

Ivana LJUBIC

Professeur

Département: Systèmes d'Information, Data

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Pays d'origine: Autriche

INTERETS DE RECHERCHE

Intelligence artificielle (IA), Recherche opérationnelle, Planification et optimisation, Mathématiques,

FORMATION

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|------|--|
| 2013 | Habilitation en Recherche des Opérations, Université de Vienne, Autriche |
| 2004 | Ph.D. en Informatique, TU Wien, Autriche |
| 2000 | Master of Science degree (MSc), Department for Optimization and Numerical Analysis, Faculty of Mathematics, University of Belgrade, Serbie |

EXPERIENCE PROFESSIONNELLE

Positions académiques principales

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|----------------|--|
| 2016 - Présent | Professeur, ESSEC Business School, France |
| 2015 - 2016 | Professeur associé, ESSEC Business School, France |
| 2011 - 2015 | Professeur associé, Université de Vienne, Autriche |
| 2007 - 2010 | Post-Doc Researcher & Lecturer, ISOR, Université de Vienne, Autriche |
| 2000 - 2004 | Research and Teaching Assistant (PhD candidate), TU Wien, Autriche |

Autres affiliations académiques

- | | |
|----------------|--|
| 2024 - Présent | Coordinator of PhD concentration in Operations Management and Operations Research, ESSEC Business School, France |
| 2017 - 2021 | Directrice Académique du programme EMBA ESSEC & Mannheim, ESSEC Business School, France |
| 2016 - 2018 | Membre du Comité Scientifique, ESSEC Business School, France |
| 2015 - 2015 | Professeur visitant, Universidad Adolfo Ibáñez, Chili |
| 2014 - 2014 | Professeur visitant, Université Paris Dauphine-PSL, France |
| 2013 - 2015 | Member of the doctoral advisory board at ISOR, Université de Vienne, Autriche |
| 2012 - 2013 | Professeur visitant, Technische Universität Berlin, Allemagne |
| 2012 - 2012 | Professeur visitant, TU Dortmund Universität, Allemagne |

2011 - 2012

Professeur visitant, University of Maryland, États-Unis

Autres expériences professionnelles

2018 - 2019

Member of the "Task Force: future directions, strategy, evaluation", ESSEC Business School, France

BOURSES, PRIX ET DISTINCTIONS

Prix et Distinctions

- 2025 Best Paper Awards 2025 - European Journal of Operational Research - Category "Review"
- 2022 Marguerite Frank Award for the best EJCO paper in 2021 for the paper A Survey on Mixed-Integer Programming Techniques in Bilevel Optimization. Jointly with Thomas Kleinert, Martine Labbé, and Martin Schmidt
- 2021 The Glover-Klingman Prize for the best Networks paper in 2021
- 2016 Ivana Ljubic a reçu le Best Paper Award au congrès : "INFORMS Telecommunications Conference 2016" pour son article : S. Chen, I. Ljubic, S. Raghavan: The Generalized Regenerator Location Problem, INFORMS Journal on Computing 27(2): 204 - 220, 2015.
- 2014 Gagnante du challenge d'implémentation DIMACS sur les arbres de Steiner (avec M. Fischetti et al.)
- 2014 Finaliste du Best Paper Award de l'INFORMS Telecommunication Section (avec L. Gouveia, M. Leitner)
- 2005 Prix PhD award de l'Austrian Society for Operations Research, Autriche

Bourses

- 2017 Co-applicant Prescriptive Analytics – Operations research, Initiative d'Excellence Paris Seine
- 2015 Co-PI Optimization and Analysis of Large-Scale Networks (ICT 2015) WWTF
- 2014 Applicant and leader (PI): Network Optimization in Bioinformatics and Systems Biology, FWF
- 2014 Co-applicant: e4-share: Models for Ecological, Economical, Efficient, Electric Car-Sharing, JPI Urban Europe
- 2012 Applicant and leader (PI) of the Austrian team: Multi-Criteria Optimization of FTTx Networks, (DACH programme, cooperation with the TU Wien and ZIB Berlin), FWF & DFG
- 2011 APART Fellowship à l'Austrian Academy of Sciences, Autriche
- 2011 Member of the graduate school in Computational Optimization (Initiativkolleg programme), University of Vienna
- 2011 Applicant and leader (PI): Network Design Under Uncertainty: Algorithmic Aspects of Stochastic and Robust Optimization (APART programme), OEAW
- 2010 Applicant and leader (PI) of the Austrian team: Flow Projection Results in Telecommunication: Models and Algorithms (Acciones Integradas programme, in cooperation with the University of La Laguna, Spain), OEAD (Austrian exchange)

service)

- 2007 Hertha-Firnberg Post-Doc Fellowship de l'Austrian Science Fund, Autriche
- 2007 Applicant and leader (one of two PIs): Algorithmic Solutions for Optimal Design of Telecommunication Networks, (Bridge programme, cooperation with Telekom Austria AG), FFG
- 2007 Applicant and leader (PI): Algorithmic Solutions for Last-Mile Networks, (Hertha-Firnberg programme), FWF
- 2003 Applicant and leader (PI): Combinatorial and Memetic Algorithms for Selected Network Design Problems (DOC programme). OEAW
- 2003 PhD Fellowship de l'Austrian Academy of Sciences, Autriche
- 2002 Doctoral Scholarship Programme of the OEAW (DOC Programme)

