

Javier Marengo

Business School, Universidad Torcuato Di Tella
Av. Figueroa Alcorta 7350 (C1428BCW) Ciudad de Buenos Aires, Argentina
javier.marengo@utdt.edu

A. Education

- Ph.D. in Computer Science (*Doctor de la Universidad de Buenos Aires, área Computación*). School of Sciences, University of Buenos Aires, Argentina (March 2005). Advisors: Dr. Martin Grötschel and Dr. Annegret Wagler.
 - M.Sc. in Computer Science (*Licenciado en Ciencias de la Computación*). School of Sciences, University of Buenos Aires, Argentina (December 1999).
 - B.Sc. in Computer Science (*Analista Universitario de Computación*). School of Sciences, University of Buenos Aires, Argentina (August 1998).
-

B. Academic appointments

- Associate professor, Business School, Universidad Torcuato Di Tella, Argentina (2023–).
 - Adjunct professor, Computer Science Department, School of Sciences, University of Buenos Aires, Argentina (2010–2023).
 - Adjunct professor, Sciences Institute, National University of General Sarmiento, Argentina (2006–2023).
 - Teaching assistant, Computer Science Department, School of Sciences, University of Buenos Aires, Argentina (1997–2009).
 - Teaching assistant, Sciences Institute, National University of General Sarmiento, Argentina (2000–2005).
-

C. Research

- **Research interests:** integer programming, polyhedral combinatorics, applications of operations research.

C.1. Published and accepted papers

1. Koch I. and Marenco J., *A hybrid heuristic for the rectilinear picture compression problem*. 4OR (en prensa).
2. Braga M. and Marenco J., *Facet-generating procedures for the maximum-impact coloring polytope*. Discrete Applied Mathematics 323 (2022) 96–112.
3. Koch I. and Marenco J., *The maximum 2D subarray polytope: facet-inducing inequalities and polyhedral computations*. Discrete Applied Mathematics 323 (2022) 286–301.
4. Aliaga F., Delle Donne D., Durán G., and Marenco J., *Drainage area maximization in unconventional hydrocarbon fields with integer linear programming techniques*. Annals of Operations Research 316 (2022) 891–904.
5. Durán G., Guajardo M., Gutiérrez F., Marenco J., Sauré D., and Zamorano G., *Scheduling the main professional football league of Argentina*. INFORMS Journal on Applied Analytics 51-5 (2021) 361–372.
6. Durán G., Guajardo M., López A., Marenco J., and Zamorano G., *Scheduling multiple sports leagues with travel distance fairness: An application to Argentinean youth football*. INFORMS Journal on Applied Analytics 51-2 (2021) 91–165.
7. Braga M. and Marenco J., *Facets based on cycles and cliques for the acyclic coloring polytope*. RAIRO Operations Research 54 (2020) 1863–1874.
8. Braga M., Delle Donne D., Escalante M., Marenco J., Ugarte M., and Varaldo M., *The minimum chromatic violation problem: a polyhedral approach*. Discrete Applied Mathematics 281 (2020) 69–80.
9. Marenco J., *Facet-inducing inequalities with acyclic supports for the caterpillar-packing polytope*. RAIRO Operations Research 53 (2019) 1267–1277.
10. Durán G., Durán S., Marenco J., Mascialino F., and Rey P., *Scheduling Argentina’s professional basketball leagues: A variation on the travelling tournament problem*. European Journal of Operational Research 275 (2019) 1126–1138.
11. Corrêa R., Delle Donne D., and Marenco J., *On the combinatorics of the 2-class classification problem*. Discrete Optimization 31 (2019) 40–55.
12. Koch I. and Marenco J., *An integer programming approach to b-coloring*. Discrete Optimization 32 (2019) 43–62.
13. Blaum M. and Marenco J., *Computing the P_3 -hull number of a graph, a polyhedral approach*. Discrete Applied Mathematics 255 (2019) 155–166.
14. Bertero F., Bianchetti M., and Marenco J., *Integer programming models for the routing and spectrum allocation problem*. TOP 26-3 (2018) 465–488.
15. Marenco J., *The caterpillar-packing polytope*. Discrete Applied Mathematics 245 (2018) 4–15.

