CURRICULUM VITAE

Personal:

Name:	Francesca Guerriero
Address:	Department of Mechanical, Energy and Management Engineering University of Calabria Via P. Bucci, 41/C 87036 Rende (CS) – Italy
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Fax:	+39 0984 494713
Electronic Mail:	francesca.guerriero@unical.it
Date and place of birth:	September 25, 1968, Cosenza, Italy
Languages:	Italian, English

Academic Position:

2015 – present:	Full Professor of Operations Research, at University of Calabria, Rende, Italy
2015 – present:	Vice Dean Department of Mechanical, Energy and Management Engineering, University of Calabria, Italy
2013 - present:	Management Engineering Graduate Program Coordinator, University of Calabria, Rende, Italy
2010:	Full Professorship in Operations Research at Polytechnic University of Marche, Italy
2002- 2015:	Associate Professor of Operations Research, at University of Calabria, Rende, Italy
1999-2002:	Assistant Professor of Operations Research, at University of Calabria, Rende, Italy
1998-1999:	Postdoctoral Research Fellow (Top Talent Program), Department of Electronics, Computer Science and Systems, University of Calabria, Italy.
1999:	Visiting Researcher at the Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, MA, USA (Prof. Dimitri P. Bertsekas)

Research topic “Solution Approaches for the Non-Linear Minimum Cost Flow Problem”

1995: Visiting Researcher at the Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, MA, USA (Prof. Dimitri P. Bertsekas)
Research topic “Auction Methods for the Linear Minimum Cost Flow Problem”

1993: Visiting Researcher at the Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, MA, USA (Prof. Dimitri P. Bertsekas)
Research topic “Efficient Solution Approaches on Sequential and Parallel Systems for the Shortest Path Problem”.

Education:

1997: Ph.D. University of Calabria, Italy
Specialization: Systems Engineering and Informatics
Dissertation: Parallel Algorithms for Large-Scale Network Optimization Problems
Advisor: L. Grandinetti

1993: Graduate (Laurea) Degree (summa cum laude) in Management Engineering, from University of Calabria, Italy
Dissertation: Parallel Algorithms for Network Flow Optimization Problems
Advisor: L. Grandinetti

Research Interests:

- Network Optimization

  Analysis and development of solution approaches for network flow optimization problems. The attention has been mainly focused on the minimum cost flow problem (linear and non-linear) and different instances of the shortest path problem (the k shortest path problems, the multiobjective shortest path problem, the shortest path problem with forbidden paths, the constrained shortest path problem, the robust shortest path). In addition, the shortest path tour problem, the constrained shortest path tour problem, the steiner tree problem and the spanning tree problem have been investigated.
  Development of models and methods for finding optimal paths in mobile ad hoc networks.

- Combinatorial Optimization

  Definition, analysis and development of innovative solution approaches for combinatorial optimization problem. The attention has been focused on the rollout approaches and genetic algorithms.

- Logistics

  Definition, analysis and development of efficient approaches for solving problems arising in the fields of logistics and supply chain management. The attention has been focused on the plant location problem, the multiobjective uncapacitated arc routing problem, the inventory routing problem, the products allocation problem, the truck and trailer routing problem, the green vehicle routing problem, the vehicle routing problem with occasional drivers and the vehicle routing problem aided by the use of drones.

- Revenue Management
  The research is aimed at the development of revenue management techniques for problems arising in the rental car industry, in the restaurant and advertising industries.

- Project Management
  The research has been directed toward developing models and methods for addressing the project-scheduling problem, in the presence of different types of time constraints. Some issues related to project management under uncertainty and resource constraints have been also investigated.

- Optimization and Big Data
  The world is witnessing an unprecedented growth of needs in data analytics. An open issue and challenge faced by the data community is how to scale up analytic algorithms. To address this issue, optimization of large-scale data sets has attracted many researchers in recent years. The research activity has been focused on the development of fully distributed stochastic optimization algorithms for decision making over large-scale data sets and the empirical evaluation of their performance.

