Laurent ALFANDARI
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Département: Systèmes d'Information, Data
Analytics et Opérations
Campus de Cergy

DIPLÔMES

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1999	Doctorat en Recherche Opérationnelle (Université Paris Dauphine-PSL France)
1995	Master of Research, Sciences du Management (Université Paris Dauphine-PSL France)
1993	M.Sc in Management (Grande Ecole program) (ESSEC Business School France)
1990	Licence - Mathématiques & Sciences Sociales (Université Paris Dauphine-PSL France)

CERTIFICATS

2010	International Teachers Program (ITP) (Kellogg School of Management, Northwestern University États-Unis)

CARRIÈRE

POSITIONS ACADÉMIQUES PRINCIPALES

2000 - 2007-08-31	Professeur assistant (ESSEC Business School France)
2007 - 2010-08-31	Professeur associé (ESSEC Business School France)
2010 - Présent	Professeur (ESSEC Business School France)

AUTRES POSITIONS

2002 - 2020-09-01   Membre du LIPN (Sorbonne Université France)

1995 - 2002-08-31   Membre du Laboratoire LAMSADE (Université Paris Dauphine-PSL France)

2012 - 2014-12-31   Responsable de département (ESSEC Business School France)

2025 - 2028-08-31   Responsable du département IDO (ESSEC Business School France)

POSITIONS PROFESSIONNELLES

1993 - 1993-12-31   Conseil en Urbanisme et Développement de Commerce Spécialisés (PROCOS France)

1992 - 1992-01-12   Auditeur interne (TOTAL France)

1992 - 1992-12-31   Contrôleur de Gestion (Hachette France)

1991 - 1991-12-31   Marketing (Hachette France)

AUTRES POSITIONS ACADÉMIQUES

2018 - 2021-08-31   Responsable de filière PHD Opération & Data Analytics (ESSEC Business School France)

2019 - 2023-08-31   CO-Responsable DU MASTER IN DATA SCIENCES AND BUSINESS ANALYTICS (ESSEC Business School France)

2013 - 2021-09-01   Responsable de filière business analytics methods (ESSEC Business School France)

2009 - 2011-08-30   Directeur académique / Responsable académique (ESSEC Business School France)

PUBLICATIONS

CHAPITRES

ALFANDARI, L., PLATEAU, A. et TOLLA, P. (2004). A Path Relinking Algorithm for the Generalized

Assignment Problem. Dans: *Metaheuristics Computer Decision-making*. 1st ed. Kluwer Academic Publishers, pp. 1-17.

ALFANDARI, L. (2018). Décision et complexité : le cas de la planification optimale de tout simplisme. Dans: *Complexité et organisations : faire face aux défis de demain*. 1st ed. Eyrolles, pp. 229-242.

ALFANDARI, L. et NAGIH, A. (2006). Optimisation de la construction de rotations d'équipages en transport aérien. Dans: *Optimisation combinatoire 3. Applications (traité IC2)*. 1st ed. Hermès Sciences, Lavoisier, pp. 23-45.

ALFANDARI, L. et NAGIH, A. (2010). Applications of Combinatorial Optimization: Airline Crew Pairing Optimization. Dans: *Applications of Combinatorial Optimization*. 1st ed. Wiley, pp. 1-22.

ARTICLES

ALFANDARI, L. (2001). The Minimum Bounded-Diameter Spanning Forest Problem Is Log-Approximable. *Foundations of Computing and Decision Sciences*, pp. 123-132.

LIBERTI, L., ALFANDARI, L. et PLATEAU, M.C. (2011). Edge Cover by Connected Bipartite Subgraphs. *Annals of Operations Research*, 188(1), pp. 307-329.

ALFANDARI, L. et PASCHOS, V. (2000). Master-slave Strategy and Polynomial Approximation. *Computational Optimization and Applications*, pp. 231-245.

ESPINOZA GARCIA, J.C. et ALFANDARI, L. (2018). Robust Location of New Housing Developments Using a Choice Model. *Annals of Operations Research*, 271, pp. 527–550.

ALFANDARI, L. et ESPINOZA GARCIA, J.C. (2018). Robust Optimization for Non-Linear Impact of Data Variation. *Computers & Operations Research*, 99, pp. 38-47.

