to solve a distribution problem," Springer International Publishing, 2018, pp. 151–159.
 - G. Capobianco, C. Cerrone, R. Cerulli, and G. Felici, "Optimal paths for dual propulsion vehicles on real street network graphs," in *Optimization and Decision Science: Methodologies and Applications: ODS, Sorrento, Italy, September 4-7, 2017 47, Springer International Publishing, 2017, pp. 517–527.*
- 8 F. Carrabs, C. Cerrone, R. Cerulli, and C. D'Ambrosio, "Improved upper and lower bounds for the close enough traveling salesman problem," in *Green, Pervasive, and Cloud Computing: 12th International Conference, GPC 2017, Cetara, Italy, May 11-14, 2017, Proceedings 12*, Springer International Publishing, 2017, pp. 165–177.
- 9 F. Carrabs, **C. Cerrone**, C. D'Ambrosio, and A. Raiconi, "Column generation embedding carousel greedy for the maximum network lifetime problem with interference constraints," in *Optimization and Decision Science: Methodologies and Applications: ODS, Sorrento, Italy, September 4-7, 2017 47, Springer International Publishing, 2017, pp. 151–159.*
- **C. Cerrone**, R. Cerulli, B. Golden, and R. Pentangelo, "A flow formulation for the close-enough arc routing problem," in *Optimization and Decision Science: Methodologies and Applications: ODS, Sorrento, Italy, September 4-7, 2017 47, Springer International Publishing, 2017, pp. 539–546.*
- F. Carrabs, **C. Cerrone**, and R. Cerulli, "A tabu search approach for the circle packing problem," in 2014 17th International conference on network-based information systems, IEEE, 2014, pp. 165–171.

Conference Presentations (speaker in bold)

- **C. Cerrone**, (plenary session) optimizing conference agendas with al-based interest estimation and mathematical programming. ISC, 19-20 June Catania Italy., 2025.
- **2 C. Cerrone**, The trigger arc tsp: Optimise the picking process in warehouses with compactable storage systems. ISC, 6-7 June Valencia Spain., 2024.



C. Cerrone, R. Cerulli, M. Gentili, and L. Bianco, New resolution approaches for the sensor location problem (slp). EWGLA Conference, 28-30 April, Naples, Italy., 2010.
 C. Cerrone, R. Cerulli, and A. Raiconi, A genetic approach for bounded degree spanning tree problems. AIRO Conference, 7-10 September, Villa San Giovanni , Italy., 2010.
 C. Cerrone and R. Cerulli, A platform for the design and experimental evaluations of graphs algorithms.

C. Cerrone and R. Cerulli, *A platform for the design and experimental evaluations of graphs algorithms.* AIRO Conference, 5-8 September, Genoa , Italy., 2007.

C. Cerrone and R. Cerulli, *A 2-approximated algorithm and a efficient heuristic for the minimum vertex cover problem.* CTW Conference on Graphs and Combinatorial Optimization, 5-9 June Cologne, Germany., 2006.



C. Cerrone and R. Cerulli, *Variants of the vertex cover problem.* AIRO Conference, 12-15 September, Cesena , Italy., 2006.

Other Professional Experiences

2024 – 2025	Instructor at the "Big Data Analysis" course for CISITA - Via del Molo, 1/a - 19126 La Spezia (SP). The course was held in Savona and the topics covered were Big Data and Data Analysis.
2018 – 2020	Consultant for optimization projects at "Starboard Corporation," a logistics company based in Michigan.
2012 – 2014	Consultant for the PONo1_02705 project "FIBAC Innovative Enjoyment of Artistic and Cultural Assets."
2012 – 2014	Consultant for the PONo1_00990 project "Automotive Enterprise 2.0: Social and Semantic Methodologies and Techniques for the Automotive Sector."
2012 – 2016	CEO at NPsof S.R.L. San Giuseppe Vesuviano (NA).
2012 - 2013	Consultant for the "AMP ₄ VAS" project for the development of a banking authoring plat- form. (Client: Metoda S.p.A.).
2011	Consultant for the OpenHMI project for the development of a visual programming environment for HMI (Human-Machine Interface) devices. (Client: NEXSOFT S.p.A.).
	Instructor at the "Master Web Design" training course for Formatict snc. The course took place in Bologna, and the topics covered were JavaScript, XML, and XSLT.
2008 - 2009	Project Manager for the EDOSOC project for the management of social housing in the Lazio region. (Client: LAIT S.p.A.).
2007 - 2008	Project Manager for the AEDC project for the management of religious buildings in Lazio. (Client: LAIT S.p.A.).
2007 - 2007	Project Manager for the GAMP project for the management of POS (Point of Sale) transactions. (Client: BPM Banca Popolare di Milano).
2003 - 2006	CEO of the startup C.N.P. Software, Eboli (SA).
2001 – 2003	Software Developer at Studio Gamma, Battipaglia (SA).
2000 - 2001	Software Developer at Serin Sistemi, Salerno.

Skills

Languages	Native Italian speaker. Strong reading, writing, and speaking competencies for English.
Coding	Java, JavaScript, с, с++, Python, Cplex, Gurobi, LpSolve, sql, хмl, нтмl, json, धТЕХ, Math-
	ematical Programming,
Misc.	Academic research, teaching, training, consultation.

Prof. Carmine Cerrone 16/07/2025