PUBLICATIONS

Articles

- BECK, Y., LJUBIC, I. et SCHMIDT, M. (2026). Heuristic Methods for Γ -Robust Mixed-Integer Linear Bilevel Problems. *INFORMS Journal on Computing*, 38(1), pp. 189-206.
- CLAUTIAUX, F. et LJUBIC, I. (2025). Last fifty years of integer linear programming: A focus on recent practical advances. *European Journal of Operational Research*, 324(3), pp. 707-731.
- LI, Y., ARCHETTI, C. et LJUBIC, I. (2025). Emerging optimization problems for distribution in same-day delivery. *Computers & Operations Research*, 182, pp. 107105.
- CASELLI, G., IORI, M. et LJUBIC, I. (2025). Bilevel optimization with sustainability perspective: A survey on applications. *European Journal of Operational Research*, In press.
- CALAMITA, A., LJUBIC, I. et PALAGI, L. (2025). Benders decomposition for congested partial set covering location with uncertain demand. *European Journal of Operational Research*, In press.
- FERNÁNDEZ, E., LJUBIC, I. et ZEREGA, N. (2025). The multi-commodity flow problem with outsourcing decisions. *Transportation Research Part B: Methodological*, 201, pp. 103333.
- GAAR, E., LEE, J., LJUBIC, I., SINNL, M. et TANINMIS, K. (2024). On SOCP-based disjunctive cuts for solving a class of integer bilevel nonlinear programs. *Mathematical Programming*, 206, pp. 91-124.
- KUZBAKOV, Y. et LJUBIC, I. (2024). New formulations for two location problems with interconnected facilities. *European Journal of Operational Research*, 31(1), pp. 51-65.
- PETROPOULOS, F., LAPORTE, G., AKTAS, E., ALUMUR, S.A., ARCHETTI, C., AYHAN, H. ... ZHAO, X. (2024). Operational Research: methods and applications. *Journal of the Operational Research Society*, 75(3), pp. 423-617.
- LJUBIC, I., POZO, M.A., PUERTO, J. et TORREJON, A. (2024). Benders decomposition for the discrete ordered median problem. *European Journal of Operational Research*, 317(3), pp. 858-874.
- GHADDAR, B., LJUBIC, I. et QIU, Y. (2024). Three network design problems for community energy storage. *Networks*, 84(4), pp. 420-445.

- LI, Y., ARCHETTI, C. et LJUBIC, I. (2024). Reinforcement Learning Approaches for the Orienteering Problem with Stochastic and Dynamic Release Dates. *Transportation Science*, 58(5), pp. 1143-1165.
- CERULLI, M., ARCHETTI, C., FERNÁNDEZ, E. et LJUBIC, I. (2024). A Bilevel Approach for Compensation and Routing Decisions in Last-Mile Delivery. *Transportation Science*, 58(5), pp. 1076-1100.
- KAHR, M., LEITNER, M. et LJUBIC, I. (2024). The Impact of Passive Social Media Viewers in Influence Maximization. *INFORMS Journal on Computing*, 36(6), pp. 1359-1756, C2.
- HAERING, T., LEGAULT, R., TORRES, F., LJUBIC, I. et BIERLAIRE, M. (2024). Exact algorithms for continuous pricing with advanced discrete choice demand models. *OR Spectrum*, In press.
- LEITNER, M., LJUBIC, I., MONACI, M., SINNL, M. et TANINMIS, K. (2023). An Exact Method for Binary Fortification Games. *European Journal of Operational Research*, 307(3), pp. 1026-1039.
- DELLE DONNE, D., ARCHETTI, C., ALFANDARI, L. et LJUBIC, I. (2023). Freight-on-Transit for urban last-mile deliveries: A strategic planning approach. *Transportation Research Part B: Methodological*, 169, pp. 53-81.
- BECK, Y., LJUBIC, I. et SCHMIDT, M. (2023). A survey on bilevel optimization under uncertainty. *European Journal of Operational Research*, 311(2), pp. 401-426.
- MOUACI, A., GOURDIN, , LJUBIC, I. et PERROT, N. (2023). Two extended formulations for the virtual network function placement and routing problem. *Networks*, 82(1), pp. 32-51.
- CERULLI, M., SERRA, D., SORGENTE, C., ARCHETTI, C. et LJUBIC, I. (2023). Mathematical programming formulations for the collapsed k-core problem. *European Journal of Operational Research*, 311(1), pp. 56-72.
- RAMIREZ-PICO, C., LJUBIC, I. et MORENO, E. (2023). Benders Adaptive-Cuts Method for Two-Stage Stochastic Programs. *Transportation Science*, 57(5), pp. 1252-1275.
- BECK, Y., LJUBIC, I. et SCHMIDT, M. (2023). Exact methods for discrete Γ -robust interdiction problems with an application to the bilevel knapsack problem. *Mathematical Programming Computation*, 15(4), pp. 733-782.
- FURINI, F., LJUBIC, I., MALAGUTI, E. et PARONUZZI, P. (2022). Casting light on the hidden bilevel combinatorial structure of the capacitated vertex separator problem. *Operations Research*, 70(4), pp. 2399–2420.
- ALFANDARI, L., LJUBIC, I. et DE MELO DA SILVA, M. (2022). A tailored Benders decomposition approach for last-mile delivery with autonomous robots. *European Journal of Operational Research*, 299(2), pp. 510-525.
- KESHVARI FARD, M., LJUBIC, I. et PAPIER, F. (2022). Budgeting in International Humanitarian Organizations. *Manufacturing & Service Operations Management*, 24(3), pp. 1562-1577.
- ARCHETTI, C. et LJUBIC, I. (2022). Comparison of formulations for the Inventory Routing Problem. *European Journal of Operational Research*, 303(3), pp. 997-1008.
- FERNÁNDEZ, E., LEITNER, M., LJUBIC, I. et RUTHMAIR, M. (2022). Arc Routing with Electric Vehicles: Dynamic Charging and Speed-Dependent Energy Consumption. *Transportation Science*, 56(5), pp. 1111-1408.
- CONIGLIO, S., FURINI, F. et LJUBIC, I. (2022). Submodular maximization of concave utility functions composed with a set-union operator with applications to maximal covering location problems. *Mathematical Programming*, 196(1-2), pp. 9-56.

