

# Stefano Coniglio

## Curriculum Vitae

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🌐 [www.southampton.ac.uk/maths/about/staff/sc2r15.page](http://www.southampton.ac.uk/maths/about/staff/sc2r15.page)

Nationality: Italian  
Birthday: April, 6 1983



### Academic appointments

- 2021– **Fellow of the Alan Turing Institute, UK.**
- 2020– **Associate Professor of Operational Research**, *Department of Mathematical Sciences*, University of Southampton, Southampton, UK.
- 2016–20 **Lecturer (Level 5, equiv. to Lecturer B) in Operational Research**, *Department of Mathematical Sciences*, University of Southampton, Southampton, UK.
- 2019 **Visiting Professor**, *Université Paris Dauphine*.
- 2018 **Visiting Professor**, *Politecnico di Milano*.
- 2018 **Visiting Professor**, *Université Paris Dauphine*.
- 2012–16 **Postdoctoral researcher**, *Lehrstuhl II für Mathematik (Department of Mathematics II)*, RWTH Aachen University, Aachen, Germany, Discrete Optimization group headed by Prof. Arie Koster.
- 2011–12 **Postdoctoral researcher**, *Dipartimento di Elettronica e Informazione (Department of Electronics and Computer Science)*, *Politecnico di Milano, Italy*, Operations Research group headed by Prof. F. Maffioli.
- 2010 **Visiting scholar**, *Tepper School of Business, Carnegie-Mellon University, Pittsburgh, US, Pennsylvania*, Supervisor: Prof. F. Margot.

### Qualifications

- 2021 **National Scientific Qualification (Abilitazione Scientifica Nazionale) as Associate Professor - sector “01/B1 Informatica”.**
- 2020 **National Scientific Qualification (Abilitazione Scientifica Nazionale) as Associate Professor - sector “01/A6 Ricerca Operativa”.**
- 2017 **Fellow of the Higher Education Academy**, awarded in recognition of attainment against the “UK Professional Standards Framework” for teaching and learning support in higher education.  
Recognition reference: PR139371
- 2008–11 **PhD in Information Technology (awarded: 16.02.2011)**, *Dipartimento di Elettronica e Informazione (Department of Electronics and Computer Science, Operations Research Group)*, *Politecnico di Milano*, Advisor: Prof. E. Amaldi.  
Thesis: *On coordinated cutting plane generation and mixed integer programs with nonconvex 2-norm constraints*.
- 2005–07 **MSc in Engineering of Computing Systems (awarded: 20.12.2007)**, *Politecnico di Milano*, Grade: 110/110 cum laude.  
Thesis: *Hyperplane clustering and piecewise linear model fitting*.
- 2002–05 **BSc in Engineering of Computing Systems (awarded: 28.09.2005)**, *Politecnico di Milano*, Grade: 110/110 cum laude.  
Thesis: *New constructive heuristics for finding minimal fundamental cycle bases in graphs*.

### Research grants

- 2020–22 **Co-Recipient of Recipient of a Royal Society and China National Science Foundation International Exchange Grant**, budget: 12,000 GBP.
- 2020–21 **Co-Investigator of the “Economic Ageing of Transformers” project**, total budget: £446,814 GBP, £229,054 allocated to the subproblem I am responsible for, funded by the National Grid.
- 2018–19 **Recipient of the Paris Dauphine Visiting Professor Grant**, budget: 2,900 GBP, granted by Université Paris Dauphine.

- 2018–19 **Co-recipient of the ESRC Impact Acceleration 'Next Generation Services' fund**, *budget: 3494.40 GBP*, granted by the University of Southampton.
- 2017–18 **Recipient of the Paris Dauphine Visiting Professor Grant**, *budget: 2,900 GBP*, granted by Université Paris Dauphine.
- 2017–18 **Recipient of CORMSIS Visitor Fund**, *budget: 800 GBP*, invited visitor: Dr. Stefano Gualandi.
- 2017–18 **Co-recipient of the SIRDF-FBLA Strategic Interdisciplinary Research Development Fund 2017/2018**, *budget: 6,789 GBP*, granted by the Faculty of Business, Law and Arts, University of Southampton.  
Project title: *W-GREENBELT: Workshop on GREEN and BluE Logistics and Transport*.
- 2016–17 **Co-recipient of the SIRDF-FHSMS Strategic Interdisciplinary Research Development Fund 2016/2017**, *budget: 6,959 GBP*, granted by the Faculty of Social, Human and Mathematical Sciences, University of Southampton.  
Project title: *Hierarchical optimization techniques for forecasting*.
- 2016–17 **Recipient of CORMSIS Visitor Fund**, *budget: 800 GBP*, invited visitor: Prof. Ted Ralphs.
- 2015–16 **Recipient of the RWTH Start-Up grant for early-career researchers**, *budget: 20,000 EUR*, granted by RWTH Aachen University.  
Project title: *From the simplex method to cutting plane algorithms: bound-optimal cuts and bound-improving pivoting rules*.

## Participation to research projects and consultancy activities

- 2020–21 **Economic Ageing of Transformers**, *funded by the National Grid, UK*.  
Development of optimization algorithms for assessing the economical impact of updating the ratings of transformers
- 2018 **UK Met Office, Exeter, UK**.  
Development of optimization algorithms for personnel rostering subject to fairness and cyclicity constraints.
- 2014–16 **Robust optimization of power networks**, *funded by BMWi, Bundesministerium für Wirtschaft und Energie (Federal ministry for economy and energy), Germany*, industrial partner: ProCom GmbH, university: RWTH Aachen University.
- 2013–16 **VINO: Virtual Network Optimization**, *funded by BMBF, Bundesministerium für Bildung und Forschung (Federal ministry for education and research), Germany*, university: RWTH Aachen University.
- 2012–13 **Robust Mixed-Integer Linear Programming**, *funded by Google Inc.*, university: RWTH Aachen University.
- 2011–12 **Planning and operation of IP networks with low energy consumption**, *funded by Lombardy Region (Italy), within the project "Green ICT & ICT for Green"*, university: Politecnico di Milano.
- 2011–12 **CESI (Centro Elettronica Sperimentale Italiano, Italian Center for Experimental Electronics)**, *Milan, Italy*.  
Development of Mixed-Integer Linear Programming techniques to solve optimal power flow, outage minimization, and unit commitment problems in the Italian power network.
- 2011 **Coordinated cutting plane methods for integer linear programming**, *funded by MIUR, Ministero dell'Istruzione, dell'Università e Ricerca (Ministry for education, university, and research), Italy*, university: Politecnico di Milano.
- 2008–10 **DECEMbRIA: decisions in health-care emergencies**, *funded by Lombardy Region, Health-care Directorate-General (Italy)*, partner: 118 Emergency Service operations center, university: Politecnico di Milano.

## PhD dissertation

- [D1] **On coordinated cutting plane generation and mixed integer programs with nonconvex 2-norm constraints**, Dipartimento di Elettronica e Informazione, Politecnico di Milano, 2011.

## Edited volumes

- [E1] **Computational Logistics: 8th International Conference, ICCL 2017, Southampton, United Kingdom, October 18-20, 2017, Proceedings**, with T. Bektas, T. Martinez-Sykora, S. Voß, Lecture Notes in Computer Science, Springer, volume 10572.

