

Current position

2020 - now **Research fellow**, *Italian National Research Council (IASI-CNR), Rome.*

Employment summary

- 2013 - 2019 **Maître de conférences**, (*equivalent to Associate Professor*) *Laboratoire d'Analyse et Modélisation de Systèmes pour l'Aide à la DEcision (LAMSADE), Université Paris-Dauphine, UMR-CNRS 7243.*
- 2012 - 2013 **Postdoctoral Fellow**, *Laboratoire d'Informatique de Paris-Nord (LIPN), Université Paris 13, UMR-CNRS 7030.*
- 2011 - 2012 **Postdoctoral Fellow**, *University of Bologna, Italie.*
- 2009 - 2012 **Consultant**, **Ferrovie dello Stato**, Roma.
- 2007 **Consultant**, **Ferrari S.p.A.**, Maranello (MO).

Education

- 2019 **Qualification as Full Professor in Operations Research**, (*MAT/09 - 01/A6*) *from the Italian Ministry of University and Research (MIUR) ("art. 16, legge 240/2010"), BANDO D.D. n. 1532/2016.*
- 2017 **Qualification as Professeur des universités (equivalent to Full Professor in the French Academic System)**, *N° qualification 20126246615 in section 26-Mathématiques appliquées et applications des mathématiques; N° qualification 18127246615 in section 27-Informatique.*
- 2017 **HDR: Habilitation à diriger des recherches**, *Reformulations and Decompositions of Mixed Integer Linear and Nonlinear Programs, Université Paris-Dauphine, France, jury: Prof. Mauro Dell'Amico, Prof. Martine Labbé, Prof. Nelson Maculan, Prof. Ridha Mahjoub, Prof. Vangelis Pascos, Prof. Eduardo Uchoa, Prof. Roberto Wolfler Calvo.*
- 2008–2011 **Ph.D. in Control System Engineering and Operational Research**, *"Decomposition and reformulation of integer linear programming problems", University of Bologna, Italy. Supervisors Prof. Paolo Toth and Prof. Alberto Caprara.*
- 2005–2007 **Master Degree in Engineering and Industrial Management**, *University of Bologna, Italy.*
- 2001-2004 **Bachelor Degree in Engineering and Industrial Management**, *University of Bologna, Italy.*

Research interests

Mixed Integer Linear Programming (MILP), *Study and development of algorithms for mixed integer linear programming problems (e.g., Branch and Cut Algorithms).*

Decomposition and Reformulation of MILP, *Study and development of algorithms based on Column Generation (e.g., Dantzig-Wolfe Reformulation, Branch and Price Algorithms).*

Mixed Integer Non Linear Programming, *Study of perspective relaxations and linearization techniques (e.g., Binary Quadratic Programming).*

Real-world Applications, *Train Timetabling, Cutting and Packing, Air Traffic Management.*

Methodology, *my research project combines the disciplines of Mathematics, Economics and Information Technology, which are the fundamental subjects that Operational Research is concerned with. I use advanced analytical techniques to arrive at solutions of optimal or near-optimal standard to intricate decision-making problems. I develop optimization models to improve the performances of the operations thank to the design of effective exact and heuristic algorithms.*

