Claudio Contardo

Associate Professor, Concordia University
Dept of Mechanical, Industrial and Aerospace Engineering
1515 Ste-Catherine St. W.
Montreal, QC H3G 2W1, Canada

Contact information and social media

Phone no.	:	+1 514 848 2424 ext 3482
E-mail	:	claudio.contardo@concordia.ca
Website	:	https://claudio.contardo.org
GitHub	:	https://github.com/claud10cv
LinkedIn	:	https://www.linkedin.com/in/claudio-contardo-06758031/
Google scholar	:	https://scholar.google.com/citations?user=hPjRTWsAAAAJ&hl=en

Research interests

- Algorithmic foundations of linear, non-linear, integer and combinatorial optimization

- Logistics management: vehicle routing, shift scheduling, location analysis, health care logistics

- Machine learning: clustering and supervised learning

- Bilevel optimization, interdiction games

- Discrete and computational geometry

- Discrete choice models and revenue management

Technical skills

- Full proficiency (written and oral) in english, french and spanish (mother tongue)

- Elementary proficiency (written and oral) in portuguese

- Programming languages: C/C++, Java, Julia, R, Matlab

- Versioning systems: Git/GitHub

- Optimization software: IBM CPLEX, Gurobi, Julia-JuMP

- Office suits: LibreOffice, MS Office 2007/2010/2013

- Advanced knowledge of Latex

Other affiliations

2013-present Member GERAD
2013-present Member CIRRELT

Past positions

2021-2022 Software Scientist, IBM Canada (CPLEX Developer)
2016-2020 Associate Professor, ESG UQAM
2012-2016 Assistant Professor, ESG UQAM
2011-2012 Postdoctoral fellow, École Polytechnique de Montréal

Education

2011 Ph.D. in Computer Science, Université de Montréal
2005 Mathematical Engineer, Universidad de Chile
2004 B.Sc. in Engineering, Universidad de Chile

Open-source software

1. **FixedSizeBitVector.jl**: *Bitvectors of fixed size in Julia whose size can be known at compile-time*, `https://github.com/claud10cv/FixedSizeBitVector.jl`, v0.1.0 (2024)

2. **Jallocator.jl**: *An allocator in Julia to reserve memory in chunks avoiding heap allocations*, `https://github.com/claud10cv/Jallocator.jl`, v0.1.0 (2024)

3. **CutBranching_jll.jl**: *Julia wrapper for the cut-branching method of Hespe et al. (2021) for maximum independent sets*, `https://github.com/JuliaBinaryWrappers/CutBranching_jll.jl`, v0.1.1 (2024)

4. **DiscreteOrderedMedian.jl**: *Ranking decomposition for the discrete ordered median problem*, `https://github.com/claud10cv/DiscreteOrderedMedian.jl`, v0.1.0 (2024)

5. **MaximumIndependentSet.jl**: *Fast methods for the maximum independent set problem*, `https://github.com/claud10cv/MaximumIndependentSet.jl`, v0.1.3 (2024)

6. **LaguerreVoronoi.jl**: *Compute Laguerre-Voronoi diagrams in Julia*, `https://github.com/claud10cv/LaguerreVoronoi.jl`, v0.1.5 (2024)

7. **SamplingInterdiction.jl**: *Network interdiction games in Julia*, `https://github.com/claud10cv/SamplingInterdiction.jl` (2020)

Awards, prizes and grants

2024-2025	MITACS (Accelerate - UKG)	90,000$
2023-2024	MITACS (Accelerate - Simwell)	30,000$
2024-2026	Concordia AI2 (Collaborations with industry)	160,000$
2022-2024	Concordia AI2 (Seed Grant)	25,000$
2022-2024	Concordia OVPRGS (Seed Grant)	10,000$
2022-2024	Concordia (Startup funds)	50,000$
2020-2026	NSERC (Discovery Grant)	186,000$
	Algorithms for large-scale discrete optimization problems arising in logistics and machine learning	
2015-2016	ESG UQAM (Young researcher award)	3,000$
2014-2016	FRQNT (ENC)	65,000$
	Méthodes d'optimisation appliquées aux problèmes liés au transport de passagers et de marchandises	
2013-2019	NSERC (Discovery Grant)	132,000$
	Mathematical programming techniques for the solution of hard combinatorial optimization problems arising in transportation	
2012-2013	ESG UQAM (Start-up funds)	12,000$

Publications

Articles in international journals

[1] Marilène Cherkesly, Claudio Contardo, and Matthieu Gruson, *Ranking decomposition for the discrete ordered median problem*, **INFORMS Journal on Computing** (2024), Forthcoming, DOI: `10.1287/ijoc.2023.0059`.