## Chapters in books

- [C1] **A Unified Framework for Multistage Discrete Optimization**, with T. Ralphs, "Bilevel optimization: advances and next challenges", Dempe, S., Zemkoho, A., eds., Springer, 513–560, 2020.

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## Journal papers

- [J19] **Deep learning methods for screening patients' S-ICD implantation eligibility**, with A. Dunn, M. ElRefai, P. Roberts, B. Wiles, A. Zemkoho, *Artificial Intelligence in Medicine* 119 (2021) 102139.
- [J18] **Optimizing over the Closure of Rank Inequalities with a Small Right-Hand Side for the Maximum Stable Set problem via Bilevel Programming**, with S. Gualandi, accepted for publication on *INFORMS Journal on Computing*.
- [J17] **On the exact separation of cover inequalities of maximum depth**, with D. Catanzaro, F. Furini, *Optimization Letters*, published online on 1st May 2021.
- [J16] **Airport Capacity Extension, Fleet Investment, and Optimal Aircraft Scheduling in a Multi-Level Market Model: Quantifying the Costs of Imperfect Markets**, with M. Sirvent, M. Weibelzahl, *OR Spectrum* 43 (2), 367-408.
- [J15] **A new combinatorial branch-and-bound algorithm for the Knapsack Problem with Conflicts**, with F. Furini, P. San Segundo, *European Journal of Operational Research*, 2021, doi: 10.1016/j.ejor.2020.07.023.
- [J14] **Elastic traffic engineering subject to a fair bandwidth assignment via bilevel programming**, with L. Gianoli, E. Amaldi, A. Capone, *IEEE/ACM Transactions on Networking*, 2020, doi: 10.1109/TNET.2020.3007572.
- [J13] **A lexicographic pricer for the fractional bin packing problem**, with F. D'Andreagiovanni, F. Furini, *Operations Research Letters*, 47(6), 622–628, 2019.
- [J12] **Computing a Pessimistic Leader-Follower Equilibrium with Multiple Followers: the Mixed-Pure Case**, with A. Marchesi, N. Gatti, *Algorithmica*, 82(5), 1189–1238, 2019.
- [J11] **Leadership in Singleton Congestion Games: What is Hard and What is Easy**, with A. Marchesi, M. Castiglioni, N. Gatti, *Artificial Intelligence (AIJ)*: 227, 1–31, 2019.
- [J10] **Bilevel programming methods for computing single-leader-multi-follower equilibria in normal-form and polymatrix games**, with N. Basilico, A. Marchesi, N. Gatti, *EURO Journal on Computational Optimization*, 8(1), 3–31, 2019.
- [J9] **A new branch-and-bound algorithm for the maximum edge-weighted clique problem**, with P. San Segundo, F. Furini, I. Ljubic, *European Journal of Operational Research (EJOR)*: 278 (1), 76–90, 2019.
- [J8] **Lot sizing with storage losses under demand uncertainty**, with A. Koster, N. Spieckermann, *Journal of Combinatorial Optimization* 36: 763–788, 2018.
- [J7] **A workload-dependent task assignment policy for crowd-sourcing**, with I. Catallo, P. Fraternali, D. Martinenghi, *World Wide Web Journal*: 20 (6): 1179–1210, 2017.
- [J6] **Discrete optimization methods to fit piecewise-affine models to data**, with E. Amaldi, L. Taccari, *Computers and Operations Research*, 75: 214–230, 2016.
- [J5] **Data Uncertainty in Virtual Network Embedding: Robust Optimization and Protection Levels**, with A. Koster, M. Tieves, *Journal of Network and Systems Management*, 24(3): 681–710, 2016.
- [J4] **Coordinated cutting plane generation via multi-objective separation**, with E. Amaldi, S. Gualandi, *Mathematical Programming, series A*, 143(1–2): 87–110, 2014.
- [J3] **Network optimization problems subject to max-min fair flow allocation**, with E. Amaldi, A. Capone, L. Gianoli, *IEEE Communications Letters*, 17(7): 1463–1466, 2013.
- [J2] **A distance-based point reassignment heuristic for the  $k$ -hyperplane clustering problem**, with E. Amaldi, *European Journal of Operational Research*, 227(1): 22–29, 2013.
- [J1] **On coordinated cutting plane generation and mixed integer programs with nonconvex 2-norm constraints**, *single author*, *4OR: A Quarterly Journal of Operations Research*, 11(1): 95–96, 2013.

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## Peer-reviewed papers published in conference proceedings

- [P24] **Private Bayesian Persuasion with Sequential Games**, with N. Celli, N. Gatti, *AAAI Conference on Artificial Intelligence AAAI*, New York, US, 2020.  
Proceedings of 37th AAAI
- [P23] **Computing Optimal Ex Ante Correlated Equilibria in Two-Player Sequential Games**, with A. Celli, N. Gatti, *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Montreal, Canada, 2019.  
Proceedings of the 18th AAMAS