INDICATORS OF SCIENTIFIC PRODUCTION

SCOPUS
Documents: 107
Citations: 1729 total citations by 1502 documents
h-index: 22

GOOGLE SCHOLAR global indicators
Citations: 3103
h-index: 28
i10-index: 64

GOOGLE SCHOLAR indicators from 2014
Citations: 1940
h-index: 22
i10-index: 53

EDITORIAL ACTIVITIES
She has taken editorial responsibilities as member of the editorial board of the international journals Optimization Methods and Software and International Journal of Computing and the AIRO Series Springer.

Grants and Scholarship:

1992: Scholarship offered by the Region of Calabria, Italy: Electronics, Computer Science and Systems.

1993-1994 Italian National Research Council (CNR) - Grant: Information Systems and Parallel Computing

1996 – 1997 Italian National Research Council (CNR) - Grant: Parallel Models and Algorithms for Large Scale Network Optimization Problem

National and International Research Projects

December 2017 -present

Calabria Region Funded Project "**SAFE**: Strumenti avanzati a supporto dei processi di dematerializzazione nei sistemi di fatturazione", Scientific Leader.

February 2017 - present

Italian Ministry of Education, University and Research (MIUR) Funded Project PRIN 2015, " Transportation and Logistics Optimization in the Era of Big and Open Data", Scientific leader

June 2015-December 2015

European-Commission and Italian Ministry of Education, University and Research (MIUR), Funded Project, "Groupage", Scientific Leader

July 2011- August 2014

European-Commission and Italian Ministry of Education, University and Research (MIUR), Funded Project, KOM4TME: KnOwledge Management 4 InfoTelematic Mobility Environment, member of the research unit.

June 2012 Italian Ministry of Education, University and Research (MIUR) Funded Project PRIN 2009, "Models and Algorithms for Advanced vehicle routing problems", Scientific leader

2001-present Member of the MIUR Center of Excellence for High Performance Computing, established at the University of Calabria in 2001. The activities carried out are primarily focused on designing and developing innovative parallel algorithms for complex and large-scale optimization problems.

2001-2004 European-Commission-Funded project " WADI - Water Supply Watershed Planning and Management: an Integrated Approach", member of the research unit

1997-1999 European-Commission-Funded project "HPC - FINANCE": High Performance Computing for Finance Project, member of the research unit

1997-1999 Italian Ministry of Education, University and Research (MIUR) Funded Project "MOST - Methods for the Optimization of Systems and Technologies" and "COSO - Algorithms for the Optimization of Complex Systems", member of the research unit

1996-1999 European-Commission-Funded project "Euromed" Advanced Biomedical Applications of HPC Technology, member of the research unit

1995-1996 Italian National Research Council (CNR) - Funded Project "Algorithms for the Management of Electric Power Systems", member of the research unit

1993-1996 European-Commission-Funded project "Molecular dynamics simulation of complex molecular systems on massively distributed memory computers ", member of the research unit

1993-1994 Italian National Research Council (CNR) - Funded Project "Optimization Models for Transportation Systems", member of the research unit

1992-1993 Italian National Research Council (CNR) - Funded Project "Information Systems and Parallel Computation", member of the research unit

Teaching Experience:

2015-present Full Professor of Operations Research, University of Calabria, Italy
Courses Taught: Operations Research, Network Optimization, Optimization Models and Methods for Project Management.

2003-2015 Associate Professor of Operations Research, University of Calabria, Italy
Courses Taught: Operations Research, Network Optimization, Optimization Models and Methods for Project Management, Optimization Models and Methods for Telecommunication Network Management.