[2] François Lamothe*, Claudio Contardo, and Matthieu Gruson, *Tilted inequalities and facets of the set covering polytope: a theoretical analysis*, **Discrete Applied Mathematics** 3001 (2024), 1–21, DOI: `10.1016/j.dam.2024.06.004`.

[3] Daniel M. Ocampo-Giraldo*, Ana M. Anaya-Arenas, and Claudio Contardo, *An iterative exact algorithm over a time-expanded network for the transportation of biomedical samples*, **INFORMS Journal on Computing** (2024), Forthcoming.

[4] Claudio Contardo, Andrea Lodi, and Andrea Tramontani, *Cutting Planes from the Branch-and-Bound Tree: Challenges and Opportunities*, **INFORMS Journal on Computing** 35. (2023), 2–4, DOI: `10.1287/ijoc.2022.1248`.

[5] Claudio Contardo and Luciano Costa*, *On the optimal layout of a dining room in the era of COVID-19 using mathematical optimization*, **International Transactions in Operational Research** (2022), DOI: `10.1111/itor.13139`.

[6] Claudio Contardo and Jorge A Sefair, *A progressive approximation approach for the exact solution of sparse large-scale binary interdiction games*, **INFORMS Journal on Computing** 34. (2022), 890–908, DOI: `10.1287/ijoc.2021.1085`.

[7] Luciano Costa*, Claudio Contardo, Guy Desaulniers, and Julian Yarkony, *Stabilized Column Generation Via the Dynamic Separation of Aggregated Rows*, **INFORMS Journal on Computing** 34. (2022), 1141–1156, DOI: `10.1287/ijoc.2021.1094`.

[8] Naveed Haghani*, Claudio Contardo, and Julian Yarkony, *Smooth and flexible dual optimal inequalities*, **INFORMS Journal on Optimization** 4. (2022), 29–44, DOI: `10.1287/ijoo.2021.0057`.

[9] Diego Rocha*, Daniel Aloise, Dario J Aloise, and Claudio Contardo, *Visual attractiveness in vehicle routing via bi-objective optimization*, **Computers & Operations Research** 137 (2022), 105507, DOI: `10.1016/j.cor.2021.105507`.

[10] Claudio Contardo and Alain Hertz, *An exact algorithm for a class of geometric set-cover problems*, **Discrete Applied Mathematics** 300 (2021), 25–35, DOI: `10.1016/j.dam.2021.05.005`.

[11] Marilène Cherkesly and Claudio Contardo, *The conditional p-dispersion problem*, **Journal of Global Optimization** (2020), Forthcoming.

[12] Claudio Contardo, *Decremental clustering for the solution of p-dispersion problems to proven optimality*, **INFORMS Journal on Optimization** 2 (2020), 134–144, DOI: `10.1287/ijoo.2019.0027`.

[13] Luciano Costa*, Claudio Contardo, Guy Desaulniers, and Diego Pecin, *Selective arc-ng pricing for vehicle routing*, **International Transactions in Operational Research** 28 (2020), 2633–2690.

[14] Claudio Contardo, Manuel Iori, and Raphael Kramer*, *A scalable exact algorithm for the vertex p-center problem*, **Computers & Operations Research** 103 (2019), 211–220, DOI: `10.1016/j.cor.2018.11.006`.

[15] Luciano Costa*, Claudio Contardo, and Guy Desaulniers, *Exact branch-price-and-cut algorithms for vehicle routing*, **Transportation Science** 53 (2019), 946–985, DOI: `10.1287/trsc.2018.0878`.

[16] Guy Desaulniers, Diego Pecin*, and Claudio Contardo, *Selective pricing in branch-price-and-cut algorithms for vehicle routing*, **EURO Journal on Transportation and Logistics** 8 (2019), 147–168, DOI: `10.1007/s13676-017-0112-9`.

[17] Daniel Aloise and Claudio Contardo, *A sampling-based exact algorithm for the solution of the minimax diameter clustering problem*, **Journal of Global Optimization** 71 (2018), 613–630, DOI: `10.1007/s10898-018-0634-1`.