- [P22] **Leadership in Singleton Congestion Games**, with *A. Marchesi, N. Gatti*, International Joint Conference on Artificial Intelligence (IJCAI), Stockholm, Sweden, 2018.  
Proceedings of the 27th IJCAI, pages: 447–453
- [P21] **Facility location with item storage and delivery**, with *J. Fliege, R. Walton*, Optimization and Decision Science (ODS), Sorrento, Italy, 2017.  
Springer Proceedings in Mathematics and Statistics, A. Sforza, C. Sterle, eds., 2017
- [P20] **On the separation of topology-free rank inequalities for the max stable set problem**, with *S. Gualandi*, International Symposium on Experimental Algorithms (SEA), London, UK, 2017.  
Leibniz International Proceedings in Informatics, pages 21:1–29:13, 2017
- [P19] **Pessimistic Leader-Follower Equilibria with Multiple Followers**, with *N. Gatti, A. Marchesi*, International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, 2017.  
Proceedings of the 26th IJCAI, pages: 171–177
- [P18] **Bilevel programming approaches to the computation of optimistic and pessimistic leader-multi-follower equilibria**, with *N. Basilico, N. Gatti, A. Marchesi*, International Symposium on Experimental Algorithms (SEA), London, UK, 2017.  
Leibniz International Proceedings in Informatics, pages 31:1–31:14, 2017
- [P17] **On robust lot sizing problems with storage deterioration, with applications to heat and power cogeneration**, with *A. Koster, N. Spieckermann*, International Symposium on Combinatorial Optimization (ISCO), Vietri Sul Mare, Salerno, Italy, 2016.  
Combinatorial Optimization, LNCS, 9849: 26–37, 2016
- [P16] **Methods for Finding Leader-Follower Equilibria with Multiple Followers**, with *N. Basilico, N. Gatti*, International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2016), Singapore, 2016.
- [P15] **On the generation of cutting planes which maximize the bound improvement**, with *M. Tieves*, International Symposium on Experimental Algorithms (SEA), Paris, France, 2015.  
Experimental Algorithms, LNCS, 9125: 97–109, 2015
- [P14] **Virtual network embedding under uncertainty: exact and heuristic approaches**, with *A. Koster, M. Tieves*, International Conference on Design of Reliable Communication Networks (DRCN), Kansas City, US, Missouri, 2015.  
IEEE Xplore, 10.1109/DRCN.2015.7148978, 1–8, 2015
- [P13] **On the computational complexity of the virtual network embedding problem**, with *A. Koster, M. Tieves*, International Network Optimization Conference (INOC), Warsaw, Poland, 2015.  
Electronic Notes in Discrete Mathematics, 52: 213–220, 2016
- [P12] **Maximum throughput network routing subject to fair flow allocation**, with *E. Amaldi, L. Taccari*, International Symposium on Combinatorial Optimization (ISCO), Lisbon, Portugal, 2014.  
Combinatorial Optimization, LNCS, 8596: 1–12, 2014.
- [P11] **Bound-optimal cutting planes**, *single author*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Enschede, Netherlands, 2013.
- [P10] **Energy-aware traffic engineering with elastic demands and MMF bandwidth allocation**, with *E. Amaldi, A. Capone, L. Gianoli*, IEEE International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD), IEEE, Berlin, Germany, 2013.  
IEEE Xplore, 10.1109/CAMAD.2013.6708111, 169–174, 2013
- [P9] **On single-path network routing subject to max-min fair flow allocation**, with *E. Amaldi, L. Gianoli, C. Ileri*, International Network Optimization Conference (INOC), Tenerife, Spain, 2013.  
Electronic Notes in Discrete Mathematics, 41: 543–550, 2013
- [P8]  **$k$ -Piecewise Affine Model Fitting: Heuristics based on multiway linear classification**, with *E. Amaldi, L. Taccari*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Munich, Germany, 2012.
- [P7] **The impact of the norm on the  $k$ -Hyperplane Clustering problem: relaxations, restrictions, approximation factors, and exact formulations**, *single author*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Frascati (Rome), Italy, 2011.
- [P6] **Formulations and heuristics for the  $k$ -Piecewise Affine Model Fitting problem**, with *E. Amaldi, L. Taccari*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Frascati (Rome) Italy, 2011.
- [P5] **Improving cutting plane generation with 0-1 inequalities by bi-criteria separation**, with *E. Amaldi, S. Gualandi*, International Symposium on Experimental Algorithms (SEA), Ischia (Naples), Italy, 2010.  
Experimental Algorithms, LNCS, 6049: 266–275, 2010

- [P4] **Single and multi-group evacuation in medium and maxi health-care emergencies**, with *E. Amaldi, C. Iuliano*, Operations Research Applied to Health Services Conference (ORAHs), Genoa, Italy, 2010.
- [P3] **Optimization models for injured people evacuation in medium/maxi health-care emergencies**, with *E. Amaldi, C. Iuliano*, Workshop on Health Care Management (WHCM), IEEE, Venice, Italy, 2010. IEEE Xplore, 10.1109/WHCM.2010.5441250, 1–6, 2010
- [P2]  **$k$ -hyperplane clustering problem: column generation and a metaheuristic**, with *E. Amaldi, K. Dhyani*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Paris, France, 2009.
- [P1] **An adaptive point-reassignment metaheuristic for the  $k$ -hyperplane clustering problem**, with *E. Amaldi*, Metaheuristic International Conference (MIC), Hamburg, Germany, 2009.

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## Papers under revision (submitted)

- [S6] **Using artificial intelligence and deep learning to optimise the selection of adult congenital heart disease patients in S-ICD screening**, with *M. ElRefai, M. Abouelasaad, I. Conibear, B. Wiles, A. Dunn, A. Zemkoho, P. Roberts*, submitted to Cardiovascular Engineering and Technology.
- [S5] **Role of Deep Learning Methods in Screening for Subcutaneous Implantable Cardioverter Defibrillator in Heart Failure**, with *M. ElRefai, B. Wiles, A. Dunn, A. Zemkoho, J. Morgan, P. Roberts*, submitted to Pacing and Clinical Electrophysiology.
- [S4] **Artificial Intelligence and Utilisation of Deep Learning Methods – A Clinical Application in Screening for Subcutaneous Implantable Cardioverter Defibrillator Eligibility in Heart Failure patients**, with *M. ElRefai, M. Abouelasaad, B. Wiles, A. Dunn, A. Zemkoho, J. Morgan, P. Roberts*, submitted to Heart Rhythm Journal.
- [S3] **Infrequent adverse event prediction in low-carbon energy production using machine learning**, with *A. Dunn and A. Zemkoho*, submitted to Journal of the Operational Reserach Society (JORS).
- [S2] **Energy Storage Operation and Electricity Market Design: On the Market Power of Monopolistic Storage Operators**, with *E. Bjorndal, M. Bjorndal, M.-F. Körner, C. Leinauer, M. Weibelzahl*, under revision for European Journal of Operational Research.
- [S1] **Maximizing submodular utility functions combined with a set-union operator over a discrete set**, with *F. Furini, I. Ljubic*, under revision for Mathematical Programming.

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## Posters

- [T6] **Using Mathematical Optimisation and Game Theory to improve the speed of broadband connections over the Internet**, with *E. Amaldi, A. Capone, L. Gianoli*, STEM for Britain, House of Commons (Westminster), London, UK, 2017.
- [T5] **Methods for Finding Leader-Follower Equilibria with Multiple Followers**, with *N. Basilico, N. Gatti*, International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2016), Singapore, 2016.
- [T4] **On the exact separation of rank inequalities for the maximum stable set problem**, with *S. Gualandi*, Integer Programming and Combinatorial Optimization (IPCO), Bonn, Germany, 2014.
- [T3] **(Beyond) sequentially coordinated cutting plane generation for inequalities with integer coefficients**, with *E. Amaldi, S. Gualandi*, Mixed Integer Programming Workshop (MIP), Waterloo, Canada, Ontario, 2011.
- [T2] **Exact bi-criteria cutting plane generation for inequalities with 0-1 coefficients**, with *E. Amaldi, S. Gualandi*, Mixed Integer Programming Workshop (MIP), Atlanta, US, Georgia, 2010.
- [T1] **Towards a decision support system for injured people evacuation in medium/maxi emergencies**, with *E. Amaldi, C. Iuliano*, PhD Alumni Association Meeting (PhDei), Milan, Italy, 2009.

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## Invited seminars

- [M15] **Integer programming and norm minimization for data science**, *Invited by Prof. E. Messina*, Università di Milano, Bicocca, Milan (virtually), 2021.
- [M14] **The bin packing problem with item class setups**, *Invited by Prof. E. Amaldi*, Politecnico di Milano, Department of Electronics, Information, and Biotechnologies, Milan, 2019.
- [M13] **Bilevel programming and the computation of pessimistic single-leader-multi-follower equilibria in Stackelberg games**, *Invited by Dr. T. Oertel*, Cardiff University, Department of Mathematics, Cardiff, 2019.