Published papers in international journals

- OPRE [36] **Casting Light on the Hidden Bilevel Combinatorial Structure of the Capacitated Vertex Separator Problem**, *F. Furini, I. Ljubić, E. Malaguti, P. Paronuzzi*, Operations Research. 2020. INFORMS. (to appear).
- DISCRETE
APPL
MATH [35] **A Branch-and-Price Algorithm for the Minimum Sum Coloring Problem**, *D. Delle Donne, F. Furini, E. Malaguti, R. Wolfler Calvo*, Discrete Applied Mathematics. 2020. Elsevier. DOI:10.1016/j.dam.2020.08.031 (18 pages).
- EUR J
OPER RES
[34] **A new combinatorial branch-and-bound algorithm for the Knapsack Problem with Conflicts**, *S. Coniglio, F. Furini, P. San Segundo*, European Journal of Operational Research, 2020. Elsevier. DOI:10.1016/j.ejor.2020.07.023 (21 pages).
- INFORMS J
COMPUT
[33] **A Branch-and-Price Framework for Decomposing Graphs into Relaxed Cliques**, *T. Gschwind, S. Irnich, F. Furini, R. Wolfler Calvo*, INFORMS Journal on Computing, 2020. INFORMS. DOI:10.1287/ijoc.2020.0984 (21 pages).
- COMPUT
OPER RES
[32] **A branch-and-price algorithm for the temporal bin packing problem**, *M. Dell'Amico, F. Furini, M. Iori*, Computer & Operations Research, 2020. Elsevier. DOI:10.1016/j.cor.2019.104825 (16 pages).
- OPER RES
LETT [31] **A lexicographic pricer for the fractional bin packing problem**, *S. Coniglio, F. D'Andreagiovanni, F. Furini*, Operations Research Letters, 2019. Springer. DOI:10.1016/j.orl.2019.10.011 (7 pages).
- OPER RES
LETT [30] **A note on Selective line-graphs and partition colorings**, *D. Cornaz, F. Furini, E. Malaguti, A. Santini*, Operations Research Letters, 2019. Springer. DOI:10.1016/j.orl.2019.08.005 (4 pages).
- MATH
PROGRAM
COMP [29] **On Integer and Bilevel Formulations for the k-Vertex Cut Problem**, *F. Furini, I. Ljubic, E. Malaguti, P. Paronuzzi*, Mathematical Programming Computation, 2019. Springer. DOI:10.1007/s12532-019-00167-1 (32 pages).
- COMPUT
OPER RES
[28] **A new branch-and-bound algorithm for the Maximum Weighted Clique Problem**, *P. San Segundo, F. Furini, J. Artieda*, Computer & Operations Research, 2019. Elsevier. DOI:10.1016/j.cor.2019.05.017 (15 pages).

- EUR J OPER RES [27] **A new branch-and-bound algorithm for the maximum edge-weighted clique problem**, *P. San Segundo, S. Coniglio, F. Furini, I. Ljubic*, European Journal of Operational Research, 2019. Elsevier. DOI:10.1016/j.ejor.2019.03.047 (15 pages).
- EUR J OPER RES [26] **The Maximum Clique Interdiction Problem**, *F. Furini, I. Ljubic, S. Martin, P. San Segundo*, European Journal of Operational Research, 2019. Elsevier. DOI:10.1016/j.ejor.2019.02.028 (16 pages).
- EUR J OPER RES [25] **Benders Decomposition for Very Large Scale Partial Set Covering and Maximal Covering Location Problems**, *J.F. Cordeau, F. Furini, I. Liubic*, European Journal of Operational Research, 2019. Elsevier. DOI:10.1016/j.ejor.2018.12.021 (15 pages).
- ANN OPER RES [24] **Theoretical and computational study of several linearisation techniques for Binary Quadratic Problems**, *F. Furini, E. Traversi*, Annals of Operations Research, 2018. Springer. DOI:10.1007/s10479-018-3118-2 (25 pages).
- MATH PROGRAM COMP [23] **QPLIB: A Library of Quadratic Programming Instances**, *F. Furini, E. Traversi, P. Belotti, A. Frangioni, A. Gleixner, N. Gould, L. Liberti, A. Lodi, R. Misener, H. Mittelmann, N. Sahinidis, S. Vigerske and A. Wiegele*, Mathematical Programming Computation, 2018. Springer. DOI:10.1007/s12532-018-0147-4 (29 pages).
- DISCRETE OPTIM [22] **The Vertex k -cut Problem**, *D. Cornaz, F. Furini, M. Lacroix, E. Malaguti, A. R. Mahjoub, S. Martin*, Discrete Optimization, 2018. Elsevier. DOI:10.1016/j.disopt.2018.07.003 (12 pages).
- COMPUT OPER RES [21] **An Exact Algorithm for the Partition Coloring Problem**, *F. Furini, E. Malaguti and A. Santini*, Computer & Operations Research, 2018. Elsevier. DOI:10.1016/j.cor.2017.12.019 (12 pages).
- OPTIM LETT [20] **On the Product Knapsack Problem**, *C. D'Ambrosio, F. Furini, M. Monaci, E. Traversi*, Optimization Letters, 2018. Springer. DOI:10.1007/s11590-017-1227-5 (22 pages).
- OMEGA-INT J MANAGE S [19] **Tighter MIP formulations for Barge Container Ship Routing**, *L. Alfandari, T. Davidovic, F. Furini, I. Ljubic, V. Maras and S. Martin*, Omega, 2018. Elsevier. DOI:10.1016/j.omega.2017.12.002 (35 pages).
- COMPUT OPER RES [18] **Exact Approaches for the Knapsack Problem with Setups**, *F. Furini, M. Monaci, E. Traversi*, Computer & Operations Research, 2018. Elsevier. DOI:10.1016/j.cor.2017.09.019 (12 pages).
- OPER RES LETT [17] **Improving the Approximated Projected Perspective Reformulation by Dual Information**, *A. Frangioni, F. Furini, C. Gentile*, Operations Research Letters, 2017. Elsevier. DOI:10.1016/j.orl.2017.08.001 (5 pages).
- EUR J OPER RES [16] **An effective dynamic programming algorithm for the minimum-cost maximal knapsack packing problem**, *F. Furini, Ivana Ljubić, Markus Sinnl*, European Journal of Operational Research, 2017. Elsevier. DOI: 10.1016/j.ejor.2017.03.061 (10 pages).
- NETWORKS [15] **An improved DSATUR-based Branch and Bound for the Vertex Coloring Problem**, *F. Furini, V. Gabrel, I. C. Ternier*, Networks. 2017. Wiley. DOI:10.1002/net.21716 (17 pages).