[18] Furkan Enderer*, Claudio Contardo, and Iván Contreras, *Integrating Dock-Door Assignment and Vehicle Routing in Cross-Docking*, **Computers & Operations Research** 88 (2017), 30–43, DOI: `10.1016/j.cor.2017.06.018`.

[19] Diego Pecin*, Claudio Contardo, Guy Desaulniers, and Eduardo Uchoa, *New Enhancements for the Exact Solution of the Vehicle Routing Problem with Time Windows*, **INFORMS Journal on Computing** 29 (2017), 489–502, DOI: `10.1287/ijoc.2016.0744`.

[20] Claudio Contardo, Guy Desaulniers, and François Lessard, *Reaching the elementary lower bound in the vehicle routing problem with time windows*, **Networks** 65 (2015), 88–99, DOI: `10.1002/net.21594`.

[21] Rafael Martinelli* and Claudio Contardo, *Exact and heuristic algorithms for capacitated vehicle routing problems with quadratic costs structure*, **INFORMS Journal on Computing** 27 (2015), 658–676, DOI: `10.1287/ijoc.2015.0649`.

[22] Claudio Contardo, Jean-François Cordeau, and Bernard Gendron, *A GRASP + ILP-based metaheuristic for the capacitated location-routing problem*, **Journal of Heuristics** 20 (2014), 1–38, DOI: `10.1007/s10732-013-9230-1`.

[23] Claudio Contardo, Jean-François Cordeau, and Bernard Gendron, *An exact algorithm based on cut-and-column generation for the capacitated location-routing problem*, **INFORMS Journal on Computing** 26 (2014), 88–102, DOI: `10.1287/ijoc.2013.0549`.

[24] Claudio Contardo and Rafael Martinelli*, *A new exact algorithm for the multi-depot vehicle routing problem under capacity and route length constraints*, **Discrete Optimization** 12 (2014), 129–146, DOI: `10.1016/j.disopt.2014.03.001`.

[25] Claudio Contardo, Jean-François Cordeau, and Bernard Gendron, *A computational comparison of flow formulations for the capacitated location-routing problem*, **Discrete Optimization** 10 (2013), 263–295, DOI: `10.1016/j.disopt.2013.07.005`.

[26] Claudio Contardo, Vera C. Hemmelmayr, and Teodor G. Crainic, *Lower and upper bounds for the two-echelon capacitated location-routing problem*, **Computers & Operations Research** 39 (2012), 3185–3199, DOI: `10.1016/j.cor.2012.04.003`.

[27] Cristián E. Cortés, Martín Matamala, and Claudio Contardo, *The pickup and delivery problem with transfers: Formulation and a branch-and-cut solution method*, **European Journal of Operational Research** 200 (2010), 711–724, DOI: `10.1016/j.ejor.2009.01.022`.

Ongoing projects

[28] Brenda Cobena* and Claudio Contardo, *Column generation for the profit-oriented hubline location problem with elastic demands.* (2024), Submitted to Computers & Operations Research (1st round).

[29] Lucas Guilhon*, Claudio Contardo, Rafael Martinelli, and Thibaut Vidal, *Efficient metaheuristic pricing for vehicle routing.* (2024).

[30] François Lamothe*, Claudio Contardo, Matthieu Gruson, and Rafael Martinelli, *A route relaxation based on the spatial aggregation of nodes for the generalized vehicle routing problem.* (2023).

[31] François Lamothe*, Alain Haït, Emmanuel Rachelson, Claudio Contardo, and Bernard Gendron, *On the integration of Dantzig-Wolfe and Fenchel decompositions via directional normalizations.* (2023), Submitted to Mathematical Programming Computation (2nd round).

[32] Farin Rastgar-Amine*, Daniel Aloise, Claudio Contardo, and Guy Desaulniers, *Data mining-driven shift enumeration for accelerating the solution of large-scale personnel scheduling problems.* (2023), Submitted to ACM Transactions on Evolutionary Learning and Optimization (2nd round).

[33] Claudio Contardo and Sandra U. Ngueveu, *On the approximation of separable non-convex optimization programs to an arbitrary numerical precision.* (2022), Submitted to IN-FORMS Journal on Computing (2nd round).