- [M12] **Computing Optimistic and Pessimistic Leader-Follower Equilibria with Multiple Followers**, *Invited by Dr. R. Misener*, Imperial College London, Department of Computing, London, 2018.
- [M11] **Network routing through the Internet as a Stackelberg game**, *Invited by Prof. T. Ralphs*, Lehigh University, Department of Industrial and Systems Engineering, Bethlehem, US, Pennsylvania, 2018.
- [M10] **Exact single level and bilevel programming approaches to the computation of Leader-Follower Nash Equilibria in games with many followers**, *Invited by Dr. L. Tran-Thanh*, University of Southampton, AIC (Agents, Interactions and Complexity) seminar series, Department of Electronics and Computer Science, Southampton, 2017.
- [M9] **Network routing through the Internet as a Stackelberg game**, *Invited by Prof. H. Xu*, University of Southampton, Business Advisory Board meeting, CORMSIS (Centre for Operational Research, Management Science and Information Systems), University of Southampton, 2017.
- [M8] **Exact single level and bilevel programming approaches to the computation of Leader-Follower Nash Equilibria in games with many followers**, *Invited by Dr. S. Gualandi*, Pavia University, Pavia, 2017.
- [M7] **Network routing through the Internet as a Stackelberg game**, *Invited by Prof. A. Koster*, RWTH Aachen University, Aachen, 2017.
- [M6] **Computing Leader-Follower Nash Equilibria in games with many followers via optimistic and pessimistic bilevel programming**, *Invited by Prof. A. Koster*, RWTH Aachen University, Aachen, 2016.
- [M5] **On bilevel programming and the computation of Leader-Follower (Nash) Equilibria in games with many followers**, *Invited by Prof. N. Gatti*, Politecnico di Milano, Milan, 2016.
- [M4] **(Bilevel programming and) bound-optimal cutting plane generation**, *Invited by Prof. T. Ralphs*, Department of Industrial and Systems Engineering, Lehigh University, Bethlehem, US, Pennsylvania, 2015.
- [M3] **On the exact separation of rank inequalities for the maximum stable set problem**, *Invited by Dr. F. D'Andreagiovanni*, Zuse Institute Berlin (ZIB), Berlin, Germany, 2014.
- [M2] **Coordinated cutting plane generation via multi-objective separation and extensions**, *Invited by Prof. A. Koster*, RWTH Aachen University, Aachen, Germany, 2012.
- [M1] **Applications of exact mathematical programming**, *Invited by Dr. M. Pozzi*, Centro Elettronica Sperimentale Italiano, Italian Center for Experimental Electronics (CESI), Milan, Italy, 2011.

## Conference presentations

- [O27] **Infinite-Precision Pattern-Enumeration Techniques for Bin Packing Problems**, *with R. Baldacci, F. Furini*, 63th Annual Meeting of the Operational Research Society (OR63), Online, 2021.
- [O26] **Decomposition methods for maximizing a submodular function combined with a set-union operator**, *with F. Furini, I. Ljubic*, 3rd IMA/OR Society Conference, Online, 2021.
- [O25] **Decomposition methods for maximizing a submodular function combined with a set-union operator**, *with F. Furini, I. Ljubic*, International Conference on Optimization and Decision Science (ODS), Online, 2020.
- [O24] **The bin packing problem with item class setups**, *with F. Furini, I. Ljubic*, 30th European Conference On Operational Research (EURO), Dublin, Ireland, 2019.
- [O23] **Computing Pessimistic Leader-Follower Equilibria with Multiple Followers (in the mixed-pure case)**, *with N. Gatti, A. Marchesi*, International Symposium on Mathematical Programming (ISMP), Bordeaux, France, 2018.
- [O22] **Computing Leader-follower equilibria with multiple followers under the assumption of pessimism in the mixed-pure case**, *with N. Gatti, A. Marchesi*, International Workshop on Bilevel Programming (IWOBIP), Lille, France, 2018.
- [O21] **On the separation of topology-free rank inequalities for the max stable set problem**, *with S. Gualandi*, International Symposium on Experimental Algorithms (SEA), London, UK, 2017.  
Leibniz International Proceedings in Informatics, pages 21:1–29:13, 2017
- [O20] **Bilevel programming approaches to the computation of optimistic and pessimistic leader-multi-follower equilibria**, *with N. Basilico, N. Gatti, A. Marchesi*, International Symposium on Experimental Algorithms (SEA), London, UK, 2017.  
Leibniz International Proceedings in Informatics, pages 31:1–31:14, 2017
- [O19] **On the computational complexity of the virtual network embedding problem**, *with A. Koster, M. Tieves*, International Network Optimization Conference (INOC), Warsaw, Poland, 2015.  
Electronic Notes in Discrete Mathematics, 52: 213–220, 2016

- [O18] **On the generation of cutting planes which maximize the bound improvement**, with *M. Tieves*, International Symposium on Experimental Algorithms (SEA), Paris, France, 2015.  
Experimental Algorithms, LNCS, 9125: 97–109, 2015
- [O17] **Dynamic robust optimization approaches to lot sizing**, with *A. Koster, N. Spiekermann, L. Taccari*, Modeling and optimization: theory and applications (MOPTA), Bethlehem, US, Pennsylvania, 2015.
- [O16] **Applications of bilevel programming to cutting plane generation**, with *M. Tieves, S. Gualandi*, International Symposium on Mathematical Programming (ISMP), Pittsburgh, US, Pennsylvania, 2015.
- [O15] **Bound optimal cutting planes: on the generation of cuts which maximize the bound improvement**, Annual Conference of the French Operations Research Society (ROADEF), Marseille, FR, 2015.
- [O14] **Maximum throughput network routing subject to fair flow allocation**, with *E. Amaldi, L. Taccari*, International Symposium on Combinatorial Optimization (ISCO), Lisbon, Portugal, 2014.  
Combinatorial Optimization, LNCS, 8596: 1–12, 2014.
- [O13] **Bound-optimal cutting planes**, *single author*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Enschede, Netherlands, 2013.
- [O12] **Virtual network embedding with network design elements: reservation of physical resources**, with *A. Koster, M. Tieves*, INFORMS Annual Meeting, San Francisco, US, California, 2014.
- [O11] **On the generation of cuts which maximize the bound improvement**, with *M. Tieves*, Annual Conference of the Italian Operational Research Society (AIRO), Como, Italy, 2014.  
Within the “Mixed-integer linear programming” organized session, chaired by myself and S. Gualandi.
- [O10] **On the exact separation of rank inequalities for the stable set problem**, with *S. Gualandi*, International Symposium on Combinatorial Optimization (ISCO), Lisbon, Portugal, 2014.
- [O9] **Bilevel optimization models for traffic engineering with elastic demands and fair flow allocation**, with *E. Amaldi, A. Capone, L. Gianoli*, INFORMS Telecommunications Conference (INFORMS TELECOM), Lisbon, Portugal, 2014.
- [O8] **Valid inequalities and lifting for the 0-1 Gamma-robust knapsack problem**, with *C. Büsing, A. Koster*, European Conference on Operational Research (EURO), Rome, Italy, 2013.
- [O7] **Spatial branch-and-bound for nonconvex Euclidean norm constrained mathematical programs**, with *F. Margot*, International Symposium on Mathematical Programming (ISMP), Berlin, Germany, 2012.
- [O6] **The impact of the norm on the  $k$ -Hyperplane Clustering problem: relaxations, restrictions, approximation factors, and exact formulations**, *single author*, Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW), Frascati (Rome), Italy, 2011.
- [O5] **Multi-objective separation for sequentially coordinated cutting plane generation**, with *E. Amaldi, S. Gualandi*, Combinatorial Optimization Workshop (COW), Aussois, France, 2011.
- [O4] **Improving cutting plane generation with 0-1 inequalities by bi-criteria separation**, with *E. Amaldi, S. Gualandi*, International Symposium on Experimental Algorithms (SEA), Ischia (Naples), Italy, 2010.  
Experimental Algorithms, LNCS, 6049: 266–275, 2010
- [O3] **An adaptive point-reassignment metaheuristic for the  $k$ -hyperplane clustering problem**, with *E. Amaldi*, Metaheuristic International Conference (MIC), Hamburg, Germany, 2009.
- [O2]  **$k$ -Hyperplane Clustering: an adaptive point-reassignment algorithm**, with *E. Amaldi*, International Symposium on Mathematical Programming (ISMP), Chicago, US, Illinois, 2009.
- [O1] **Discrete optimization algorithms for the  $k$ -hyperplane clustering problem**, with *E. Amaldi, K. Dhyani*, Annual Conference of the Italian Operational Research Society (AIRO), Ischia (Naples), Italy, 2008.