16. Corrêa R., Delle Donne D., Koch I., and Marenco J., *General cut-generating procedures for the stable set polytope*. Discrete Applied Mathematics 245 (2018) 28–41.
17. Braier G., Durán G., Marenco J., and Wesner F., *An integer programming approach to a real-world recyclable waste collection problem in Argentina*. Waste Management and Research 35 (2017) 525–533.
18. Bonomo F., Catalán J., Durán G., Epstein R., Guajardo M., Jawtuschenko A., and Marenco J., *An asymmetric multi-item auction with quantity discounts applied to Internet service procurement in Buenos Aires public schools*. Annals of Operations Research 258 (2017) 569–585.
19. Braga M., Delle Donne D., Linfati R., and Marenco J., *The maximum-impact coloring polytope*. International Transactions in Operational Research 24-1/2 (2017) 303–324.
20. Delle Donne D. and Marenco J., *Polyhedral studies of vertex coloring problems: The standard formulation*. Discrete Optimization 21 (2016) 1–13.
21. Campêlo M., Campos V., Corrêa R., Delle Donne D., Marenco J., and Mydlarz M., *A polyhedral study of the maximum stable set problem with weights on vertex-subsets*. Discrete Applied Mathematics 210 (2016) 223–234.
22. Braga M. and Marenco J., *Exploring the disjunctive rank of some facet-inducing inequalities of the acyclic coloring polytope*. RAIRO Operations Research 50 (2016) 627–644.
23. Escalante M., Marenco J., and Varaldo M., *The single-item lot-sizing polytope with continuous start-up costs and uniform production capacity*. Annals of Operations Research 235 (2015) 233–258.
24. Lucero S., Marenco J., and Martínez F., *An integer programming approach for the 2-schemes strip cutting problem with a sequencing constraint*. Optimization and Engineering 16-3 (2015) 605–632.
25. Marenco J., Mydlarz M., and Severín D., *Topological additive numbering of directed acyclic graphs*. Information Processing Letters 115-2 (2015) 199–202.
26. Bonomo F., Durán G., and Marenco J., *Mathematical programming as a tool for virtual soccer coaches: A case study of a fantasy sport game*. International Transactions in Operational Research 21-3 (2014) 399–414.
27. Marenco J. and Tetzlaff T., *Envy-free division of discrete cakes*. Discrete Applied Mathematics 164 (2014) 527–531.
28. Acosta G., Caridi I., Guala S., and Marenco J., *The quasi-periodicity of the minority game revisited*. Physica A 392-19 (2013) 4450–4465.
29. Durán G., Marenco J., Romero G., and Weintraub A., *An approach for efficient ship routing*. International Transactions in Operational Research 20-6 (2013) 767–794.
30. Bravo F., Durán G., Lucena A., Marenco J., Morán D., and Weintraub A., *Mathematical models for optimizing production chain planning in salmon farming*. International Transactions in Operational Research 20-5 (2013) 731–766.

31. Bonomo F., Delle Donne D., Durán G., and Marengo J., *Automatic dwelling segmentation of Buenos Aires Province for the 2010 Argentinian Census*. Interfaces 43-4 (2013) 373–384.
32. Braga M., Delle Donne D., and Marengo J., *A polyhedral study of the acyclic coloring problem*. Discrete Applied Mathematics 160-18 (2012) 2606–2617.
33. Bonomo F., Marengo J., Sabán D., and Stier-Moses N., *A polyhedral study of the maximum edge subgraph problem*. Discrete Applied Mathematics 160-18 (2012) 2573–2590.
34. Bonomo F., Cardemil A., Durán G., Marengo J., and Sabán D., *An application of the traveling tournament problem: The Argentine volleyball league*. Interfaces 42-3 (2012) 245–259.
35. Bonomo F., Durán G., Larumbe F., and Marengo J., *A method for optimizing waste collection using mathematical programming: A Buenos Aires case study*. Waste Management and Research 30-3 (2012) 311–324.
36. Delle Donne D. and Marengo J., *Studying playoff qualification in motorsports via mixed-integer programming techniques*. Journal of Sports Engineering and Technology 226-1 (2012) 32–41.
37. Acosta G., Caridi I., Guala S., and Marengo J., *The full strategy minority game*. Physica A 391 (2012) 217–230.
38. Delle Donne D. and Marengo J., *A branch and cut algorithm for the minimum-adjacency vertex coloring problem*. Discrete Optimization 8 (2011) 540–554.
39. Bonomo F., Durán G., Marengo J., and Valencia-Pabon M., *Minimum sum set coloring of trees and line graphs of trees*. Discrete Applied Mathematics 159 (2011) 288–294.
40. Bonomo F., Durán G., Marengo J., and Valencia-Pabon M., *On the b-coloring of cographs and P_4 -sparse graphs*. Graphs and Combinatorics 25 (2009) 153–167.
41. Bonomo F., Durán G., and Marengo J., *Exploring the complexity boundary between coloring and list-coloring*. Annals of Operations Research 169-1 (2009) 3–16.
42. Marengo J. and Wagler A., *Cycle-based facets of chromatic scheduling polytopes*. Discrete Optimization 6-1 (2009) 51–63.
43. Marengo J. and Wagler A., *Facets of chromatic scheduling polytopes based on covering cliques*. Discrete Optimization 6-1 (2009) 64–78.
44. Acosta G., Guala S., and Marengo J., *Dynamics of a minority game with an additional layer of interaction*. Physica A 387 (2008) 567–572.
45. Marengo J. and Wagler A., *Chromatic scheduling polytopes coming from the bandwidth allocation problem in point-to-multipoint radio access systems*. Annals of Operations Research 150-1 (2007) 159–175.
46. Marengo J. and Wagler A., *On the combinatorial structure of chromatic scheduling polytopes*. Discrete Applied Mathematics 154-13 (2006) 1865–1876.