- ÁLVAREZ-MIRANDA, E., GOYCOOLEA, M., LJUBIC, I. et SINNL, M. (2021). The Generalized Reserve Set Covering Problem with Connectivity and Buffer Requirements. *European Journal of Operational Research*, 289(3), pp. 1013-1029.
- LJUBIC, I. (2021). Solving Steiner trees: Recent advances, challenges, and perspectives. *Networks*, 77(2), pp. 177-204.
- ALFANDARI, L., HASSANZADEH, A. et LJUBIC, I. (2021). An Exact Method for Assortment Optimization under the Nested Logit Model. *European Journal of Operational Research*, 291(3), pp. 830-845.
- FURINI, F., LJUBIC, I., SAN SEGUNDO, P. et ZHAO, Y. (2021). A branch-and-cut algorithm for the Edge Interdiction Clique Problem. *European Journal of Operational Research*, 294(1), pp. 54-69.
- LJUBIC, I., MOUACI, A., PERROT, N. et GOURDIN, E. (2021). Benders decomposition for a node-capacitated Virtual Network Function placement and routing problem. *Computers & Operations Research*, 130(105227).
- KLEINERT, T., LABBÉ, M., LJUBIC, I. et SCHMIDT, M. (2021). A Survey on Mixed-Integer Programming Techniques in Bilevel Optimization. *European Journal on Computational Optimization*, 9, pp. 100007.
- LEITNER, M., LJUBIC, I., RIEDLER, M. et RUTHMAIR, M. (2020). Exact Approaches for Network Design Problem with Relays. *Omega*, 91.
- LJUBIC, I., FURINI, F., MALAGUTI, E. et PARONUZZI, P. (2020). On Integer and Bilevel Formulations for the k-Vertex Cut Problem. *Mathematical Programming Computation*, 12, pp. 133-164.
- BRANDSTÄTTER, G., LEITNER, M. et LJUBIC, I. (2020). Location of Charging Stations in Electric Car Sharing Systems. *Transportation Science*, 54(5), pp. 1408-1438.
- GOUVEIA, L., LEITNER, M. et LJUBIC, I. (2020). A polyhedral study of the diameter constrained minimum spanning tree problem. *Discrete Applied Mathematics*, 285, pp. 364-379.
- CORDEAU, J.F., FURINI, F. et LJUBIC, I. (2019). Benders Decomposition for Very Large Scale Partial Set Covering and Maximal Covering Location Problems. *European Journal of Operational Research*, 275(3), pp. 882-896.
- ALFANDARI, L., DAVIDOVIC, T., FURINI, F., LJUBIC, I., MARAS, V. et MARTIN, S. (2019). Tighter MIP models for Barge Container Ship Routing. *Omega*, 82, pp. 38-54.
- FURINI, F., LJUBIC, I., MARTIN, S. et SAN SEGUNDO, P. (2019). The Maximum Clique Interdiction Problem. *European Journal of Operational Research*, 277(1), pp. 112-127.
- FISCHETTI, M., LJUBIC, I., MONACI, M. et SINNI, M. (2019). Interdiction Games and Monotonicity, with Application to Knapsack Problems. *INFORMS Journal on Computing*, 31(2), pp. 390-410.
- ARULSELVAN, A., BLEY, A. et LJUBIC, I. (2019). The Incremental Connected Facility Location Problem. *Computers & Operations Research*, 112.
- SAN SEGUNDO, P., CONIGLIO, S., FURINI, F. et LJUBIC, I. (2019). A new branch-and-bound algorithm for the maximum edge-weighted clique problem. *European Journal of Operational Research*, 278(1), pp. 76-90.
- LEITNER, M., LJUBIC, I., RIEDLER, M. et RUTHMAIR, M. (2019). Exact Approaches for Network Design Problems with Relays. *INFORMS Journal on Computing*, 31(1), pp. 171-192.