ROZENKNOP, A., WOFLER, C., ALFANDARI, L., CHEMLA, D. et LETOCART, L. (2013). Solving Electricity Production Planning By Column Generation. *Journal of Scheduling*, 16(6), pp. 585-604.

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.

BUTELLE, F., ALFANDARI, L., COTI, C., FINTA, L., LÉTOCART, L. et PLATEAU, G. (2016). Fast Machine Reassignment. *Annals of Operations Research*, 242(1), pp. 130-160.

ALFANDARI, L., SADKI, J., PLATEAU, A. et NAGIH, A. (2013). Hybrid Column Generation for Large-Size Covering Integer Programs: Application to Transportation Planning. *Computers & Operations Research*, 40(8), pp. 1938-1946.

DENOYEL, V., ALFANDARI, L. et THIELE, A. (2017). Optimizing Healthcare Network Design Under Reference Pricing and Parameter Uncertainty. *European Journal of Operational Research*, 263(3),

pp. 996-1006.

ALFANDARI, L. (1999). The Greedy Approach for the Crew Pairing Problem: Some Cases of Polynomial Subproblems. *Cahiers du Lamsade (Laboratoire d'Analyse et de Modélisation de Systèmes d'Aide)*, pp. 1-10.

GIANESSI, P., ALFANDARI, L., LÉTOCART, L. et CALVO, R.F. (2016). The Multicommodity-Ring Location Routing Problem. *Transportation Science*, 50(2), pp. 541-558.

ALFANDARI, L., PLATEAU, A. et SCHEPLER, X. (2015). A Branch-and-Price-and-Cut Approach for Sustainable Crop Rotation Planning. *European Journal of Operational Research*, 241(3), pp. 872-879.

GIANESSIA, P., ALFANDARI, L., LETOCART, L. et WOLFLER CALVOA, R. (2016). A Column Generation Based Heuristic for the Multicommodity-Ring Vehicle Routing Problem. *Transportation Research Procedia*, 12, pp. 227-238.

ALFANDARI, L. (2007). Improved Approximation of the General Soft-capacitated Facility Location Problem. *RAIRO - Operations Research*, pp. 83-93.

ALFANDARI, L. et PASCHOS, V. (1999). Approximating Minimum Spanning Tree of Depth 2. *International Transactions in Operational Research*, pp. 607-622.

ALFANDARI, L., LEMALADE, J.L., NAGIH, A. et PLATEAU, G. (2011). A MIP Flow Model for Crop-Rotation Planning in a Context of Forest Sustainable Development. *Annals of Operations Research*, 190(1), pp. 149-164.

ALFANDARI, L. et MONNOT, J. (2014). A Note on the Clustered Set Covering Problem. *Discrete Applied Mathematics*, 1(164), pp. 13-19.

FARD, M.K. et ALFANDARI, L. (2019). Trade-Offs Between the Stepwise Cost Function and Its Linear Approximation for the Modular Hub Location Problem. *Computers & Operations Research*, 104, pp. 358-374.

ALFANDARI, L., DENOYEL, V. et THIELE, A. (2020). Solving Utility-Maximization Selection Problems with Multinomial Logit Demand: Is the First-Choice Model a Good Approximation? *Annals of Operations Research*, 292, pp. 553–573.

ZHAO, Y. et ALFANDARI, L. (2020). Design of diversified package tours for the Digital Travel industry: A branch-cut-and-price approach. *European Journal of Operational Research*, 285(3), pp. 825-843.

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.

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.

ALFANDARI, L. et TOULOUSE, S. (2021). Approximation of the Double Traveling Salesman Problem with multiple stacks. *Theoretical Computer Science*, 877, pp. 74-89.

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.

BISWAS, D. et ALFANDARI, L. (2022). Designing an optimal sequence of non?pharmaceutical interventions for controlling COVID-19. *European Journal of Operational Research*, 303(3), pp. 1372-1391.

BISWAS, D., ALFANDARI, L. et ARCHETTI, C. (2024). A Triple Bottom Line optimization model for assignment and routing of on-demand home services. *Computers & Operations Research*, 167, pp. 106644.

ZHAO, Y., ALFANDARI, L. et ARCHETTI, C. (2025). Stochastic scheduling and routing decisions in online meal delivery platforms with mixed force. *European Journal of Operational Research*, 323(1), pp. 139-152.