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## Technical reports

- [R3] **Optimal offline virtual network embedding with rent-at-bulk aspects**, with *B. Grimm, A. Koster, M. Tieves, A. Werner*, preprint available on arXiv at: <http://arxiv.org/abs/1501.07887>.
- [R2] **Optimal power flow and outage minimization**, Technical Report, CESI, 2011.
- [R1] **Q-sample sharing via q-similarity: new strategies for accelerating q-learning algorithms**, with *M. Matteucci*, Technical Report 2009.16, Dipartimento di Elettronica e Informazione, Politecnico di Milano, 2009.

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## Visits for scientific collaborations

- [I11] **Dauphine University, Paris**, *November 2019*, invited by Dr. F. Furini.
- [I10] **Dauphine University, Paris**, *June/July 2019*, invited by Dr. F. Furini.
- [I9] **Dauphine University, Paris**, *October 2018*, invited by Dr. F. Furini.
- [I8] **Dauphine University, Paris**, *May 2018*, invited by Dr. F. Furini.
- [I7] **Lehigh University, Bethlehem**, *April 2018*, invited by Prof. T. Ralphs.
- [I6] **RWTH Aachen University, Aachen**, *March 2017*, invited by Prof. A. Koster.
- [I5] **RWTH Aachen University, Aachen**, *April 2016*, invited by Prof. A. Koster.
- [I4] **Politecnico di Milano, Milan**, *March 2016*, invited by Prof. N. Gatti.
- [I3] **Lehigh University, Bethlehem**, *July 2015*, invited by Prof. T. Ralphs.
- [I2] **Zuse Institute Berlin (ZIB), Berlin**, *December 2014*, invited by Dr. F. D'Andreagiovanni.
- [I1] **Politecnico di Milano, Milan**, *a number of times since September 2012*, invited by Prof. E. Amaldi and N. Gatti.
- [I0] **Carnegie-Mellon University, Pittsburgh**, *January-March 2010*, invited by Prof. F. Margot.

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## Researchers invited for scientific collaborations

- [V5] **S. Gualandi (University of Pavia)**, *November 2018*, invited to University of Southampton.
- [V4] **F. Furini (Dauphine University)**, *August 2018*, invited to University of Southampton.
- [V3] **T. Ralphs (Lehigh University)**, *April 2017*, invited to University of Southampton.
- [V2] **L. Taccari (Politecnico di Milano)**, *March 2015*, invited to RWTH Aachen University.
- [V1] **S. Gualandi (AntOptima)**, *November 2013*, invited to RWTH Aachen University.

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## Activities as conference organizer

- [CO4] **OR63**, *63rd Annual conference of the Operational Research Society*, University of Southampton (Virtual), September 2021.
- [CO3] **W-GREENBELT 2018**, *Workshop on GREEN and BluE Logistics and Transport*, University of Southampton, 16-17 July 2018.
- [CO2] **ICCL 2017**, *International Conference on Computational Logistics*, University of Southampton, 18-20 October 2017.
- [CO1] **BODAF 2017**, *(Bilevel) Optimization, Data Analysis and Forecasting*, University of Southampton, 3-4 July 2017.

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## Activities as conference stream organizer

- [CStO1] **63rd Annual Conference of the Operational Research Society 2021**, *(Online, UK)*, stream title: “Combinatorial Optimisation”; sessions: “Integer programming and combinatorial optimisation”, “Heuristic and scheduling problems”, “Submodularity, robustness and nonlinear optimisation”, speakers: I. Aliev, S. Gualandi, Y. Lu, V.T. Ramamoorthy, D. Paraskevopoulos, C. Lamas-Fernandez, J. Ward, F. Garuba, M. Anjos, and myself.

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## Activities as conference session organizer

- [CSO5] **IMA and OR Society Conference on Mathematics of Operational Research 2021**, *(Online, UK)*, session title: “(Multilevel) optimization methods for energy transmission”, speakers: L. Schewe, M. Weibelzahl, P. Bartmeyer.
- [CSO4] **European Conference on Operational Research (EURO) 2019**, *(Dublin, IR)*, session title: “Packing and Covering with Integer Programming”, speakers: P. Fath, F. Antonio Medrano, S. Coniglio, M. Sorensen.
- [CSO3] **IMA and OR Society Conference on Mathematics of Operational Research 2017**, *(Birmingham, UK)*, session title: “Nonlinear and Bilevel Optimisation”, speakers: M. Sinnl, A. Zemkoho, S. Brierley.
- [CSO2] **International Symposium on Mathematical Programming (ISMP) 2015**, *(Pittsburgh, US, Pennsylvania)*, session title: “Applications of Bilevel Programming to Combinatorial Optimization and Game Theory”, speakers: M. Carvalho, L. Lozano, C. Casorran-Amilburu.
- [CSO1] **Annual Conference of the Italian Operations Research Society (AIRO) 2014**, *(Como, Italy)*, session title: “Mixed-integer linear programming”, speakers: S. Smriglio, M. Boccia, S. Coniglio.

## Activities as editorial board member

2020 - **Associate Editor**, *Asia-Pacific Journal of Operational Research*.

## Activities as program committee member

**Evo\*2022.**

**EvoApplications 2021**, *24th European Conference on the Applications of Evolutionary Computation*, (part of Evo\*2021).

**EvoApplications 2020**, *23rd European Conference on the Applications of Evolutionary and bio-inspired Computation*, (part of Evo\*2020).

**IJCAI 2019**, *International Joint Conference on Artificial Intelligence*.

**ICCL 2018**, *International Conference on Computational Logistics*.

**IJCAI-ECAI 2018**, *International Joint Conference on Artificial Intelligence and European Conference on Artificial Intelligence*.