2000-2002 Assistant Professor of Operations Research, University of Calabria, Italy
Courses Taught: Operations Research, Network Optimization, Optimization Models and Methods for Project Management, Simulation Techniques

1994-2000 Teaching Assistant in Operations Research, University of Calabria, Italy

Phd students' supervision at University of Calabria

2004 -2007 S. Benigno –Title "A revenue management approach to address a truck rental problem"
2007-2010 L. Di Puglia Pugliese - Title "Models and Methods for the Constrained Shortest Path Problem and its variants",
2007-2011 M.G. Grande – Title "Solution Approaches for the Stochastic Dial-A-Ride Problem"
2014-2017 G. Macrina – Title "Green Logistics and Crowd-shipping: Challenges and Opportunities"

Reviewer of Ph.D. theses:

2011 Alia Ghaddar, "Improving the Quality of Aggregation using data analysis in WSNs", Ecole Doctoral, Science Pour l'Ingénieur, EDSP, Lille, France

2017 RAZAFIMANDIMBY Anjalalaina Jean, "Toward Internet of Heterogeneous Things : Wireless communication maintenance and efficient data sharing among devices", Universitè Lille 1 - Sciences et Tecnologies École Doctorale ed Règionale SPI 72 INRIA Lille - Nord Europe.

Other Activities

Member of the Technical Program Committee of the IEEE INFOCOM 2019 workshop titled IEEE MiSARN 2019: "Mission-Oriented Wireless Sensor, UAV and Robot Networking" Parigi, Francia, Aprile 2019

Member of the International Program Committee of the 8th International Conference on Operations Research and Enterprise Systems – ICORES 2019. Prague, Czech Republic, 19 - 21 February, 2019

Member of the International Program Committee of the 7th International Conference on Operations Research and Enterprise Systems – ICORES 2018. Madeira, Portugal, 24 - 26 January, 2018

Member of the International Program Committee of the IEEE INFOCOM 2018 workshop titled "WiSARN 2018: Wireless Sensor, Robot and UAV Networks", Honolulu, HI, USA, April 16, 2018

Member of the International Program Committee of the 6th International Conference on Operations Research and Enterprise Systems – ICORES 2017. Porto, Portugal, 23 - 25 February, 2017

Member of the International Program Committee of the 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2017), Bucharest, Romania, September, 2017

Member of the International Program Committee of the 8th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2015), Warsaw, Poland, 2015

Member of the Scientific Technical Programming Committee (TPC Member) of 7th EAI International Conference on Ad Hoc Networks, SAN REMO, ITALY, September 2015

Member of the Scientific Technical Programming Committee (TPC Member) of the 6th International Conference on Ad Hoc Networks, Rhodes, Greece, August 2014

Member of the Program Commitee of the 7th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2013), Berlin, Germany, September, 2013

Member of the Program Commitee of the EURO-INFORMS Joint International Conference: "All roads lead to OR", Rome, Italy, July 2013

Member of the Scientific Technical Programming Committee (TPC Member) of the 4th International Conference on Ad Hoc Networks, Paris, October 2012

Member of the International Programme Committee of the 6th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems:

Technology and Applications (IDAACS'2011), Prague, Czech Republic, September, 2011

Member of the International Programme Committee of the 5th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2009), Rende, Italy, September 2009

Member of the Scientific Committee of the Conference Airo2004, Italian Association of Operations Research, Lecce, Italy, September 2004.

Peer Review Activity for International Journals

Journal of Optimization Theory and Applications, European Journal of Operational Research, Computers & Operations Research, Parallel Computing, Computing, Health Care Management Science, Journal of Environmental Management, OMEGA, Networks, Optimization Letters, Transportation Science, Operations Research.

Reviewer of Many Research Projects (Calabria Region funded Projects; H2020-MSCA-ITN-2017 - (Innovative Training Network) Marie Sklodowska-Curie actions; Executive Government Agency of National Science Centre (Narodowe Centrum Nauki – NCN), Poland; National Council of Science and Technology of Chile, etc.)

Papers at Google Scholar

http://scholar.google.it/citations?hl=it&user=f4wsBOUAAAAJ

ORCID iD: orcid.org/0000-0002-3887-1317

Scopus Author ID: 6603690658

ResearcherID: F-7670-2013

List of Recent Publications (from 2016)

Journal Articles

A.1. Di Puglia Pugliese, L., Zorbas, D., Guerriero, F., Douligeris, C. (2018) Optimal Routing Approaches for IEEE 802.15.4 TSCH Networks, Transactions on Emerging Telecommunications Technologies, doi: 10.1002/ett.3538

A.2. Guerriero, F, Di Puglia Pugliese, L., Macrina, G. (2018) A rollout algorithm for the resource constrained elementary shortest path problem, Optimization Methods and Software, doi: 10.1080/10556788.2018.1551391.