- DISCRETE APPL MATH [14] **Solving Vertex Coloring Problems as Maximum Weight Stable Set Problems**, *D. Cornaz, F. Furini, E. Malaguti*, Discrete Applied Mathematics. 2016. Elsevier. DOI:10.1016/j.dam.2016.09.018 (12 pages).
- INFORMS J COMPUT [13] **Modeling Two-Dimensional Guillotine Cutting Problems via Integer Programming**, *F. Furini, E. Malaguti, D. Thomopoulos*, INFORMS Journal on Computing. 2016. INFORMS. DOI:10.1287/ijoc.2016.0710 (15 pages).
- TRANSPORT RES B-METH [12] **The Time Dependent Traveling Salesman Planning Problem in Controlled Airspace**, *F. Furini, C.A. Persiani, P. Toth*, Transportation Research Part B. 2016. Elsevier. DOI:10.1016/j.trb.2016.04.009 (17 pages).
- INFORM PROCESS LETT [11] **Solving the Temporal Knapsack Problem via Recursive Dantzig–Wolfe Reformulation**, *A. Caprara, F. Furini, E. Malaguti, E. Traversi*, Information Processing Letters. 2016. Elsevier. DOI:10.1016/j.ipl.2016.01.008 (7 pages).
- COMPUT OPTIM APPL [10] **Approximated Projected Perspective Relaxations**, *A. Frangioni, F. Furini, C. Gentile*, Computational Optimization and Applications. 2016. Springer. DOI:10.1007/s10589-015-9787-8 (30 pages).
- OMEGA-INT J MANAGE S [9] **Approaches to a real-world train timetabling problem in a railway node**, *V. Cacchiani, F. Furini and M.P. Kidd*, Omega. 2015. Elsevier. DOI:10.1016/j.omega.2015.04.006 (14 pages).
- J. SCHED [8] **Improved Rolling Horizon Algorithms for the Aircraft Sequencing Problem**, *F. Furini, M. P. Kidd, C. Persiani, P. Toth*, Journal of Scheduling. 2015. Springer. DOI:10.1007/s10951-014-0415-8 (13 pages).
- INFORMS J COMPUT [7] **Heuristic and exact algorithms for the interval min-max regret knapsack problem**, *F. Furini, M. Iori, S. Martello, M. Yagiura*, INFORMS Journal on Computing, 2015. INFORMS. DOI:10.1287/ijoc.2014.0632 (14 pages).
- MATH PROGRAM [6] **Automatic Dantzig-Wolfe Reformulation of Mixed Integer Programs**, *M. Bergner, A. Caprara, A. Ceselli, F. Furini, M. E. Lübbecke, E. Malaguti, E. Traversi*, Mathematical Programming. 2015. Springer. DOI:10.1007/s10107-014-0761-5 (34 pages).
- IEEE TRANS SIGNAL PROCESS[5] **Generation of antipodal random vectors with prescribed non-stationary 2-nd order statistics**, *A. Caprara, F. Furini, A Lodi, M Mangia, R Rovatti and G. Setti*, IEEE Transactions on Signal Processing, 2014. IEEE. DOI:10.1109/TSP.2014.2302737 (10 pages).
- COMPUT OPER RES [4] **Models for the Two-Dimensional Two-Stage Cutting Stock Problem with Multiple Stock Size**, *F. Furini, E. Malaguti*, Computer & Operations Research, 2013. Elsevier. DOI:10.1016/j.cor.2013.02.026 (10 pages).
- INFORMS J COMPUT [3] **Uncommon Dantzig-Wolfe Reformulation for the Temporal Knapsack Problem**, *A. Caprara, F. Furini, E. Malaguti*, INFORMS Journal on Computing, 2012. INFORMS. DOI: 10.1287/ijoc.1120.0521 (12 pages).
- EUR J OPER RES [2] **A Column Generation Heuristic for the Two-Dimensional Two-Stage Guillotine Cutting Stock Problem with Multiple Stock Size**, *F. Furini, E. Malaguti, R. Medina Durán, A. Persiani, P. Toth*, European Journal of Operational Research, 2012. Elsevier. DOI: 10.1016/j.ejor.2011.10.018 (10 pages).
- DISCRETE OPTIM[1] **Exact Weighted Vertex Coloring via Branch-and-Price**, *F. Furini, E. Malaguti*, Discrete Optimization, 2012. Elsevier. DOI: 10.1016/j.disopt.2012.03.002 (8 pages).