**AAAI 2018**, *AAAI Conference on Artificial Intelligence*.

**EvoCOMNET 2018**, (*workshop of EvoSTAR 2018*).

**ICCL 2017**, *International Conference on Computational Logistics*.

**EvoCOMNET 2017**, (*a track of EvoSTAR 2017*).

**AAAI 2017**, *AAAI Conference on Artificial Intelligence*.

**IJCAI 2016**, *International Joint Conference on Artificial Intelligence*.

**AAAI 2016**, *AAAI Conference on Artificial Intelligence*.

## Activities as peer reviewer

Peer reviews **VQR 2015-19 (Italian Research quality evaluation)**, *Referee, ERC codes: PE1\_15 (Discrete mathematics and combinatorics), PE6\_6 (Algorithms, distributed, parallel and network algorithms, algorithmic game theory), PE6\_7 (Artificial intelligence, intelligent systems, multi agent systems), PE6\_11 (Machine learning, statistical data processing and applications using signal processing (e.g., speech, image, video))*.

Journals **Networks**.

**Expert Systems with Applications**.

**International Journal of Hydrogen Energy**.

**INFORMS Operations Research**.

**Energy**.

**INFORMS Journal on Computing**.

**SIAM Journal of Optimization**.

**Journal of the Operational Research Society**.

**RAIRO Operations Research**.

**European Journal of Operational Research**.

**TOP (Journal of the Spanish Society of Statistics and Operations Research)**.

**IEEE Transactions on Cloud Computing**.

**Operations Research Letters**.

**Computational and Applied Mathematics**.

**IEEE Transactions on Network and Service Management**.

**Discrete Optimization**.

**European Journal on Computational Optimization**.

**Computers and Operations Research**.

**Computational and Applied Mathematics**.

**International Journal of Parallel, Emergent and Distributed Systems**.

**IIIE Transactions**.

**INFOR (Information Systems and Operational Research)**.

**Computer Networks**.

**Journal of Experimental Algorithmics**.

Conferences **WI 2021**, *Internationale Tagung Wirtschaftsinformatik (International Conference on Information Systems)*.

**STACS 2019**, *Symposium on Theoretical Aspects of Computer Science*.

**IJCAI 2018**, *International Joint Conference on Artificial Intelligence*.  
**ICCL 2018**, *International Conference on Computational Logistics*.  
**AAAI 2018**, *AAAI Conference on Artificial Intelligence*.  
**ICCL 2017**, *International Conference on Computational Logistics*.  
**ICAT 2017**, *International Conference on Information, Communication and automation technologies*.  
**EvoCOMNET 2017**, “Application of Nature-inspired Techniques for Communication Networks and other Parallel and Distributed Systems” track within *EvoSTAR 2017*.  
**AAAI 2017**, *AAAI Conference on Artificial Intelligence*.  
**IJCAI 2016**, *International Joint Conference on Artificial Intelligence*.  
**AAAI 2016**, *AAAI Conference on Artificial Intelligence*.  
**CP 2015**, *Conference on Principles and Practice of Constraint Programming*.  
**ENIC 2015**, *European Network Intelligence Conference*.  
**INOC 2015**, *International Network Optimization Conference*.  
**OPODIS 2014**, *International Conference on Principles of Distributed Systems*.  
**DRCN 2014**, *Design of Reliable Communication Networks*.  
**AAAI 2014**, *AAAI Conference on Artificial Intelligence*.  
**SEA 2013**, *Symposium on Experimental Algorithms*.

## Participation to conferences and workshops

- Organizer** **63th Annual Meeting of the Operational Research Society (OR63)**, 2021, Online.  
**W-GREENBELT 2018**, **Workshop on GREEN and BluE Logistics and Transport**, 2018, Southampton, UK.  
**International Conference on Computational Logistics**, 2017, Southampton, UK.  
**(Bilevel) Optimization, Data Analysis and Forecasting**, 2017, Southampton, UK.
- Speaker** **63th Annual Meeting of the Operational Research Society (OR63)**, 2021, Online.  
**3rd IMA/OR Society Conference**, 2021, Online.  
**International Conference on Optimization and Decision Science (ODS)**, 2020, Online.  
**International Symposium on Mathematical Programming (ISMP)**, 2018, Bordeaux, France.  
**International Workshop on Bilevel Programming (IWOBIP)**, 2018, Lille, France.  
**Symposium on Experimental Algorithms (SEA)**, 2017, London, UK.  
**Modeling and Optimization: Theory and Applications (MOPTA)**, 2015, Bethlehem, US, Pennsylvania.  
**International Symposium on Mathematical Programming (ISMP)**, 2015, Pittsburgh, US, Pennsylvania.  
**Symposium on Experimental Algorithms (SEA)**, 2015, Paris, France.  
**International Network Optimization Conference (INOC)**, 2015, Warsaw, Poland.  
**Conference of the French Society of Operations Research and Decision Support (ROADEF)**, 2015, Marseille, France.  
**INFORMS Annual Meeting**, 2014, San Francisco, US, California.  
**International Symposium on Combinatorial Optimization (ISCO)**, 2014, Lisbon, Portugal.  
**INFORMS Telecommunications Conference**, 2014, Lisbon, Portugal.  
**EURO-INFORMS Joint International Meeting**, 2013, Rome, Italy.  
**Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW)**, 2013, Enschede, Netherlands.  
**International Symposium on Mathematical Programming, ISMP**, 2012, Berlin, Germany.  
**Cologne-Twente Workshop on Graphs and Combinatorial Optimization (CTW)**, 2011, Rome, Italy.  
**Combinatorial Optimization Workshop (COW)**, 2011, Aussois, France.  
**Symposium on Experimental Algorithms (SEA)**, 2010, Naples, Italy.  
**International Symposium on Mathematical Programming, ISMP**, 2009, Chicago, US, Illinois.  
**Annual Conference of the Italian Operations Research Society (AIRO)**, 2008, Naples, Italy.  
**Metaheuristics International Conference (MIC)**, 2008, Hamburg, Germany.

- Poster presenter **STEM for Britain, House of Commons (Westminster)**, 2017, London, UK.  
**Integer Programming and Combinatorial Optimization (IPCO)**, 2014, Bonn, Germany.  
**Mixed-Integer Programming Workshop (MIP)**, 2011, Waterloo, Canada, Ontario.  
**Mixed-Integer Programming Workshop (MIP)**, 2010, Atlanta, US, Georgia.
- Other **Mathematical Foundations of Optimisation in Data Science, Newton Institute**, 2020, Online.  
**Annual Analytics Summit, OR Society**, 2016, London, UK.  
**First Aachen Discrete Mathematics Days**, 2016, Aachen, Germany.  
**Combinatorial Optimization Workshop (COW)**, 2016, Aussois, France.  
**Mixed-Integer Nonlinear Methods for Energy Systems Engineering (MINOMESE)**, 2015, Aachen, Germany.  
**Combinatorial Optimization Workshop (COW)**, 2013, Aussois, France.  
**Integer Programming and Combinatorial Optimization (IPCO)**, 2009, Bertinoro, Italy.