A.3. Ferone, D., Festa, P., Guerriero F. (2018), An efficient exact approach for the constrained shortest path tour problem, Optimization Methods and Software, doi:10.1080/10556788.2018.1548015.

A.4. Macrina, G. Di Puglia Pugliese, L., Guerriero, F., Laporte, G. (2019) The green mixed fleet vehicle routing problem with partial battery recharging and time windows, Computers and Operations Research, 101:183-199

A.5. Santos, J.L., Di Puglia Pugliese, L., Guerriero, F. (2018) A new approach for the multiobjective minimum spanning tree, Computers and Operations Research, 98: 69-83.

A.6. Di Puglia Pugliese, L., Gaudioso, M., Guerriero, F., Miglionico, G. (2018) A Lagrangean-based decomposition approach for the link constrained Steiner tree problem, Optimization Methods and Software, 33 (3): 650-670.

A.7. Bruni, M.E., Di Puglia Pugliese, L., Beraldi, P., Guerriero, F. (2018) A computational study of exact approaches for the adjustable robust resource-constrained project scheduling problem, Computers and Operations Research, 99:178-190

A.8. Bruni ME, Di Puglia Pugliese L, Beraldi P, Guerriero F (2017). An adjustable robust optimization model for the resource-constrained project scheduling problem with uncertain activity durations. OMEGA, vol. 71, p. 66-74, ISSN: 0305-0483

A.9. Guerriero F, Loscrì V, Pace P, Surace R (2017). Neural networks and SDR modulation schemes for wireless mobile nodes: A synergic approach. AD HOC NETWORKS, vol. 54, p. 17-29, ISSN: 1570-8705

A.10. Sheikhalishahi M, Wallace RM, Grandinetti L, Vazquez-Poletti JL, Guerriero F (2016). A multi-dimensional job scheduling. FUTURE GENERATION COMPUTER SYSTEMS, p. 123-131, ISSN: 0167-739X

A.11. Grandinetti L, Guerriero F, Pezzella F, Pisacane O (2016). A pick-up and delivery problem with time windows by electric vehicles . INTERNATIONAL JOURNAL OF PRODUCTIVITY AND QUALITY MANAGEMENT, vol. 18, p. 403-423, ISSN: 1746-6474

A.12. Guerriero F, Miglionico G, Olivito F (2016). Location and reorganization problems: The Calabrian health care system case. EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, p. 939-954, ISSN: 0377-2217

A.13. Guerriero F, Miglionico G, Olivito F (2016). Managing TV commercials inventory in the Italian advertising market . INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, p. 5499 -5521, ISSN: 0020-7543

A.14. Di Puglia Pugliese L, Guerriero F, Zorbas, D, Razafindralambo T (2016). Modelling the mobile target covering problem using flying drones. OPTIMIZATION LETTERS, vol. 10, ISSN: 1862-4472

A.15. Di Puglia Pugliese L, Guerriero F (2016). On the shortest path problem with negative cost cycles. COMPUTATIONAL OPTIMIZATION AND APPLICATIONS, p. 559-583, ISSN: 0926-6003

A.16. Zorbas D, Di Puglia Pugliese L, Razafindralambo T, Guerriero F (2016). Optimal drone placement and cost-efficient target coverage . JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, vol. 75, p. 16-31, ISSN: 1084-8045

A.17. Ferone D, Festa P, Guerriero F, Lagana' D (2016). The constrained shortest path tour problem. COMPUTERS & OPERATIONS RESEARCH, vol. 74, p. 64-77, ISSN: 0305-0548, doi: 10.1016/j.cor.2016.04.002

Book Chapters

B.1. Bruni, M.E., Di Puglia Pugliese, L., Beraldi, P., Guerriero, F. (2018) A two-stage stochastic programming model for the resource constrained project scheduling problem under uncertainty, ICORES 2018 - Proceedings of the 7th International Conference on Operations Research and Enterprise Systems, 2018:194-200