[34] Farin Rastgar-Amine*, Claudio Contardo, Guy Desaulniers, and Maxime Gasse, *Learning to enumerate shifts for large-scale flexible personnel scheduling problems.* (2022), Submitted to Journal of Scheduling (2nd round).

[35] Marilène Cherkesly, Claudio Contardo, and Caroline Rocha, *A branch-cut-and-price method for a combined vehicle routing and assignment problem.* (2020).

[36] Luciano Costa*, Gerardo Berbeglia, Claudio Contardo, and Jean-François Cordeau, *On the calibration of large-scale discrete choice models via modern column generation,* (2020).

Dissertations

[1] Claudio Contardo, *Models and algorithms for the capacitated location-routing problem*, PhD thesis, Montréal, Canada: Université de Montréal, 2011, URL: http://claudio.contardo.org/wp-content/uploads/2010/09/These.pdf.

[2] Claudio Contardo, *Formulación y solución de un problema de ruteo de vehículos con demanda variable en tiempo real, trasbordos y ventanas de tiempo*, MSc thesis, Santiago, Chile: Universidad de Chile, 2005, URL: http://claudio.contardo.org/wp-content/uploads/2010/09/memoria.pdf.

Seminars and presentations as invited speaker

[1] Claudio Contardo, *Decremental relaxation for resource constrained shortest paths*, In: Workshop on vehicle routing 2020, Santiago, Chile, 2020, Cancelled due to COVID19.

[2] Claudio Contardo, *Decremental relaxation methods*, In: GERAD Day 2020, Montreal, Canada, 2020, Cancelled due to COVID19.

[3] Claudio Contardo, *Dynamic refinement methods for vehicle routing problems with timing considerations*, In: CIRRELT Day 2020, Montreal, Canada, 2020.

[4] Marilène Cherkesly and Claudio Contardo, *The conditional p-dispersion problem*, In: GERAD Day 2019, Montreal, Canada, 2019.

[5] Claudio Contardo, *Exploiting degeneracy in minimax combinatorial optimization problems: applications to clustering, location analysis and graph partitioning*, In: Un chercheur du GERAD vous parle, Montréal, Canada, Apr. 2018.

[6] Claudio Contardo, *Branch-cut-and-price methods for vehicle routing*, In: NHH, Bergen, Norway, 2016.

[7] Claudio Contardo, *Exact methods for vehicle routing*, In: Universidad de Los Andes, Bogotá, Colombia, June 2016.

[8] Claudio Contardo, *Resource-based cycle elimination applied to the vehicle routing problem*, In: Universidad Adolfo Ibáñez, Santiago, Chile, June 2015.

[9] Claudio Contardo, *Resource-based cycle elimination applied to the vehicle routing problem*, In: Universidad de Chile, Santiago, Chile, June 2015.

[10] Claudio Contardo, *Models and algorithms for location-routing problems*, In: Technical University of Pereira, Pereira, Colombia, Oct. 2013.

[11] Claudio Contardo, *Exact and heuristic methods for VRPs*, In: PUC-Rio, Rio de Janeiro, Brazil, Nov. 2012.

Supervision of graduate students

Ph.D. (in progress)

[1] Kelly Botello, *Assortment optimization in omni-channel retail*, Ph.D. thesis, Concordia University, 2024-?, co-supervised with N. Vidyarthi.

[2] Brenda Cobena, *Network design problems in public transit*, Ph.D. thesis, Concordia University, 2020-?, co-supervised with I. Contreras.

[3] Bayron Fuentealba, *Prize-collecting vehicle routing problems with time-dependent rewards*, Ph.D. thesis, Concordia University, 2023-?, co-supervised with O. Kuzgunkaya.

[4] Miguel Hoyos, *Network design problems in omnichannel retail*, Ph.D. thesis, Concordia University, 2022-?, co-supervised with N. Vidyarthi.

[5] Ziba Jabbar-Zare, *Sparse optimization for machine learning*, Ph.D. thesis, Concordia University, 2021-?, co-supervised with T. Vidal.

[6] Farrin Rastgar, *Shift scheduling and enumeration*, PhD thesis, Polytechnique Montréal, 2019-?, co-supervised with Guy Desaulniers.

[7] Ziyuan (Augustin) Sun, *Stochastic hub-location problems*, Ph.D. thesis, Concordia University, 2023-?, co-supervised with J.-F. Cordeau.