## Teaching experience (as instructor/lecturer)

- 2021–22 **Combinatorial Optimization, NATCOR**, *Course co-leader and co-instructor*, PhD students, University of Southampton (virtual).  
 Topics: Integer programming and norm minimization for machine learning, modeling techniques for integer programming, Lagrangian relaxations
- 2020–21 **Operational Research I and Mathematical Computing**, *Co-instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Sorting Algorithms, Computational Complexity, Dijkstra’s algorithm, Critical Path Method, Linear Programming, Simplex Method  
**Algorithms**, *Instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Spanning Trees, Shortest Paths, Network Flows, Bipartite Matchings, Computational Complexity,  $\mathcal{NP}$ -Hardness and Approximability, Dynamic Programming
- 2019–20 **Combinatorial Optimization, NATCOR**, *Co-instructor*, PhD students, University of Southampton.  
 Topics: Integer programming and norm minimization for machine learning
- 2018–19 **Operational Research I and Mathematical Computing**, *Co-instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Sorting Algorithms, Computational Complexity, Dijkstra’s algorithm, Critical Path Method, Linear Programming, Simplex Method  
**Algorithms**, *Instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Spanning Trees, Shortest Paths, Network Flows, Bipartite Matchings, Computational Complexity,  $\mathcal{NP}$ -Hardness and Approximability, Dynamic Programming
- 2017–18 **Operational Research I and Mathematical Computing**, *Co-instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Sorting Algorithms, Computational Complexity, Dijkstra’s algorithm, Critical Path Method, Linear Programming, Simplex Method  
**Algorithms**, *Instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Sorting Algorithms, Spanning Trees, Shortest Paths, Network Flows, Bipartite Matchings, Computational Complexity,  $\mathcal{NP}$ -Hardness and Approximability  
**Introduction to Operational Research & module co-leader**, *Co-instructor*, BSc students in Mathematics, University of Southampton.  
 Topics: Linear and Integer Programming, Simplex Method, Project Networks, Inventory Control
- 2016–17 **Algorithms**, *Instructor & module leader*, BSc students in Mathematics, University of Southampton.  
 Topics: Sorting Algorithms, Spanning Trees, Shortest Paths, Network Flows, Bipartite Matchings, Computational Complexity,  $\mathcal{NP}$ -Hardness and Approximability
- 2015–16 **Algorithms**, *Co-instructor (with Prof. C. Potts)*, BSc students in Mathematics, University of Southampton.  
 Topics: Network Flows, Bipartite Matchings, Computational Complexity,  $\mathcal{NP}$ -Hardness and Approximability
- 2015–16 **Optimization B**, *Co-instructor (with Prof. A. Koster)*, BSc/MSc students in Mathematics, RWTH Aachen University.  
 Topics: Shortest paths, Linear Programming with TUM and TDI formulations, Bipartite and Nonbipartite Matchings
- 2011–12 **Foundations of Operations Research & module leader**, *Instructor*, MSc students in Computer Science Engineering, Politecnico di Milano, Como Campus.  
 Topics: Shortest paths, Spanning Trees, Network flows, Linear Programming, Mixed-Integer Linear Programming

## Teaching experience (as teaching assistant)

- 2014–15 **Integer Linear Optimization**, *Teaching assistant (course tutor, homework grading)*, MSc students in Mathematics, RWTH Aachen University.
- 2012–13 **Optimization B**, *Teaching assistant (course tutor, homework grading)*, BSc/master students in Mathematics, RWTH Aachen University.
- 2010–11 **Optimization**, *Teaching assistant (course and lab demonstrations tutor)*, MSc students in Computer Science Engineering and Mathematical Engineering, Politecnico di Milano.
- Foundations of Operations Research**, *Teaching assistant (course and lab demonstrations tutor)*, MSc students in Computer Science Engineering and Mathematical Engineering, Politecnico di Milano.
- 2009–10 **Optimization**, *Teaching assistant (course and lab demonstrations tutor)*, MSc students in Computer Science Engineering and Mathematical Engineering, Politecnico di Milano.
- Operations Research**, *Teaching assistant (course tutor)*, BSc students in Computer Science Engineering, Politecnico di Milano, Como campus.
- 2008–09 **Fundamentals of Operations Research D**, *Teaching assistant (lab demonstrations tutor)*, BSc students in Computer Science Engineering, Politecnico di Milano, Como Campus.
- Fundamentals of Operations Research D-E**, *Teaching assistant (course tutor)*, BSc students in Computer Science Engineering, Politecnico di Milano.
- 2007–08 **Fundamentals of Operations Research D**, *Teaching assistant (lab demonstrations tutor)*, BSc students in Computer Science Engineering, Politecnico di Milano, Como Campus.
- Complements of Operations Research**, *Teaching assistant (lab demonstrations tutor)*, MSc students in Computer Science Engineering and Mathematical Engineering, Politecnico di Milano.
- Fundamentals of Operations Research D-E**, *Teaching assistant (lab demonstrations tutor)*, MSc students in Computer Science Engineering, Politecnico di Milano.

## Supervised students awards

- 2020 **CORMSIS Summer Project Prize**, *University of Southampton*, M.E. Voss, A. Inaba, X.-W. Teh.
- 2019 **CORMSIS Summer Project Prize**, *University of Southampton*, S.Y. Chin and Z. Xue.
- 2018 **CORMSIS Summer Project Prize**, *University of Southampton*, M. Orderud.
- 2017 **CORMSIS Summer Project Prize**, *University of Southampton*, C. Velez.
- 2016 **CORMSIS Summer Project Prize**, *University of Southampton*, K. Roy.

## Postdoc supervision

- 2020– **F. Garuba**, *University of Southampton*.
- 2020–20 **P.M. Bartmeyer**, *University of Southampton*.

## PhD student supervision

- 2016–21 **R. Walton**, *University of Southampton*.  
(co-supervision (50%) with J. Fliege)

## PhD student supervision (ongoing)

- 2022– **J. Montree**, *University of Southampton*.  
(co-supervision (50%) with H. Qi)
- 2020– **Y. Shao**, *University of Southampton*.  
(co-supervision (40%) with A. Zemkoho and H. Qi)
- 2019– **M.A. Alammr**, *University of Southampton*.  
(co-supervision (30%) with C. Potts and A. Martinez-Sykora)
- 2018– **A.J. Dunn**, *University of Southampton*.  
(co-supervision (40%) with A. Zemkoho and H. Qi)
- 2018– **J.B. Badrodin**, *University of Southampton*.  
(co-supervision (50%) with H. Qi)
- 2017– **K.-M. Steinborn-Büsse**, *University of Southampton*.  
(co-supervision (50%) with J. Fliege)