International Journals		2012	2013	2014	2015	2016	2017	2018	2019	2020
ANN OPER RES	1							1		
COMPUT OPER RES	5		1					2	1	1
COMPUT OPTIM APPL	1					1				
DISCRETE APPL MATH	2						1			1
DISCRETE OPTIM	2	1						1		
EUR J OPER RES	6	1					1		3	1
IEEE TRANS SIGNAL PROCESS	1			1						
INFORM PROCESS LETT	1					1				
INFORMS J COMPUT	4	1			1	1				1
J. SCHED	1				1					
MATH PROGRAM	1				1					
MATH PROGRAM COMP	2							1	1	
NETWORKS	1						1			
OMEGA-INT J MANAGE S	2					1			1	
OPER RES LETT	3						1		2	
OPRE	1									1
OPTIM LETT	1							1		
TRANSPORT RES B-METH	1					1				
	36	3	1	1	3	5	4	6	8	5

	h-index	2012	2013	2014	2015	2016	2017	2018	2019	2020	total
Google Scholar citations	16	9	10	24	30	89	124	113	151	231	796
Scopus citations	11	1	4	13	16	43	45	58	76	135	387

Published papers in conference proceedings

- INOC, 2017, **ILP Models and Column Generation for the Minimum Sum Coloring Problem**, *F. Furini, E. Malaguti, S. Martin and I.-C. Ternier*, Electronic Notes in Discrete Mathematics. Elsevier. DOI: 10.1016/j.endm.2018.01.023 (8 pages).
- ISCO, 2016, **MIP Formulations for a Rich Real-world Lot-sizing Problem with Setup Carryover**, *F. Focacci, F. Furini, V. Gabrel, D. Godard and X. Shen*, Lecture Notes Computer Science. Springer. DOI: 10.1007/978-3-319-45587-7_11 (12 pages).
- MIC, 2015, **Matheuristics for the Temporal Bin Packing Problem**, *F. Furini and X. Shen*, Springer book. ISBN: 978-3-319-58252-8. (13 pages).
- CIE, 2015, **A pseudo-polynomial size formulation for 2-stage two-dimensional knapsack problems**, *F. Furini, E. Malaguti*, IEEE Conference. ISBN: 978-1-5108-1745-6 (8 pages).
- INOC, 2015, **Lower Bounding Techniques for DSATUR-based Branch and Bound**, *F. Furini, V. Gabrel, I. C. Ternier*, Electronic Notes in Discrete Mathematics. Elsevier. DOI:10.1016/j.endm.2016.03.020 (8 pages).
- CPAIOR, 2015, **ILP and CP Formulations for the Lazy Bureaucrat Problem**, *I. Ljubic, F. Furini, M. Sinnl*, Lecture Notes Computer Science. Springer. DOI: 10.1007/978-3-319-18008-3_18 (15 pages).