COMMUNICATIONS DANS UNE CONFÉRENCE

ALFANDARI, L. et ALFANDARI, L. (2019). Le problème de Team Orienteering avec contraintes de diversité entre les tours : Une approche de Branch-and-Price-and-Cut. Dans: ROADEF 2019.

ESPINOZA, I.C. et ALFANDARI, L. (2014). Robust Facility Location Optimization with Location-dependent Demands. Dans: 2014 INFORMS Annual Meeting.

ALFANDARI, L., DENOYEL, V. et THIELE, A. (2015). Robust in Network Selection of Hospitals by Healthcare Under Reference Pricing. Dans: EURO 2015 12 July 2015 Conference.

ALFANDARI, L. (2018). Robust Optimization for Non-Linear Impact of Data Variation. Dans: Workshop on Robust Optimization Avignon (RO 2018).

ALFANDARI, L. et ESPINOZA-GARCIA, J.C. (2019). Robust optimization for non-linear impact of data variation. Dans: 30th European Conference on Operational Research (EURO 2019). Dublin.

ALFANDARI, L. (2013). Un algorithme de Branch?and?Price pour le problème de planification durable de rotations culturales. Dans: 14ème Conférence ROADEF 2013.

ALFANDARI, L. (2013). Approximation du problème de Clustered Set Covering. Dans: 14ème

Conférence ROADEF 2013.

ALFANDARI, L., NAGIH, A., PLATEAU, A. et SADKI, J. (2013). Hybrid Column Generation for Large-Size Integer Programs. Dans: 26th EURO – INFORMS Joint International Conference.

ALFANDARI, L. et KESHVARI-FARD, M. (2015). Localisation de hubs avec fonction de coût discrète. Dans: ROADEF February Conference.

ALFANDARI, L., NAGIH, A., PLATEAU, A. et SADKI, J. (2011). Schéma hybride de génération de colonnes pour un problème de planification de production agricole. Dans: ROADEF 2011.

ALFANDARI, L. (2022). Optimizing Drone Use in Early Infant Diagnosis of HIV Supply Chainin Less Developed Countries. Dans: 2022 Euro. Espoo.

ALFANDARI, L., HASSANZADEH, A. et LJUBIC, I. (2020). Une méthode exacte pour le problème d'assortiment optimal avec modèle de choix nested-logit. Dans: 21st ROADEF 2020.

FURINI, F., LJUBIC, I., SAN SEGUNDO, P. et ZHAO, Y. (2021). The Edge Interdiction Clique Problem. Dans: 31st European Conference on Operational Research 2021. Athens (virtual).

ALFANDARI, L., NAGIH, A., PLATEAU, A. et SADKI, J. (2012). Generalizations of Dobson Approximation Algorithm and Cooperation with Column Generation for Large-Size Covering Integer Programs. Dans: 2nd International Symposium on Combinatorial Optimization (ISCO 2012).

ALFANDARI, L., NAGIH, A., PLATEAU, A. et SADKI, J. (2013). Hybrid Column Generation for Large-Size Covering Integer Programs. Dans: 26th Conference of European Chapter on Combinatorial Optimization.

ALFANDARI, L., NAGIH, A., PLATEAU, A. et SADKI, J. (2011). Hybridization of Column Generation and Approximation Heuristics for Large-size Covering Integer Programs. Dans: MIC 2011 - Metaheuristics International Conference.

ALFANDARI, L. (2000). Logical Definability of Covering and Partitioning Minimization Problems. Dans: CLAIO X (Congresso Latino-Americano de Investigacion Operativa)-Latin-American Congress of Operations Research, Mexico.

ALFANDARI, L., FURINI, F., LJUBIC, I. et MARTIN, S. (2017). New MIP models for Liner Shipping Route Design with Empty Container Repositioning. Dans: 18ème Conférence ROADEF de la Société Française de Recherche Opérationnelle et d'Aide à la Décision.

ALFANDARI, L., DAVIDOVIC, T., FURINI, F., LJUBIC, I., MARAS, V. et MARTIN, S. (2018). New MIP models for liner shipping route design with empty container repositioning. Dans: 4th International Conference on Logistics Operations Management (GOL'2018).