- LEITNER, M., LJUBIC, I., LUIPERSBECK, M. et SINNL, M. (2018). A Dual Ascent-Based Branch-and-Bound Framework for the Prize-Collecting Steiner Tree and Related Problems. *INFORMS Journal on Computing*, 30(2), pp. 402-420.
- LEITNER, M., LJUBIC, I., LUIPERSBECK, M. et SINNL, M. (2018). Decomposition Methods for the Two-Stage Stochastic Steiner Tree Problem. *Computational Optimization and Applications*, 69(3), pp. 713-752.
- FISCHETTI, M., LJUBIC, I., MONACI, M. et SINNL, M. (2018). On the Use of Intersection Cuts for Bilevel Optimization. *Mathematical Programming*, 172(1-2), pp. 77-103.
- LJUBIC, I. et MORENO, E. (2018). Outer Approximation and Submodular Cuts for Maximum Capture Facility Location Problems with Random Utilities. *European Journal of Operational Research*, 266(1), pp. 46-56.
- LEITNER, M., LJUBIC, I., SALAZAR-GONZALEZ, J.J. et SINNL, M. (2018). The Connected Facility Location Polytope. *Discrete Applied Mathematics*, 234, pp. 151-167.
- FISCHETTI, M., LJUBIC, I., MONACI, M. et SINNL, M. (2017). A New General-Purpose Algorithm for Mixed-Integer Bilevel Linear Programs. *Operations Research*, 65(6), pp. 1615-1637.
- BLEY, A., LJUBIC, I. et MAURER, O. (2017). A Node-Based ILP Formulation for the Node-Weighted Dominating Steiner Problem. *Networks*, 69(1), pp. 33-51.
- LEITNER, M., LJUBIC, I., SALAZAR-GONZALEZ, J.J. et SINNL, M. (2017). An Algorithmic Framework for the Exact Solution of Tree-Star Problems. *European Journal of Operational Research*, 1(261), pp. 54-66.
- FURINI, F., LJUBIC, I. et SINNL, M. (2017). An Effective Dynamic Programming Algorithm for the Minimum-Cost Maximal Knapsack Packing Problem. *European Journal of Operational Research*, 262(2), pp. 438-448.
- FISCHETTI, M., LJUBIC, I. et SINNL, M. (2017). Redesigning Benders Decomposition for Large-Scale Facility Location. *Management Science*, 63(7), pp. 2146-2162.
- ÁLVAREZ-MIRANDA, E., LJUBIC, I., LUIPERSBECK, M. et SINNL, M. (2017). Solving Minimum-Cost Shared Arborescence Problems. *European Journal of Operational Research*, 258(3), pp. 887-901.
- LJUBIC, I., MUTZEL, P. et ZEY, B. (2017). Stochastic Survivable Network Design Problems: Theory and Practice. *European Journal of Operational Research*, 256(2), pp. 333-348.
- FISCHETTI, M., LEITNER, M., LJUBIC, I., LUIPERSBECK, M., MONACI, M. et RESCH, M. (2017). Thinning out Steiner Trees: A Node-Based Model for Uniform Edge Costs. *Mathematical Programming Computation*, 9(2), pp. 203-229.
- EHRGOTT, M., LJUBIC, I. et PARRAGH, S.N. (2017). Feature cluster: Recent advances in exact methods for multi-objective optimisation. *European Journal of Operational Research*, 260(3), pp. 805-806.
- SINNL, M. et LJUBIC, I. (2016). A Node-Based Layered Graph Approach for the Steiner Tree Problem with Revenues, Budget and Hop-Constraints. *Mathematical Programming Computation*, 8(4), pp. 461-490.
- FISCHETTI, M., LJUBIC, I. et SINNL, M. (2016). Benders Decomposition without Separability: A Computational Study for Capacitated Facility Location Problems. *European Journal of Operational Research*, 253(3), pp. 557-569.