[8] Yuchao (Bob) Wang, *Machine learning for personnel scheduling problems*, Ph.D. thesis, Concordia University, 2023-?, co-supervised with G. Desaulniers.

Postdoctoral fellows (completed)

[1] François Lamothe, *Set-covering problems*, Postdoctoral fellow, ESG UQAM, co-supervised with M. Gruson.

[2] Diego Pecin, *Exact algorithms for vehicle routing problems*, Postdoctoral fellow, École Polytechnique de Montréal, co-supervised with G. Desaulniers.

[3] Luciano Costa, *Modern column generation for calibrating a discrete-choice model*, Postdoctoral fellow, HEC Montréal, 2020, co-supervised with J.-F. Cordeau and G. Berbeglia.

Ph.D. (completed)

[1] Luciano Costa, *Exact algorithms for pickup and delivery problems*, Ph.D. thesis, École Polytechnique de Montréal, 2020, co-supervised with G. Desaulniers.

M.Sc. (completed)

[1] Juliana de Mier Medellin, *Design of a ride-sharing system*, Master's thesis, Pontificia Universidad Javeriana, 2022-2023, co-supervised with C. Ortiz-Astroza.

[2] Alejandro Hernandez-Pena, *A matheuristic for the covering tour problem*, Master's thesis, ESG UQAM, 2019-2021, co-supervised with Marilène Cherkesly.

[3] Kim Ton, *Models and algorithms for dispersion problems with covering constraints*, Master's thesis, Polytechnique Montréal, 2019-?, co-supervised with Daniel Aloise.

[4] Elizabeth Gauthier, *An optimization-based decision maing tool for the distribution of humanitarian aid: the case of the WFP in Niger*, Master's thesis, ESG UQAM, 2019, co-supervised with Walter Rei and Marie-Ève Rancourt.

[5] Pascaline Hele-Taka, *Supervised classification for the assembly of sessions of a scientific conference*, Master's thesis, ESG UQAM, 2019, co-supervised with Daniel Aloise.

[6] Daniel Ocampo, *A time-expanded formulation and preprocessing for a biomedical sample distribution problem*, National University of Colombia, 2019.

[7] Marie-Pier Séguin, *On the risks involved in the distribution of humanitarian aid: the case of the WFP in Niger*, Master's thesis, ESG UQAM, 2019, co-supervised with Walter Rei and Marie-Ève Rancourt.

[8] Furkan Enderer, *Integrating dock-door assignment and vehicle routing in cross-docking*, Master's thesis, Concordia University, 2014, co-supervised with I. Contreras.

[9] Emelyne Munezero, *Problèmes d'ordonnancement avec possibilités de transfers*, Master's thesis, École Polytechnique de Montréal, 2014, co-supervised with G. Desaulniers.

Research interns

Graduate students

[1] Lucas Guilhon, *Fast metaheuristics for pricing in column generation for vehicle routing*, MITACS GRA, 2024.

[2] Naveed Haghani, *Dual optimal inequalities for column generation*, Research Intern at Verisk AI, 2019.

[3] Raphael Kramer, *An exact algorithm for the vertex p-center problem*, Doctoral researcher, 2017.

[4] Rafael Martinelli, *Exact algorithms for vehicle routing problems*, Postdoctoral researcher, 2013.

Undergrad students

[1] Kyle McRae, *On the design of a marathon course using bilevel optimization*, Honours project, co-supervised with M. Kazemi-Zanjani, 2024.

[2] Pamela Bustamante, *Algorithms for graph clustering*, Emerging leaders in the Americas fellow, 2018.

[3] Emmanuelle Tousignant-Larivière, *Mapping the decision process associated with the planning and scheduling of working sites in Montreal*, Undergrad scholarship granted by Kheops, 2018.

[4] Elizabeth Gauthier, *Design of a supply chain network in aid distribution: the case of the WFP in Niger*, NSERC undergrad student research award, 2016.

[5] Marie-Pier Séguin, *On the factors that influence costs and delays in a supply chain in aid distribution: the case of the WFP in Niger*, NSERC undergrad student research award, 2016.