## MSc/BSc student supervision (dissertations)

- 2020–21 **7 MSc students**, *University of Southampton*, Z. Chen, Q. Du, R. Jain, L. Moore, T. Boivert, S. Wang, T. Wu.  
(unique supervisor)
- 2019–20 **4 MSc students**, *University of Southampton*, M. Maliali, A. Inaba, X.-W. Teh, M.E. Voss.  
(unique supervisor)
- 2018–19 **1 Visiting MSc student**, *University of Southampton/University of Pavia*, L. Muffone.  
(unique supervisor)
- 3 MSc students**, *University of Southampton*, S.-Y. Chin, Z. Fei, Z. Xue.  
(unique supervisor)
- 2017–18 **3 MSc students**, *University of Southampton*, M. Orderud, Z. Luu, Q. Wu.  
(unique supervisor)
- 2016–17 **3 MSc students**, *University of Southampton*, C. Liu, G. Oyasor, C. Velez.  
(unique supervisor)
- 2015–16 **2 MSc students**, *University of Southampton*, K. Roy, C. Ma.  
(unique supervisor)
- 2009–16 **3 MSc students**, *Politecnico di Milano*, A. Nicotra, C. Ileri, D. Cardana.  
(co-supervision with E. Amaldi)
- 2015 **1 MSc student**, *RWTH Aachen University*, J. Rosendahl.  
(co-supervision with A. Koster)
- 2009–16 **3 MSc students**, *Politecnico di Milano*, A. Marchesi, S. Corti, A. Perrucci.  
(co-supervision with N. Gatti)
- 2008–12 **7 BSc students**, *Politecnico di Milano*, A. Nicotra, M. Mazzoni, G. Personeni, I. Catallo, S. Celentano, F. Cardellini, E. Cereda.  
(co-supervision with E. Amaldi)

## Students supervision (within taught courses)

- 2020–21 **Presenting Reports**, University of Southampton.  
Supervisor of 10 MSc students on researching, writing, and presenting a report on aspects of Operations Research and Machine Learning
- 2020–21 **MMath Project**, University of Southampton.  
Supervisor of a 4th year BSc student (A. Rose) working on solving the hyperplane-clustering problem
- 2020–21 **Mathematics Project**, University of Southampton.  
Supervisor of six BSc students working on modeling and solving diet problems with mathematical programming
- 2019–20 **Presenting Reports**, University of Southampton.  
Supervisor of six MSc students on researching, writing, and presenting a report on aspects of Operations Research and Machine Learning
- 2018–19 **Mathematical Investigation and Communication (MIC)**, University of Southampton.  
Supervisor of six BSc students working on modeling and solving diet problems with mathematical programming
- 2017–18 **Presenting Reports**, University of Southampton.  
Supervisor of three MSc students on researching, writing, and presenting a report on aspects of Operations Research
- Communicating and Researching Mathematics (CRM)**, University of Southampton.  
Supervisor of four BSc students working on topics of network traffic estimation
- 2016–17 **Presenting Reports**, University of Southampton.  
Supervisor of three MSc students on researching, writing, and presenting a report on aspects of Operations Research
- Communicating and Researching Mathematics (CRM)**, University of Southampton.  
Supervisor of three BSc students working on topics of Robust Optimization
- 2015–16 **Presenting Reports**, University of Southampton.  
Supervisor of three MSc students on researching, writing, and presenting a report on aspects of Operations Research

## PhD students examination

- 2021–22 **Independent chair for PhD viva/defence**, *University of Southampton*, G. Yim (PhD student in Applied Mathematics and Theoretical Physics).
- 2020–21 **Internal examiner for PhD viva/defence**, *University of Southampton*, Y. Zhang (PhD student in Operational Research).

- 2019–20 **Internal examiner for PhD viva/defence**, *University of Southampton*, M. Benedek (PhD student in Operational Research).
- 2018–19 **Internal examiner for PhD viva/defence**, *University of Southampton*, A. Robins (PhD student in Operational Research).
- Internal examiner of PhD viva/defence**, *University of Southampton*, S. Zhou (PhD student in Operational Research).
- Independent assessor for 1st year review**, *University of Southampton*, L.-C. Dinh (PhD student in Computer Science).
- Independent assessor for 3rd year review**, *University of Southampton*, F. Ge (PhD student in Operational Research).
- 2017–18 **Internal examiner for PhD viva/defence**, *University of Southampton*, C. Lamas Fernandez (PhD student in Business Analytics).
- Independent assessor for 2nd year review (MPhil to PhD upgrade)**, *University of Southampton*, Y. Zhang (PhD student in Operational Research).
- Independent assessor for 2nd year review (MPhil to PhD upgrade)**, *University of Southampton*, S. Zachariades (PhD student in Operational Research).
- Independent assessor for 2nd year review (MPhil to PhD upgrade)**, *University of Southampton*, F. Ge (PhD student in Operational Research).
- 2016–17 **Independent assessor for 2nd year review (MPhil to PhD upgrade)**, *University of Southampton*, M. Benedek (PhD student in Operational Research).
- Independent assessor for 2nd year review (MPhil to PhD upgrade)**, *University of Southampton*, S. Zhou (PhD student in Operational Research).
- Independent assessor for 1st year PhD review**, *University of Southampton*, Y. Zhang (PhD student in Operational Research).
- Independent assessor for annual PhD review**, *University of Southampton*, H. Hall (PhD student in Operational Research).
- 2015–16 **Independent assessor 2nd year review (MPhil to PhD upgrade)**, *University of Southampton*, A. Robins (PhD student in Operational Research).
- 2011–12 **Member of MSc graduation committee**, *Politecnico di Milano*, Mathematical Engineering.

## Administrative service

- 2018– **MSc Admission Officer**, *MSc programs: Operational Research, Operational Research & Finance, Operational Research & Statistics, Data and Decision Analytics*, *University of Southampton*.
- 2017–18 **MSc Exam Officer**, *MSc programs: Operational Research, Operational Research & Finance, Operational Research & Statistics*, *University of Southampton*.
- 2016–17 **Deputy Ethics Officer**, *Department of Mathematical Sciences*, *University of Southampton*.

## Travel grants

- 2015 **Traveling support for session organization and oral presentation**, *ISMP 2015 (Pittsburgh, US, Pennsylvania)*, granted by DAAD (German Academic Exchange Service).
- 2011 **Traveling support for poster presentation**, *MIP 2011 (Waterloo, Canada, Ontario)*, granted by conference organizers via conference sponsors.
- 2010 **Traveling support for poster presentation**, *MIP 2010 (Atlanta, US, Georgia)*, granted by conference organizers via conference sponsors.

## Honors and awards

- 2017 **STEM for Britain**, *Selected for “STEM for Britain” poster competition among early-career researchers at the House of Commons (Westminster), London, UK*.
- 2008–10 **PhD scholarship**, (*1st classified over more than 80 applicants at Dipartimento di Elettronica e Informazione, Politecnico di Milano*), granted by MIUR (Italian Ministry for University and Research).
- 2002–07 **BSc and MSc student scholarships**, *reduced student tuition fees (each eligible year) for merit*.

## Spoken languages

Italian (mother tongue), English (fluent), French (basic)

## Technical skills

Programming C/C++, Python, Java, Matlab/Octave

Math programming AMPL, IBM ILOG CPLEX (Concert library), Gurobi, BCP, Couenne, Pyomo

OS GNU/Linux, Windows

Office suite Microsoft Office (Word, PowerPoint, Excel), Open/Libre Office

## References

**Prof. E. Amaldi**, *Politecnico di Milano (Milan, Italy)*, edoardo.amaldi@polimi.it.

**Prof. A. Koster**, *RWTH Aachen University (Aachen, Germany)*, koster@math2.rwth-aachen.de.

**Prof. N. Gatti**, *Politecnico di Milano (Milan, Italy)*, nicola.gatti@polimi.it.

**Prof. T. Ralphs**, *Lehigh University (Lehigh, Bethlehem, PA, US)*, ted@lehigh.edu.

January 19, 2022