- LEITNER, M., LJUBIC, I., SINNL, M. et WERNER, A. (2016). ILP Heuristics and a New Exact Method for Bi-Objective 0/1 ILPs: Application to FTTx-Network Design. *Computers & Operations Research*, 72, pp. 128-146.
- ÁLVAREZ-MIRANDA, E., FERNÁNDEZ, E. et LJUBIC, I. (2015). The Recoverable Robust Facility Location Problem. *Transportation Research Part B: Methodological*, 79(1), pp. 93-120.
- CHEN, S., LJUBIC, I. et RAGHAVAN, S. (2015). The Generalized Regenerator Location Problem. *INFORMS Journal on Computing*, 27(2), pp. 204-220.
- GOUVEIA, L., LEITNER, M. et LJUBIC, I. (2015). The Two-Level Diameter Constrained Spanning Tree Problem. *Mathematical Programming*, 150(1), pp. 49-78.
- LJUBIC, I., PUTZ, P. et SALAZAR-GONZALEZ, J.J. (2014). A MIP-based Heuristic Approach to solve a Prize-Collecting Local Access Network Design Problem. *European Journal of Operational Research*, 235(3), pp. 727-739.
- GOUVEIA, L., LEITNER, M. et LJUBIC, I. (2014). Hop constrained Steiner trees with multiple root nodes. *European Journal of Operational Research*, 236(1), pp. 100-112.
- LEITNER, M., LJUBIC, I. et SINNL, M. (2014). The bi-objective prize-collecting Steiner tree problem. *INFORMS Journal on Computing*, 27(1), pp. 118-134.
- ÁLVAREZ-MIRANDA, E., LJUBIC, I. et RAGHAVAN, S. (2014). The Recoverable Robust Two-Level Network Design Problem. *INFORMS Journal on Computing*, 27(1), pp. 1-19.
- GOLLOWITZER, S., GENDRON, B. et LJUBIC, I. (2013). A cutting plane algorithm for the Capacitated Connected Facility Location Problem. *Computational Optimization and Applications*, 55(3), pp. 647-674.
- ALVAREZ-MIRANDA, E., LJUBIC, I. et TOTH, P. (2013). A note on the Bertsimas & Sim algorithm for robust combinatorial optimization problems. *4OR: A Quarterly Journal of Operations Research*, 11(4), pp. 349-360.
- GOLLOWITZER, S., GOUVEIA, L. et LJUBIC, I. (2013). Enhanced Formulations and Branch-and-Cut for the Two Level Network Design Problem with Transition Facilities. *European Journal of Operational Research*, 225(2), pp. 211-222.
- ALVAREZ-MIRANDA, E., LJUBIC, I. et TOTH, P. (2013). Exact Approaches for Solving Robust Prize-Collecting Steiner Tree Problems, *European Journal of Operational Research*. *European Journal of Operational Research*, 229(3), pp. 599-612.
- BLEY, A., LJUBIC, I. et MAURER, O. (2013). Lagrangian decompositions for the two-level FTTx network design problem. *Computational Optimization and Applications*, 1(3), pp. 221-252.
- LJUBIC, I., PUTZ, P. et SALAZAR-GONZALEZ, J.J. (2012). Exact approaches to the single-source network loading problem. *Networks*, 59(1), pp. 89-106.
- LJUBIC, I. et GOLLOWITZER, S. (2012). Layered Graph Approaches to the Hop Constrained Connected Facility Location Problem. *INFORMS Journal on Computing*, 25(2), pp. 256-270.
- FROMMLET, F., LJUBIC, I., BJÖRK ARNARDÓTTIR, H. et BOGDAN, M. (2012). QTL Mapping Using a Memetic Algorithm with Modifications of BIC as Fitness Function. *Statistical Applications in Genetics and Molecular Biology*, 11(4).
- GOLLOWITZER, S. et LJUBIC, I. (2011). MIP models for connected facility location: A theoretical and computational study. *Computers & Operations Research*, 38(2), pp. 435-449.
- LJUBIC, I. (2010). A branch-and-cut-and-price algorithm for vertex-biconnectivity augmentation. *Networks*, 56(3), pp. 169-182.

CHIMANI, M., KANDYBA, M., LJUBIC, I. et MUTZEL, P. (2010). Orientation-based models for $\{0,1,2\}$ -survivable network design: theory and practice. *Mathematical Programming*, 124(1), pp. 413-440.

LJUBIC, I. et CHEN, S. (2010). The regenerator location problem. *Networks*, 55(3), pp. 205-220.

LJUBIC, I., CHIMANI, M., KANDYBA, M. et MUTZEL, P. (2009). Obtaining optimal k -cardinality trees fast. *ACM Journal of Experimental Algorithmics (JEA)*, 14(5), pp. 5.1-5.23.

LJUBIC, I., WEISKIRCHER, R., PFERSCHY, U., KLAU, G., MUTZEL, P. et FISCHETTI, M. (2006). An Algorithmic Framework for the Exact Solution of the Prize-Collecting Steiner Tree Problem. *Mathematical Programming*, 105(2), pp. 427-449.

LJUBIC, I. et RAIDL, G.R. (2003). A Memetic Algorithm for Minimum-Cost Vertex-Biconnectivity Augmentation of Graphs. *Journal of Heuristics*, 9(5), pp. 401-428.

RAIDL, G.R. et LJUBIC, I. (2002). Evolutionary Local Search for the Edge-Biconnectivity Augmentation Problem. *Information Processing Letters*, 82(1), pp. 39-45.

LJUBIC, I., TOŠIĆ, D., FILIPOVIC, V. et KRATICA, J. (2001). Solving the simple plant location problem by genetic algorithms. *RAIRO - Operations Research*, 35(1), pp. 127-142.

Ouvrages et édition d'ouvrages

LJUBIC, I., BARAHONA, F., DEY, S.S. et MAHJOUN, A.R. [Eds] (2022). *Combinatorial Optimization*. New York: Springer.

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Chapitres d'ouvrage

GOUVEIA, L., LJUBIC, I. et LEITNER, M. (2024). Common-Flow Formulations for the Diameter Constrained Spanning and Steiner Tree Problems. Dans: Teodor Gabriel Crainic, Michel Gendreau, Antonio Frangioni eds. *Combinatorial Optimization and Applications*. 1 ed. Cham: Springer Nature Switzerland, pp. 37-58.

LJUBIC, I. (2023). Connected Facility Location Problems. Dans: Pardalos P.M., Prokopyev O.A. eds. *Encyclopedia of Optimization*. 3rd ed. Cham: Springer, pp. 1-11.