B.2. Di Puglia Pugliese, L., Guerriero, F., Natalizio, E., Zema, N. R. (2017) A biobjective formulation for filming sport events problem using drones, Proceedings of the 2017 IEEE 9th International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, IDAACS, 2: 639-644

B.3. Macrina, G., Di Puglia Pugliese, L., Guerriero, F., Laganà, D. (2017) The Vehicle Routing Problem with Occasional Drivers and Time Windows, Springer Proceedings in Mathematics and Statistics, 217: 577-587

B.4. Di Puglia Pugliese, L., Guerriero, F. (2017) Last-Mile Deliveries by Using Drones and Classical Vehicles, Springer Proceedings in Mathematics and Statistics, 217: 557-565

B.5. Di Puglia Pugliese L., Gaudioso M, Guerriero F., Miglionico G. (2016). An algorithm to find the link constrained steiner tree in undirected graphs. In: (a cura di): Greuel G.-M. Sommese A.Koch T.Paule P., Mathematical Software – ICMS 2016. vol. 9725,, p. 492-497, doi: 10.1007/978-3-319-42432-3_63

Conference Contributions

- **C.1.** Shahbazian R., Guerriero, F., "Where Optimization Meets Big Data: A Review", HPC 2018, High Performance Computing, FROM clouds and BIG DATA to EXASCALE AND BEYOND, An International Advanced Workshop, July 2 – 6, 2018, Cetraro, Italy
- **C.2.** Shahbazian R., Grandinetti, L., Guerriero, F., "A New Distributed and Decentralized Stochastic Optimization Algorithm with Applications in Big Data Analytics", The Fourth International Conference on Machine Learning, Optimization, and Data Science – September 13-16, 2018 – Volterra, Tuscany, Italy.
- **C.3.** L. Di Puglia Pugliese, D. Zorbas, F. Guerriero, "Modeling and solving the packet routing problem in industrial IoT networks", ODS2018, Taormina, Italia, September 10 – 13, 2018.
- **C.4.** L. Di Puglia Pugliese, F. Guerriero, "Cooperation among classical vehicles and drones: new opportunities for last-mile delivery process", EURO2018, Valencia, Spagna, July 8 – 11, 2018
- **C.5.** Macrina G., Archetti, C., Guerriero, F., "The online vehicle routing problem with occasional drivers", EURO2018, Valencia, Spagna, July 8 – 11, 2018.
- **C.6.** L. Di Puglia Pugliese, F. Guerriero, N.R. Zema, "A mathematical formulation to optimize UAV trajectories for WSN data collection", BalkanCom2018, Podgorica, Montenegro, June 6 – 8, 2018.
- **C.7.** L. Di Puglia Pugliese, F. Guerriero, E. Natalizio, N.R. Zema, "A biobjective formulation for filming sport events problem using drones", IDAACS2017, Bucharest, Romania, Septemebr 21 – 23, 2017
- **C.8.** L. Di Puglia Pugliese, F. Guerriero, "Last-mile deliveries by using drones and classical vehicles", ODS2017, Sorrento, Italia September 4 - 7, 2017
- **C.9.** L. Di Puglia Pugliese, F. Guerriero, G. Macrina, "An iterated local search precedure for the green vehicle routing problem with heterogeneous fleet and time windows", MIC2017, Barcellona, Spagna, July 4 – 7, 2017
- **C.10.** L. Di Puglia Pugliese, M. Gaudioso, F. Guerriero, G. Miglionico, "An Algorithm to Find the Link Constrained Steiner Tree in Undirected Graph", ICMS, Berlin, Germany, July 11 – 14, 2016
- **C.11.** L. Di Puglia Pugliese, M. Gaudioso, F. Guerriero, G. Miglionico, "Mat-heuristic procedure based on Lagrangean relaxation for the Link Constrained Steiner Tree Problem", EURO2016, Poznan, Poland, July 2 – 6, 2016

Rende, January 2019