Academic experience

Research stays abroad

2016 (2 days)	Visiting professor	Universidad de Los Andes, Colombia
2016 (5 days)	Visiting professor	NHH, Norway
2015 (10 days)	Visiting professor	Universidad Adolfo Ibáñez, Chile
2014 (5 days)	Visiting professor	Universidad de Antioquia, Colombia
2013 (10 days)	Visiting professor	Universidad Tecnológica de Pereira, Colombia
2012 (10 days)	Visiting professor	PUC-Rio, Brazil

Reviewing activities

Peer-reviewed journals

Transportation Science, Operations Research, INFORMS Journal on Computing, European Journal of Operational Research, Computers & Operations Research, Networks, European Journal of Industrial Engineering, Discrete Applied Mathematics, Annals of Operations Research, INFOR, Mathematical Programming Computation.

Funding agencies

- CONICYT (Chile): FONDECYT

- NSERC: MSc/PhD scholarships

- FRQNT: MSc/PhD scholarships

- ANR (France): Generic projects

Theses / Qualifying exams

- Diego Canales (MSc, PUC-Chile): Thesis defense (2024)

- Shabnam Mahmoudzadeh-Vaziri (PhD, Concordia): Thesis defense (2024)

- Masoud A. Monirian (PhD, Concordia): Thesis defense (2024)

- Hadeer Awad (PhD, Concordia): Qualifying exam (2024)

- Pedram Farghadani Chaharsooghi (PhD, Concordia): Qualifying exam (2024)

- Daniel Bustos-Coral (PhD, U of Melbourne): Thesis defense (2023)

- Samah Abdalrhaman (PhD, UQAM): Qualifying exam (2023)

- Ibrahim Dan Dije (PhD, UQAM): Qualifying exam (2023)

- Mahmoud Zeid (PhD, Concordia): Qualifying exam (2023)

- Fernando Zingler (PhD, Concordia): Qualifying exam (2022)

- Tayeb Mhamedi (PhD, Poly): Qualifying exam (2020)

- Aditya Malik (PhD, Concordia): Qualifying exam (2020)

- Jean-Bertrand Gauthier (PhD, HEC): Qualifying exam phases II (2015) and III (2016); Thesis defense (2017)

- Masoud Chitsaz (PhD, HEC): Qualifying exam phases II (2016) and III (2017); Thesis defense (2020)

- Andréanne Leduc (MSc, Poly): Thesis defense (2013)

Service

Organization of scientific meetings

- Program Co-Chair, CP2024 (2024)

- Program Co-Chair, IISE Annual Meeting (2024)

- Organizer of GERAD seminar given by Sandra U. Ngueveu (2020)

- Organizer of GERAD seminar given by Gerardo Berbeglia (2019)

- Organizer of GERAD seminar given by Rafael Martinelli (2018)

- Organizer of GERAD seminar given by Gerardo Berbeglia (2018)

- Member of the organizing committee, Optimization Days 2016

- Organizer of GERAD seminar given by Juan G Villegas (2014)

Editorial activity

- Associate Editor, International Transactions in Operational Research, 2019-present

Other research activities

GERAD

- Member of the scientific committee (2018-2020)

- Jury at the best thesis award 2017

- Jury at the best thesis award 2016

- Jury at the best thesis award 2015

Teaching experience

2022-present	Concordia U.	Lecturer	Operations research I	UG
			Theory of OR	Grad
			Discrete Optimization	Grad
			Logistics networks management	Grad
2012-2020	ESG UQÀM	Lecturer	Operations management	UG
			Decision analysis	EMBA
			Decision analysis	MBA
			Operations research	UG
			Introduction to programming	UG
2007-2010	HEC Montréal	T.A.	Linear algebra	UG
			Models of operations research	UG
2007	U. de Montréal	T.A.	Introduction to operations research	UG
2001	U. de Chile	T.A.	Mathematics	High school
1999-2004	U. de Chile	T.A.	Introduction to calculus	UG
			Differential calculus and integration	UG
			Introduction to linear algebra	UG
			Ordinary differential equations	UG
			Advanced calculus and applications	UG
			Transportation networks	Grad
			Models & algorithms in optimization	Grad

Miscellaneous

- Erdős # 3: P. Erdős → M. Loebl → M. Matamala → C. Contardo

- Head coach, A.S.S.O.M. U10 soccer team (2024-present)

- Assistant coach, A.S.S.O.M. U09 soccer team (2023-2024)

- Member of the Board of directors, Syndicat de co-propriété AZUR (2015-2017)

- Member of the Board of directors, CPE La boîte à surprise (2018-2021)

- According to Google scholar, 2200+ citations and an `h`-index of 15