ALFANDARI, L., DENOYAL, V. et THIELE, A. (2014). Optimal Facility In-Network Selection for Healthcare Payers under Reference Pricing. Dans: 20th Conference of the International Federation of Operational Research Societies.

ALFANDARI, L., LJUBIC, I. et MELO, M. (2019). Optimal Vehicle Routing with Autonomous Devices for Last-Mile Delivery. Dans: 2019 Workshop of the EURO Working Group on Vehicle Routing and Logistics optimization (VeRoLog 2019).

ALFANDARI, L. et ESPINOZA-GARCIA, J.C. (2018). Optimisation robuste pour la localisation de nouveaux logements avec modèle de choix. Dans: 19ème Congrès de la société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF 2018).

ALFANDARI, L., DENOYEL, V. et THIELE, A. (2016). Optimisation robuste pour la sélection d'un réseau d'hôpitaux dans un système de Prix de Référence. Dans: 17ème congrès de la société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF2016).

ALFANDARI, L. (2012). Planification et routage pour l'optimisation de la distribution urbaine de marchandise. Dans: 13e congrès annuel de la Société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF 2012).

ALFANDARI, L. et ESPINOZA-GARCIA, J.C. (2018). Robust Optimization for Non-Linear Impact of Data Variation. Dans: ISMP Bordeaux 2018 (International Symposium of Mathematical Optimization).

ALFANDARI, L., DAVIDOVIC, T., FURINI, F., LJUBIC, I., MARAS, V. et MARTIN, S. (2017). Tighter MIP Formulations for the Barge Container Ship Routing Problem. Dans: 21st Conference of the International Federation of Operational Research Societies (IFORS).

ALFANDARI, L., PLATEAU, A. et SCHEPLER, X. (2014). Un algorithme de branch-and-price-and-cut pour la planification durable des rotations agricoles. Dans: 15ème congrès annuel de la Société française de recherche opérationnelle et d'aide à la décision (ROADEF).

ALFANDARI, L., LJUBIC, I. et PUNAM-MANDAL, M. (2025). Robust optimization for disaster preparedness with aftershocks. Dans: 2025 ROADEF. Champs-sur-Marne.

ALFANDARI, L., LJUBIC, I. et DE MELO DA SILVA, M. (2021). A tailored Benders Decomposition Approach for Last-Mile Delivery With autonomous Robots. Dans: 31st European Conference on Operational Research 2021 (EURO 2021). Athens.

DELLE DONNE, D., ALFANDARI, L., ARCHETTI, C. et LJUBIC, I. (2022). Freight-on-Transit for urban last-mile deliveries: A Strategic Planning Approach. Dans: International Workshop on Freight Transportation and Logistics (ODYSSEUS). Tanger.

DELLE DONNE, D., ALFANDARI, L., ARCHETTI, C. et LJUBIC, I. (2021). Freight on Public Transport: Strategical decision making with mixed integer programming. Dans: European Conference on Operational Research (EURO). Athens.

DELLE DONNE, D., ALFANDARI, L., ARCHETTI, C. et LJUBIC, I. (2022). Freight-on-Transit for urban last-mile deliveries: A Strategic Planning Approach. Dans: Spanish Conference on Statistics and Operations Research (SEIO). Granada.

ARCHETTI, C., ALFANDARI, L. et ALFANDARI, L. (2022). Capacity Design and Resource Allocation in Online Food Delivery Platforms. Dans: International Workshop on Freight Transportation and Logistics (Odysseus 2022). Tanger.

ALFANDARI, L., LJUBIC, I. et PUNAM-MANDAL, M. (2023). Robust Facility Location in Disaster Preparation for Earthquakes with Aftershocks. Dans: OR 2023: Decision Support & Choice-Based Analytics for a Disruptive World. Hamburg.

ALFANDARI, L. (2023). Approximation of the Double Traveling Salesman Problem with Multiple Stacks. Dans: 23rd Congress of International Federation of Operational Research Societies (IFORS) 2023. Santiago de Chile.

DELLE DONNE, D., KUZBAKOV, Y. et ALFANDARI, L. (2023). A Branch-and-price Approach for Last-mile Deliveries with Capacitated Robot Stations. Dans: 23rd Conference of the International Federation of Operational Research Societies 2023. Santiago.