47. Acosta G., Guala S., and Marengo J., *Emergence of cooperation in an evolutionary game with two-level decisions*. *Physica A* 343 (2004) 669–676.
48. Coll P., Marengo J., Méndez Díaz I., and Zabala P., *An integer programming model for the graph coloring problem*. *Annals of Operations Research* 116 (2002) 79–90.

C.2. Work in progress

1. Marengo J., *An integer programming approach to the slitter change minimization problem in the paper and the corrugated cardboard industries*.
2. Marengo J., *An integer programming approach for the hyper-rectangular clustering problem with axis-parallel clusters and outliers*.
3. Abdala L. and Marengo J., *Greedy procedures for the picker routing problem with mixed shelves*.
4. Marengo J., *A mixed integer programming formulation for the drainage area maximization problem in unconventional hydrocarbon fields*.

C.3. Published papers in regional journals

1. Maqueda T. and Marengo J., *Optimizing the distribution of cash within a bank in Argentina*. *Boletín de estadística e investigación operativa* 36-3 (2020) 239–248.
2. Bianchetti M., Durán G., Koch I., and Marengo J., *Algoritmos de zonificación para el problema de la recolección de residuos urbanos: El caso de estudio de una ciudad argentina*. *Ingeniería de Sistemas* 31 (2017) 83–112.
3. Durán G., Durán S., Marengo J., Mascialino F., and Rey P., *Programación matemática para los fixtures de los torneos profesionales del básquet de la Argentina en un formato NBA*. *Ingeniería de Sistemas* 30 (2016) 35–61.
4. Delle Donne D., Durán G., Fuentes G., Marengo J., Villasante J., and Weintraub A., *Logística marítima y terrestre de una empresa salmonera en Chile mediante programación matemática*. *Ingeniería de Sistemas* 30 (2016) 63–90.
5. Braier G., Durán G., Marengo J., and Wesner F., *Una aplicación del problema del cartero rural a la recolección de residuos reciclables en Argentina*. *Ingeniería de Sistemas* 29 (2015) 49–65.
6. Aliaga F., Delle Donne D., Durán G., and Marengo J., *Optimización del área de drenaje en yacimientos no convencionales por medio de programación lineal entera*. *Ingeniería de Sistemas* 28 (2014) 27–40.
7. Marengo J., Pinto Valdés D., and Wolff P., *Un modelo de programación lineal entera para la planificación de cursos y relatores del programa “Construyendo mis sueños”*. *Ingeniería de Sistemas* 28 (2014) 41–55.
8. Bonomo F., Catalán J., Durán G., Epstein R., Jawtuschenko A., and Marengo J., *Una licitación combinatorial aplicada a la provisión de Internet a las escuelas de Buenos Aires*. *Ingeniería de Sistemas* 27 (2013) 9–30.