GAAR, E., LEE, J., LJUBIC, I., SINNL, M. et TANINMIŞ, K. (2022). SOCP-Based Disjunctive Cuts for a Class of Integer Nonlinear Bilevel Programs. Dans: Karen Aardal, Laura Sanità eds. *Integer Programming and Combinatorial Optimization*. 1st ed. Cham: Springer, pp. 262-276.

FISCHETTI, M., LJUBIC, I., MONACI, M. et SINNL, M. (2016). Intersection Cuts for Bilevel Optimization. Dans: *Integer Programming and Combinatorial Optimization*. 1st ed. Berlin: Springer Computer Science, pp. 77-88.

FURINI, F., LJUBIC, I. et SINNL, M. (2015). ILP and CP Formulations for the Lazy Bureaucrat Problem. Dans: Laurent Michel (ed.). *Integration of AI and OR Techniques in Constraint Programming (CPAIOR 2015)*. 1st ed. Cham, New York: Springer, pp. 255-270.

LJUBIC, I., ALVAREZ-MIRANDA, E. et MUTZEL, P. (2013). The Maximum Weight Connected Subgraph Problem. Dans: *Facets of Combinatorial Optimization*. 1st ed. Springer, pp. 245-270.

LJUBIC, I. (2007). A Hybrid VNS for Connected Facility Location. Dans: Thomas Bartz-Beielstein, María José Blesa Aguilera, Christian Blum, Boris Naujoks, Andrea Roli, Günter Rudolph, Michael Sampels eds. *Hybrid Metaheuristics*. 1 ed. Springer Berlin Heidelberg, pp. 157-169.

KLAU, G.W., LJUBIC, I., MOSER, A., MUTZEL, P., NEUNER, P., PFERSCHY, U. et WEISKIRCHER, R. (2004). Combining a Memetic Algorithm with Integer Programming to Solve the Prize-Collecting Steiner Tree Problem. Dans: Kalyanmoy Deb (ed.). *Genetic and Evolutionary Computation – GECCO 2004*. 1 ed. Springer Berlin Heidelberg, pp. 1304-1315.

KRATICA, J., LJUBIC, I. et TOŠIĆ, D. (2003). A Genetic Algorithm for the Index Selection Problem. Dans: Stefano Cagnoni, Colin G. Johnson, Juan J. Romero Cardalda, Elena Marchiori, David W. Corne, Jean-Arcady Meyer, Jens Gottlieb, Martin Middendorf, Agnès Guillot, Günther R. Raidl, Emma Hart eds. *Applications of Evolutionary Computing*. 1 ed. Springer Berlin Heidelberg, pp. 280-290.

KERSTING, S., RAIDL, G.R. et LJUBIC, I. (2002). A Memetic Algorithm for Vertex-Biconnectivity Augmentation. Dans: Stefano Cagnoni, Jens Gottlieb, Emma Hart, Martin Middendorf, Günther R. Raidl eds. *Applications of Evolutionary Computing*. 1 ed. Springer Berlin Heidelberg, pp. 102-111.

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Editeur invité d'un numéro spécial

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- LJUBIC, I. (2015). A polyhedral study of the diameter constrained minimum spanning tree problem. Dans: Seminario conjunto ACGO y Matemáticas Discretas, Center of Mathematical Modeling. Santiago.
- LJUBIC, I. (2014). The Recoverable Robust Facility Location Problem. Dans: Graz Discrete Mathematics and Optimization Seminar, TU Graz. Graz.
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- LJUBIC, I. (2012). Solving 2-Stage Stochastic Network Design Problems by 2-Stage Branch- and-Cut. Dans: Seminarios CIO, Centro de Investigacao Operacional, Faculdade de Ciencias, Universidade de Lisboa. Lisboa.
- LJUBIC, I. (2012). Optimization Tools for Last Mile Access Networks. Dans: Colloquium of the Computer Science Department, Faculty of Mathematics and Natural Sciences. Cologne.
- LJUBIC, I. (2012). The Recoverable Robust Two-Level Network Design Problem. Dans: Kolloquium Optimierung und Operations Research der Wirtschafts- und Sozialwissenschaften, der Fakultät für Informatik und der Fakultät für Mathematik, TU Dortmund. Dortmund.
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- LJUBIC, I. (2010). Dissaggregated Flow Formulation for the Single-Source Network-Loading Problem. Dans: COGA, TU Berlin.
- LJUBIC, I. (2010). OptTelNets: Algorithmische Ansätze. Dans: COGA, TU Berlin. Berlin.

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LJUBIC, I. (2024). Benders Adaptive-Cuts for Two-Stage Stochastic Optimization. Dans: Benders Day, Eindhoven University of Technology. Eindhoven.

LJUBIC, I. (2024). [Plenary] Benders Adaptive-Cuts for Network Design and Facility Location Problems Under Uncertainty. Dans: International Network Optimization Conference (INOC) 2024, University College Dublin.

LJUBIC, I. (2024). Introduction to computational bilevel optimization with an application to a pricing problem for last-mile delivery. Dans: Gerhard Woeginger Research Colloquium, RWTH Aachen University, Germany. Aachen.

LJUBIC, I. (2024). Introduction to computational bilevel optimization with an application to a pricing problem for last-mile delivery. Dans: Workshop on Ordered Structures in Games and Decision (OSGaD), Centre d'Economie de la Sorbonne. Paris.