- CODIT, **Mathematical Formulations for the Balanced Vertex k -Separator Problem**, 2014,[6] *D. Cornaz, F. Furini, M. Lacroix, E. Malaguti, A. R. Mahjoub, S. Martin*, IEEE Conference. DOI: 10.1109/CoDIT.2014.6996889 (8 pages).
- ISCO, 2014, **State space reduced dynamic programming for the aircraft sequencing problem with constrained position shifting**, *F. Furini, M. P. Kidd, A. Persiani, P. Toth*, Lecture Notes Computer Science. Springer. DOI: 10.1007/978-3-319-09174-7_23. (12 pages).
- INOC, 2013, **A fast heuristic approach for train timetabling in a railway node**, *F. Furini, M. P. Kidd*, Electronic Notes in Discrete Mathematics. Elsevier. DOI: 10.1016/j.endm.2013.05.094 (8 pages).
- SEA, 2013, **Hybrid SDP Bounding Procedure**, *F. Furini, E. Traversi*, Lecture Notes Computer Science. Springer. DOI: 10.1007/978-3-642-38527-8_23 (12 pages).
- ISCO, 2012, **Aircraft Sequencing Problems via a Rolling Horizon Algorithm**, *F. Furini, C. Persiani, P. Toth*, Lecture Notes Computer Science. Springer. DOI: 10.1007/978-3-642-32147-4_25 (12 pages).
- IPCO, 2011, **Partial convexification of general MIPs by Dantzig-Wolfe reformulation**, *M. Bergner, A. Caprara, F. Furini, M.E. Lübbecke, E. Malaguti, E. Traversi*, Lecture Notes Computer Science. Springer. DOI: 10.1007/978-3-642-20807-2_4 (12 pages).

Editorial Duties

- 2018-now **Associate Editor of Omega journal of management science.**
- 2018-now **Guest Editor of the special issue of Discrete Applied Mathematics, titled "Graphs and Combinatorial Optimization".**
- 2017-2019 **Guest Editor of the special issue of Annals of Operations Research, titled "Recent Advances in Decomposition Methods for hard Optimization Problems".**

Referee Activities

- 2009–now **I regularly acts as referee for the principal international journals, such as, INFORMS Journal on Computing - European Journal of Operation Research - Journal of Scheduling - Computers & Operations Research - Computers & Industrial Engineering - Journal of Optimization Theory and Applications - Journal of the Operational Research Society - RAIRO - Operations Research - Computational Optimization and Applications - OMEGA International Journal of Management Science - Discrete Optimization - Discrete Applied Mathematics - OR Spectrum - Mathematical Programming - Transportation Science - Mathematical Programming- Operations Research.**
- 2013–now **I act as a regular referee for international scientific institutions, among which, l'agence nationale de la recherche (ANR) and the Chilean National Science and Technology Commission.**

Prices and expertises

- 2014-now **Prime d'encadrement doctoral et de recherche (PEDR), top 15% of the french researcher in Computer Science.**
- 2018 **Accueil en délégation institutionnelle CNRS – Semester of research at Université Pierre et Marie Curie (Paris 6).**
- 2014 **Prix Fondation Dauphine de la Publication.**

International collaborations

- Italy **University of Bologna, University of Modena, University of Padova, University of Pisa, CNR IASI**, *Collaborators and co-authors: P. Toth, E. Malaguti, A. Lodi, S. Martello, V. Cacchiani, M. Iori, M. Monaci, A. Frangioni, C. Gentile.*
- Germany **RWTH Aachen University, University of Mainz**, *Collaborators and co-authors: M. Lübbecke, S. Irnich.*
- United States **University of Colorado**, *Collaborators and co-authors: Manuel Laguna, Fred Glover.*
- Japan **Nagoya University**, *Collaborators and co-authors: M. Yagiura.*

Visiting positions

- 2019 **University of Parma**, *Visiting Scientist: Dipartimento di Ingegneria e Architettura*, four months of research with professor M. Locatelli.
- 2018 **University of Southampton**, *Visiting Scientist: Faculty of Mathematics*, one month of research with professor S. Coniglio.
- 2014 **University of Vienna**, *Visiting Scientist: Faculty of Business, Economics, and Statistics*, one month of research with professor I. Ljubic.
- 2012 **University of Colorado**, *Visiting Scientist: Leeds School of Business*, two months of research with professors M. Laguna et F. Glover.
- 2011 **RWTH Aachen University**, *Visiting Scientist: Operations Research Group*, three months of research with professor M. Lübbecke.
- 2010 **Imperial College London**, *Visiting Scientist: Imperial College Business School*, six months of research with professor E. Hadjiconstantinou.