9. Guala S. and Marengo J., *Planificación del menú semanal de colaciones de un hospital de Argentina por medio de programación lineal entera*. Ingeniería de Sistemas 27 (2013) 55–71.
10. Bonomo F., Durán G., and Marengo J., *Programación matemática para asesorar a un entrenador de fútbol: un juego de fantasía como caso de estudio*. Ingeniería de Sistemas 27 (2013) 109–130.
11. Bonomo F., Durán G., Delle Donne D., and Marengo J., *Segmentación automática de la Provincia de Buenos Aires para el Censo Nacional Argentino 2010 mediante programación matemática*. Ingeniería de Sistemas 25 (2011) 29–45.
12. Bonomo F., Durán G., Larumbe F., and Marengo J., *Optimización de la recolección de residuos en la zona sur de la Ciudad de Buenos Aires*. Ingeniería de Sistemas 23 (2009) 71–88.
13. Domínguez J., Pagliettini L., and Marengo J., *Costos de localización en el complejo agroindustrial arrocero argentino. Cambios ocurridos en la última década. Comparación con la situación en Uruguay*. Revista de la Facultad de Agronomía de la UBA 29-1 (2009) 13–31.

C.4. Papers in conference proceedings

1. Di Pasquale R. and Marengo J., *Machine learning for improving performance in an evolutionary algorithm for minimum path with uncertain costs given by massively simulated scenarios*. Proceedings of IEEE IJCAI-PRICAI 2020. Yokohama, Japan (2021).
2. Dias B., de Freitas R., Maculan N., and Marengo J., *The distance polytope for the vertex coloring problem*. In: Combinatorial Optimization. Proceedings of the 5th International Symposium on Combinatorial Optimization ISCO 2018. Marrakesh, Morocco (2018).
3. Di Pasquale R. and Marengo J., *Optimization meets big data: A survey*. Proceedings of the IEEE Congress on Evolutionary Computation 2017. San Sebastián, Spain (2017).
4. Bonomo F., Durán G., and Marengo J., *A virtual coach for fantasy soccer using mathematical programming*. Proceedings of the 4th MathSport International Conference. Leuven, Belgium (2013).
5. Castillo A., Domínguez J., Pagliettini L., and Marengo J., *Análisis de los costos de exportación del arroz argentino en función de la localización geográfica de los molinos*. Proceedings of the III Congreso Regional de Economía Agraria. Valdivia, Chile (2011).
6. Aliaga F., Bonomo F., Delle Donne D., Durán G., Marengo J., and Sotelo R., *Sistema de información geográfica como apoyo a las actividades del Censo Nacional de Población, Hogares y Viviendas 2010 de la Provincia de Buenos Aires*. Proceedings of JUI 2011, Jornadas Argentinas de Informática. Córdoba, Argentina (2011).
7. Nurmi K., Goossens D., Bartsch T., Bonomo F., Briskorn D., Durán G., Kyngäs J., Marengo J., Ribeiro C., Spieksma F., Urrutia S., and Wolf R., *A framework for a highly constrained sports scheduling problems*. Proceedings of the 2010 IAENG International Conference on Operations Research (ICOR at IMECS), Hong Kong (2010).

8. Domínguez J., Pagliettini L., and Marengo J., *Costos de localización en el complejo agroindustrial arrocero argentino. Cambios ocurridos en la última década*. Proceedings of the V Jornadas Interdisciplinarias de Estudios Agrarios y Agroindustriales. Buenos Aires, Argentina (2007).
9. Domínguez J., Pagliettini L., and Marengo J., *Subsistema arrocero. Análisis de la localización de los molinos y de la producción primaria. Incidencia en los costos de transporte*. Proceedings of the XXXVIII Reunión Anual de la Asociación Argentina de Economía Agraria. Mendoza, Argentina (2007).
10. Marengo J., *Upper bounds on the stability number of a graph based on clique projection*. Proceedings of SIO 2005, Jornadas Argentinas de Informática e Investigación Operativa. Rosario, Argentina (2005).
11. Marengo J., *A generalization of independent-set inequalities for the mapping polytope*. Proceedings of IX CLAIO. Concepción, Chile (2002).
12. Marengo J., *A new class of facets of the mapping polytope*. Proceedings of SIO 2002, Jornadas Argentinas de Informática e Investigación Operativa. Santa Fe, Argentina (2002).
13. Marengo J. and Loiseau I., *Facetas del poliedro de mapping simple*. Proceedings of SIO 2001, Jornadas Argentinas de Informática e Investigación Operativa. Buenos Aires, Argentina (2001).
14. Marengo J., *On the complexity of the separation problem for classes of facets of the linear ordering polytope*. Proceedings of the XXXII Simposio Brasileiro de Pesquisa Operacional. Vicososa, Brazil (2000).