LJUBIC, I. (2024). Benders decomposition for the discrete ordered median problem. Dans: 13 Journées Thématiques du Groupe de Travail "Optimisation dans les Réseaux". Paris.

LJUBIC, I. (2024). Interdiction and Blocking Problems. Dans: Winter School on Network Optimization, organized by University of Lisbon. Estoril.

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LJUBIC, I., FURINI, F., MALAGUTI, E. et PARONUZZI, P. (2020). Casting Light on the Hidden Bilevel Combinatorial Structure of the Capacitated Vertex Separator Problem. Dans: Mixed Integer Programming Workshop 2020 Online Edition.

LJUBIC, I. (2018). Recent Developments on Exact Solvers for the (Prize-Collecting) Steiner Tree Problem (Invited Tutorial). Dans: Winter School on Network Optimization NetOpt2018.

LJUBIC, I. (2015). On optimal design of charging stations for electric vehicles. Dans: PGM0 Seminar, École Polytechnique. Paris.

LJUBIC, I. (2015). MIP Approaches to the Lazy Bureaucrat and Greedy Boss Problems. Dans: Séminaire Pôle 2 Optimisation Combinatoire, University Paris Dauphine. Paris.

LJUBIC, I. (2015). A New Modeling Concept for Facility Location Under Uncertainty. Dans: Seminar of the Operations Group, Universidad Adolfo Ibanez. Santiago.

Préfaces d'un ouvrage

LJUBIC, I., BARAHONA, F., DEY, S.S. et MAHJOUR, A.R. (2022). Preface. Dans: *Combinatorial Optimization*. 1st ed. Springer, pp. vi.

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FURINI, F., LJUBIC, I. et TRAVERSI, E. (2020). Preface: decomposition methods for hard optimization problems. *Annals of Operations Research*, 284(2), pp. 483–485.

EHRGOTT, M., LJUBIC, I. et PARRAGH, S.N. (2017). EDITORIAL: Feature Cluster: Recent Advances in Exact Methods for Multi-Objective Optimization. *European Journal of Operational Research*, 260(3), pp. 805-806.

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DELLE DONNE, D., ALFANDARI, L., ARCHETTI, C. et LJUBIC, I. (2021). *Freight-on-Transit for urban last-mile deliveries: A Strategic Planning Approach*. 2104, ESSEC Business School.

ALFANDARI, L., LJUBIC, I. et DE MELO DA SILVA, M. (2019). *Onlast-mile Delivery with Autonomous Robots*. ESSEC Business School.

Presse

DELLE DONNE, D., ARCHETTI, C., LJUBIC, I. et ALFANDARI, L. (2023). When public transport delivers. *ESSEC Knowledge*.

ALFANDARI, L., ARCHETTI, C. et LJUBIC, I. (2021). Sustainable city logistics. *ESSEC Knowledge*.

AUTRES ACTIVITES DE RECHERCHE

Co-direction d'une revue

Depuis 2021 Transportation Science

Depuis 2019 Networks

2017 - 2021 Journal of Global Optimization

2016 - 2021 Omega

Membre d'un comité de lecture

Depuis 2023 Operations Research

Depuis 2021 Transportation Science

Depuis 2020 Networks

2018 - 2025 European Journal of Operational Research

Relecteur pour :

4OR: A Quarterly Journal of Operations Research, Annals of Operations Research, Computational Management Science, Computational Optimization and Applications, Computers & Operations Research, Discrete Applied Mathematics, Discrete Optimization, European Journal of Operational Research, European Journal on Computational Optimization, Evolutionary Computation, IEEE Transactions on Evolutionary Computation, IIE Transactions, INFOR, INFORMS Journal on Computing, International Transactions in Operational Research, Journal of Combinatorial Optimization, Journal of Global Optimization, Journal of Global Optimization, Journal of Heuristics, Management Science, Mathematical Methods of Operations Research, Mathematical Programming, Networks, Omega, Operations Research, Operations Research Letters, Optimization Letters, OR Spektrum, Plos One, SIAM Journal on Optimization, Transportation Science

Organisation d'une conférence

- 2019 Autumn school on advanced BCP tools: VRPSolver and Coluna, France
- 2019 EURO 2019 Conference, Stream "Network Analytics and Optimization", Irlande
- 2019 Optimization and Data Science, France
- Depuis 2019 Member of Editorial Advisory Board - SN Operations Research Forum, SN Operations Research Forum
- 2018 Optimization, Games and Data Analysis" Workshop (OGDA2018), Autriche
- 2018 "Machine Learning, Networks and Combinatorial Optimization" Workshop, France
- 2018 "Cologne-Twente Workshop 2018" (CTW2018), Conservatoire National des Arts & Métiers (CNAM), France
- 2015 "Operations Research 2015" conference, Université de Vienne, Autriche
- 2014 INFORMS Telecommunication Conference 2014, Portugal
- 2014 IFORS 2014, Espagne
- 2014 Atelier de travail "Routing and Networks", Université de Vienne, Autriche
- 2014 Atelier de travail "Recent Advances in Multi-Objective Optimization", Université de Vienne, Autriche
- 2013 Workshop "Optimization Tools for Next Generation Telecommunication Networks", Austrian Academy of Sciences, Autriche