Invited seminars presentations

- 2018 **Partial Set Covering via Benders Decomposition**,
Centre for logistics and supply chain management, University of Luxembourg.
- 2018 **Most vital nodes with respect to the Clique Number**,
IASI CNR, Rome.
- 2018 **Clique Interdiction Games**,
University of Southampton, UK.
- 2018 **Reformulations and Decompositions of Mixed Integer Linear Programs**,
ESSEC, Paris.
- 2016 **BQP formulations, relaxations and formats**,
CNAM, Paris.
- 2015 **Dantzig-Wolfe Reformulation for Generic MIPs**,
Université de la Lorraine, Metz.
- 2014 **Selected Topics in Quadratic Programming**,
University of Vienna, Vienna.
- 2013 **Hybrid LP/SPD Bounding Procedure**,
Ecole Polytechnique, Paris.
- 2013 **Extended Linear Formulation for Binary Quadratic Problems**,
Université Paris 13, Paris.

- 2012 **Min-max and min-max regret optimization**,
TU Dortmund.
- 2010 **Column Generation for the Temporal Knapsack Problem**,
Southampton University.
- 2010 **Decomposition of Integer Linear Programming Problems**,
RWTH Aachen University.
- 2010 **Pseudo Compact Reformulation for the Resource Allocation Problem**,
University of Liège, HEC-Management School.

Selected Conference presentations

- 2019 **Large scale Partial Set Covering Location Problems**,
EURO, Dublin.
- 2018 **Clique Interdiction Games on Graphs**,
ISMP, Bordeaux.
- 2018 **The Maximum Clique Interdiction Game**,
The Aussois Combinatorial Optimization Workshop 2018, Aussois.
- 2017 **Exact Algorithms for the Knapsack Problem with setups**,
ODS17, Sorrento.
- 2016 **QPLIB: A Library of Quadratic Programming Instances**,
ICCOPT 2016, Tokyo.
- 2015 **Extended Formulations for the Graph Partitioning Problems**,
OR 2015, Vienna.
- 2015 **Approximated Projected Perspective Relaxations**,
ISMP 2015, Pittsburgh.
- 2015 **Infinite Staged Two-Dimensional Guillotine Problems**,
JPOC 2015, Le Havre.
- 2015 **Rolling horizon approaches to the aircraft sequencing problem**,
MIC 2015, Agadir.
- 2015 **MIP Approaches to the Lazy Bureaucrat and Greedy Boss Problems**,
CPAIOR 2015, Barcelona.
- 2015 **Modeling Two-Dimensional Guillotine Problems via Integer Programming**,
ROADEF 2015, Marseille.
- 2014 **Efficient exact algorithms for Graph Partitioning Problems**,
PGMO 2014, Paris.
- 2014 **Two useful computational tricks for Quadratic Programming**,
ROADEF 2014, Bordeaux.
- 2013 **Local Reoptimization for Bin Packing Related Problems**,
ROADEF 2013, Troyes.
- 2012 **Robust Unit Commitment Problem With Demand And Market Price Uncertainty**,
AIRO 2012, Vietri.
- 2012 **Heuristic and exact algorithms for the interval min-max regret knapsack problem**,
ISMP 2012, Berlin.
- 2012 **Aircraft sequencing problems via a rolling horizon algorithm**,
ISCO 2012, Athens University of Economics and Business.

- 2010 **Column Generation Approach for AGV dispatching problem in port terminal**,
EURO 10, Lisbon.
- 2009 **Practical solution of the Resource Allocation Problem**,
AIRO 09, Siena.