C.5. Extended abstracts

1. Di Pasquale R. and Marengo J., *El vertido óptimo de energía renovable en la operación del sistema eléctrico interconectado*. MACI 8 (2021) 173–176.
2. Bianchetti M. and Marengo J., *A branch-and-cut algorithm for the routing and spectrum allocation problem*. MACI 8 (2021) 177–180.
3. Koch I. and Marengo J., *The 2D subarray polytope*. Electronic Notes in Theoretical Computer Science 346 (2019) 557–566.
4. Braga M. and Marengo J., *Facet-generating procedures for the maximum-impact coloring polytope*. Electronic Notes in Theoretical Computer Science 346 (2019) 199–208.
5. Blaum M., Corrêa R., Koch I., Marengo J., and Mydlarz M., *An integer programming approach for the 2-class single-group classification problem*. Electronic Notes in Theoretical Computer Science 346 (2019) 321–331.
6. Dias B., de Freitas R., Maculan N., and Marengo J., *Facet-inducing inequalities and a cut-and-branch for the bandwidth coloring polytope based on the orientation model*. Electronic Notes in Discrete Mathematics 62 (2017) 141–146.

7. Braga M., Delle Donne D., Escalante M., Marengo J., Ugarte M., and Varaldo M., *The minimum chromatic violation problem: a polyhedral study*. Electronic Notes in Discrete Mathematics 62 (2017) 309–314.
8. Corrêa R., Delle Donne D., Koch I., and Marengo J., *A strengthened general cut-generating procedure for the stable set polytope*. Electronic Notes in Discrete Mathematics 50 (2015) 261–266.
9. Marengo J., *The caterpillar-packing polytope*. Electronic Notes in Discrete Mathematics 50 (2015) 47–52.
10. Braga M., Delle Donne D., Linfati R., and Marengo J., *The maximum-impact coloring polytope*. Proceedings of the VIII ALIO/EURO Workshop on Applied Combinatorial Optimization (2014).
11. Braga M. and Marengo J., *Cycle-based facets of the acyclic coloring polytope*. Proceedings of the VIII ALIO/EURO Workshop on Applied Combinatorial Optimization (2014).
12. Corrêa R., Koch I., and Marengo J., *A general cut-generating procedure for the stable set polytope*. Proceedings of the VIII ALIO/EURO Workshop on Applied Combinatorial Optimization (2014).
13. Marengo J., Mydlarz M., and Severín D., *A combinatorial Benders approach for the lucky labeling problem*. Proceedings of the IV Congreso de Matemática Aplicada, Computacional e Industrial (2013).
14. Acosta G., Caridi I., Guala S., and Marengo J., *Quasi-periodicity of the minority game*. Proceedings of the IV Congreso de Matemática Aplicada, Computacional e Industrial (2013).
15. Acosta G., Caridi I., Guala S., and Marengo J., *The full strategy minority game*. Proceedings of the II Congreso de Matemática Aplicada, Computacional e Industrial (2011) 295–298.
16. Braga M. and Marengo J., *Disjunctive ranks and anti-ranks of some facet-inducing inequalities of the acyclic coloring polytope*. Electronic Notes in Discrete Mathematics 37 (2011) 213–218.
17. Marengo J. and Sabán D., *Combinatorial properties and further facets of maximum edge subgraph polytopes*. Electronic Notes in Discrete Mathematics 37 (2011) 303–308.
18. Escalante M., Marengo J., and Varaldo M., *A polyhedral study of the single-item lot-sizing problem with continuous start-up costs*. Electronic Notes in Discrete Mathematics 37 (2011) 261–266.
19. Marengo J. and Tetzlaff T., *Envy-free division of discrete cakes*. Electronic Notes in Discrete Mathematics 37 (2011) 231–236.
20. Delle Donne D., Durán G., and Marengo J., *Solving the segmentation problem for the 2010 Argentine census with integer programming*. Electronic Notes in Discrete Mathematics 37 (2011) 279–284.