ALFANDARI, L., LJUBIC, I. et PUNAM-MANDAL, M. (2024). Robust facility location for earthquake preparedness with aftershocks. Dans: 2024 Optimisation au deuxième niveau (Centre International de Rencontres Mathématiques). Marseille.

ALFANDARI, L., HASSANZADEH, A. et LJUBIC, I. (2024). Fractional programming for Assortment optimization. Dans: 2024 International Symposium on Combinatorial Optimization (ISCO). Tenerife.

DELLE DONNE, D., ALFANDARI, L. et KUZBAKOV, Y. (2024). A column generation approach for last-mile deliveries with capacitated robot stations. Dans: International Symposium on Combinatorial Optimization (ISCO). Tenerife, Spain.

DOCUMENTS DE TRAVAIL

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

ALFANDARI, L. et PLATEAU, A. (2001). *A two-phase Path Relinking algorithm for the Generalized Assignment Problem.*

ALFANDARI, L. (2005). *Improved Approximation of the General Soft-Capacitated Facility Location Problem.* ESSEC Business School.

ESPINOZA GARCIA, J.C. et ALFANDARI, L. (2015). *Robust Location of New Housing Developments Using a Choice Model.* ESSEC Business School.

ALFANDARI, L., PLATEAU, A. et SCHEPLER, X. (2014). *A Branch-and-Price-and-Cut Approach for Sustainable Crop Rotation Planning.* ESSEC Business School.

ALFANDARI, L., PLATEAU, A. et TOLLA, P. (2002). *A Path-relinking Algorithm for the Generalized Assignement Problem.* ESSEC Business School.

ALFANDARI, L. (2004). *Choice Rules with Size Constraints for Multiple Criteria Decision Making.* ESSEC Business School.

KESHVARI FARD, M. et ALFANDARI, L. (2018). *Trade-offs between the Stepwise Cost Function and its Linear Approximation for the Modular Hub Location Problem.* ESSEC Business School.

ACTES D'UNE CONFÉRENCE

ALFANDARI, L. et MONNOT, J. (2010). Approximation of the Clustered Set Covering Problem. Dans: *Electronic Notes in Discrete Mathematics.* ISCO.

ALFANDARI, L. et PASCHOS, V. (1998). On the Approximation of Some Spanning Arborescence Problems. Dans: *Advances in Computer and Information Sciences '98. 13th International Symposium on Computer and Information Sciences (ISCIS).* IOS Press, pp. 574-581.

JUVIGNY, C., DELLE DONNE, D. et ALFANDARI, L. (2025). A Genetic Approach to the Operational Freight-on-Transit Problem. Dans: *Evolutionary Computation in Combinatorial Optimization.* Springer Cham, pp. 116-132.

ARTICLES OU VIDÉOS DE VULGARISATION

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

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

INVITÉ DANS UNE CONFÉRENCE ACADÉMIQUE (KEYNOTE SPEAKER)

ALFANDARI, L., LJUBIC, I. et DE MELO DA SILVA, M. (2022). A Tailored Benders Decomposition Approach for Last-mile Delivery with Autonomous Robots. Dans: International Conference on Operations Research and Enterprise Systems (ICORES). Online.

ACTIVITÉS DE RECHERCHE

Organisation d'une conférence ou d'un séminaire

2013 - 2013:	Organisation d'un évènement pour les practiciens et managers : "La Recherche Opérationnelle: clé de la performance des entreprises?" 200 managers et practiciens présents, et une table ronde avec Air France, Amadeus, et Bouygues Télécom (Université Paris Dauphine-PSL France)
2015 - 2015:	Organisation du concours Français de la RO: "Les Pros de la RO", nov. 2015

(finalistes : Gefco-Eurodecision, Amadeus, Decision Brain, Orange) (France)

Membre d'une association académique
2000 - Présent: Membre de la Société Française de RO (ROADEF)

Fonction dans une association académique
2011 - 2015:   Vice-President de la ROADEF

Reviewer pour un journal

- Relecteur pour Annals of Operations Research
- Computational Optimization and Applications
- Computers & Operations Research
- Discrete Applied Mathematics
- European Journal of Operational Research
- RAIRO - Operations Research

ACTIVITÉS PROFESSIONNELLES

Consulting
2002 - Présent: Activités de conseil et contrats industriels : SNCF, ESSEC BS, Babcok-Wanson, Aid-Impact...