Affiliations

- Depuis 2018 Présidente de la division Telecommunication & Network Analytics d'INFORMS
- 2017 - 2018 Vice-president of the INFORMS Telecommunication Section
- 2010 - 2016 Member of council and secretary of the INFORMS Telecom Section
- 2006 - 2008 Membre du conseil d'administration de l'Austrian Society of Operations Research OEGOR
- 2003 Member of the IEEE Computational Intelligence Society (CIS)

Supervision de thèses / HDR

- 2019 M. DE MELO DA SILVA (ESSEC Business School), Co-directeur de thèse
- 2017 M. LUIPERSBECK (Université de Vienne), Co-directeur de thèse
- 2015 M. SINNL (Université de Vienne), Co-directeur de thèse
- 2015 M. LEITNER (Université de Vienne), Directeur de thèse
- 2014 E. ALVAREZ-MIRANDA (University of Bologna), Co-directeur de thèse
- 2013 S. GOLLOWITZER (Université de Vienne), Co-directeur de thèse
- 2013 P. PUTZ (Université de Vienne), Co-directeur de thèse
- 2013 B. WASSERMANN (Université de Vienne), Co-directeur de thèse
- 2013 C. BÜSING (Université de Vienne), Directeur de thèse
- A. HASSANZADEH (ESSEC Business School), Co-directeur de thèse
- G. BRANDSTÄTTER (Université de Vienne), Co-directeur de thèse
- A. MOUACI (Université Paris Dauphine-PSL), Co-directeur de thèse

Autres activités de recherche

- 2020 Program Committee member: INFORMS Telecommunication & Network Analytics Conference 2020
- 2020 Program Committee member: International Symposium on Combinatorial Optimisation 2020
Program Committee member: International Symposium on Combinatorial Optimisation 2020
- 2020 Program Committee member: International Symposium on Combinatorial Optimization, ISCO 2020
- 2019 Relecteur pour DFG (Deutsche Forschungsgemeinschaft), Allemagne
- 2019 Program Committee member - International Network Optimization Conference, INOC 2019
- 2018 International Symposium on Combinatorial Optimization, ISCO 2018
- 2018 International Symposium on Mathematical Programming, ISMP 2018
- 2018 Relecteur pour Integer Programming and Combinatorial Optimization (IPCO 2018)
- 2018 INFORMS Telecommunication Conference 2018
- 2017 Relecteur pour FONDECYT (Fondo Nacional de Desarrollo Científico y Tecnológico), Chili
- 2017 International Network Optimization Conference, INOC 2017
- 2016 Program Committee member: INFORMS Telecommunication Conference 2016
- 2016 Membre du comité de programme : European Conference on Operational Research, EURO 2016, Poznan, Pologne

- 2015 Program Committee member:
- 2015 Program Committee member: 11th Metaheuristics International Conference
- 2015 Relecteur pour FONDECYT (Fondo Nacional de Desarrollo Científico y Tecnológico), Chili
- 2015 Membre du comité de programme : International Network Optimization Conference, INOC 2015, Varsovie, Pologne
- 2014 Membre du comité de programme : International Symposium on Combinatorial Optimization, ISCO 2014, Lisbonne, Portugal
- 2014 Comité de Programme : INFORMS Telecommunication Conference 2014, Lisbonne, Portugal
- 2014 Relecteur pour Integer Programming and Combinatorial Optimization (IPCO 2014)
- 2013 Program Committee Member: International Network Optimization Conference
- 2013 Program Committee member : 10th Metaheuristics International Conference, MIC 2013
- 2013 Relecteur pour International Symposium on Experimental Algorithms (SEA 2013)
- 2012 Relecteur pour International Colloquium on Automata, Languages and Programming (ICALP 2011)
- 2012 Program Committee member :
- 2012 Relecteur pour FONDECYT (Fondo Nacional de Desarrollo Científico y Tecnológico), Chili
- 2011 Relecteur pour European Symposia on Algorithms (ESA 2011)
- 2011 International Network Optimization Conference, INOC 2011
- 2010 Program Committee member: Third international workshop on model-based metaheuristics, Matheuristics 2010
- 2009 Relecteur pour International Network Optimization Conference (INOC 2009)
- 2008 Program Committee member:
- 2005 Program Committee member: The Genetic and Evolutionary Computation Conference, GECCO 2005
- 2002 Relecteur pour Graph Drawing (GD 2002)
- 2002 Relecteur pour European Symposia on Algorithms (ESA 2002)
- 2001 Relecteur pour European Symposia on Algorithms (ESA 2001)
- 2001 - 2005 Program Committee member: European Conferences on Evolutionary Computation in Combinatorial Optimisation EvoCOP

ACTIVITES PROFESSIONNELLES

Consulting

2007 - 2010 OptTelNets, projet réalisé avec Telecom Austria A1

Autres activités professionnelles

2017 - Présent Orange Labs, France: Optimal Instantiation of Service Chains in Software Defined Networks. CIFRE contract (PhD supervision of Ahlam Mouaci)

2006 - 2010 Telekom Austria AG: Optimal Design of FTTx Telecommunication Networks: (supervision of 2 PhD students)