Program Committees and Invited Sessions

- 2018 **Local Organization Committee of CTW 2018 in Paris (CNAM)**.
- 2018 **Local Organization Committee of SPOC18 in Paris (Paris-Dauphine)**.
- 2018 **Organizer of invited sessions on “Combinatorial Optimization” for the Joint EURO/ALIO International Conference 2018 on Applied Combinatorial Optimization, Bologna, June 25-27, 2018**.
- 2018 **Organizer of invited sessions on “Operations Research and Applications” for the ISMP International Conference, Bordeaux, June 1-6, 2018**.
- 2015 **Organizer of invited sessions on “Graph Theory” for the OR 2015 International Conference, Vienna, September 10-15, 2015**.

Research funding and grants

- 2017-now **“Rich Graph Coloring Problems with applications to resource allocation”**,
Projet PGMO, principal investigator.
- 2016-2017 **“Efficient Quadratic Programming Exact Algorithm mixing Relaxations”**,
PEPS JCJC of CNRS, principal investigator.
- 2014-2017 **“QPLIB2014: a Library of Quadratic Programming Instances”**, *Projet PGMO, principal investigator*.
- 2014-2017 **“Efficient exact algorithms for Graph Partitioning Problems”**, *Projet PGMO*.
- 2014-2017 **Production planning Software**, *with Decision Brain (<https://www.decisionbrain.com/>)*.
- 2010-2012 **Project Rail on Timetabling Optimization Software**, *with Ferrovie dello Stato (italian national railway company)*.

Teaching activity

- 2018-2019 **Benders Decomposition**, (*PhD course*). *University of Bologna, Italy*.
- 2018-2019 **Dantzig-Wolfe Decomposition**, (*PhD course*). *IFSTAR, Lille*.
- 2018-2019 **Quantitative Methods and Optimization**, (*cours magistral*). *University of Parma, Italy*.
- 2017-2018 **Modeling and Solving Decision Problems using Integer Programs with applications in Finance, Data Science and Production Management**, (*PhD course*). *University of Parma, Italy*.
- 2016-2019 **Outils d’optimisation pour les sciences des données et de la décision**, (*cours magistral*). *LAMSADE, Université Paris-Dauphine*.
- 2013-2019 **Optimisation en finance**, (*cours magistral*). *LAMSADE, Université Paris-Dauphine*.
- 2016-2019 **Gestion de la production**, (*cours magistral et travaux dirigés*). *LAMSADE, Université Paris-Dauphine*.

- 2014-2015 **Succeeding in decision making**, (*cours magistral*). *Mastère Spécialisé Leading International Industrial Projects, ESSEC et Ecole Polytechnique.*
- 2014-2015 **Column generation for hard combinatorial problems**, (*cours de l'école doctorale de Dauphine*). *Université Paris-Dauphine.*
- 2014-2016 **Humanitarian logistics**, (*cours magistral*). *MSO, Université Paris-Dauphine.*
- 2013-2015 **Résolution de problèmes de grande taille et mise en œuvre informatique**, (*cours magistral*). *LAMSADE, Université Paris-Dauphine.*
- 2013-2014 **Applications de l'optimisation combinatoire**, (*cours magistral*). *LAMSADE, Université Paris-Dauphine.*
- 2013-2017 **Programmation linéaire**, (*travaux dirigés*). *LAMSADE, Université Paris-Dauphine.*
- 2013-2016 **Système de gestion de BDD**, (*travaux dirigés*). *LAMSADE, Université Paris-Dauphine.*
- 2013-2014 **Algo et programmation JAVA**, (*travaux dirigés*). *LAMSADE, Université Paris-Dauphine.*
- 2012-2013 **Optimization software and MIP solvers**, (*travaux dirigés*). *Department of Electrical, Electronic and Information Engineering, University of Bologna.*

PhD students and dissertations

- 2014-now **Co-Supervisor of 3 PhD Students (2 CIFRE)**, *at the doctoral school of Université Paris-Dauphine.*
- 2013-2019 **Supervision of numerous dissertations of Master**, *at LAMSADE of Université Paris-Dauphine.*
- 2011-2012 **Supervision of numerous dissertations of Bachelor and Master**, *at Department of Electrical, Electronic and Information Engineering of the University of Bologna.*

Administrative Activities

- 2015-2017 **Head of Master MIAGE-IF (Informatique pour la Finance)**, *Université Paris-Dauphine, France.*
- 2014-2016 **Member of the CCR of LAMSADE**, *at Université Paris-Dauphine, France.*

Fabio Furini