21. Braga M. and Marenco J., *A polyhedral study of the acyclic coloring problem*. Electronic Notes in Discrete Mathematics 35 (2009) 35–40.
22. Bonomo F., Marenco J., Sabán D., and Stier-Moses N., *A polyhedral study of the maximum edge subgraph problem*. Electronic Notes in Discrete Mathematics 35 (2009) 197–202.
23. Bonomo F., Durán G., Marenco J., and Valencia-Pabon M., *Minimum sum set coloring on some subclasses of block graphs*. Proceedings of the 8th Cologne-Twente Workshop on Graphs and Combinatorial Optimization (2009) 195–198.
24. Delle Donne D. and Marenco J., *A polyhedral study of the minimum-adjacency graph coloring problem*. Proceedings of the VI ALIO/EURO Workshop on Applied Combinatorial Optimization (2008).
25. Escalante M., Marenco J., and Varaldo M., *A polyhedral study of the lot sizing problem with continuous start-ups*. Proceedings of the VI ALIO/EURO Workshop on Applied Combinatorial Optimization (2008).
26. Bonomo F., Durán G., and Marenco J., *Exploring the existence of fixtures for scheduling sport leagues with odd numbers of teams and grand-prix weekends*. Proceedings of the VI ALIO/EURO Workshop on Applied Combinatorial Optimization (2008).
27. Marenco J. and Rey P., *The football pool polytope*. Electronic Notes in Discrete Mathematics 30 (2008) 75–80.
28. Bonomo F., Durán G., and Marenco J., *Exploring the complexity boundary between coloring and list-coloring*. Electronic Notes in Discrete Mathematics 25 (2006) 41–47.
29. Marenco J. and Wagler A., *The combinatorial stages of chromatic scheduling polytopes*. Electronic Notes in Discrete Mathematics 19 (2005) 63–69.
30. Marenco J. and Wagler A., *Combinatorial equivalence of chromatic scheduling polytopes*. Electronic Notes in Discrete Mathematics 18 (2004) 177–180.
31. Marenco J. and Wagler A., *On chromatic scheduling polytopes coming from the bandwidth allocation problem in point-to-multipoint radio access systems*. Proceedings of the IV ALIO/EURO Workshop on Applied Combinatorial Optimization (2002) 85–86.

C.6. Book chapters

1. Braier G. and Marenco J., *Strategic and tactical modeling in the Argentine sugar industry*, in Bookbinder J. (ed.): Handbook of global logistics. International Series in Operations Research & Management Science 181, 2013.
2. Nurmi K., Goossens D., Bartsch T., Bonomo F., Briskorn D., Durán G., Kyngäs J., Marenco J., Ribeiro C., Spieksma F., Urrutia S., and Wolf-Yadlin R., *A Framework for Scheduling Professional Sports Leagues*, in Ao S., Katagiri H., Xu L., and Chan A. (eds.): IAENG Transactions on Engineering Technologies 5-2, 2010.

D. Consulting experience

1. *Celeritas Transporte y Logística S.L. (Spain)*. Design and implementation of an integer programming model for dispatch optimization (2022).
2. *Cultivos Yadrán S.A. (Chile)*. Design and participation in the implementation of a software tool for planning salmon seeding and harvesting activities (2020–2022).
3. *Globalfarm S.A.* Design and implementation of a backtracking-based algorithm for optimizing the use of refrigerated containers (2021).
4. *Primafrío S.A. (Spain)*. Design of a heuristic procedure for a routing problem with crossdocking capabilities (2019–2022).
5. *QuadMinds Technologies S.A.* Design and implementation of metaheuristic algorithms for optimizing the dispatch of emergency recovery equipments (2019).
6. *Superliga Argentina de Fútbol*. Design of the fixture for the Argentine First Division Soccer League and for the Argentine Youth Soccer League with integer programming techniques (2018–2019).
7. *QuadMinds Technologies S.A.* Design and implementation of algorithms for a clustering problem (2016).
8. *QuadMinds Technologies S.A.* Design and implementation of algorithms for routing vehicles with rollon/rolloff trailers (2015).
9. *Asociación de Clubes de Básquet*. Design of the fixture for the first and second division Argentine Professional Basketball Leagues with constraint programming techniques (2014–).
10. *QuadMinds Technologies S.A.* Development of an optimization module for solving large-scale vehicle routing problems with additional constraints (2011–).
11. *Impronta IT S.A.* Development of a software tool for routing equipment through difficult-access terrains (2011).
12. *Impronta IT S.A.* Development of a software tool based on integer programming techniques for the drainage area maximization problem in unconventional hydrocarbon fields (2011).
13. *Buenos Aires Province*. Design and implementation of integer-programming-based procedures for dwelling segmentation for the 2010 Argentinian Census (2010).
14. *Multiexport Foods S.A. (Chile)*. Design of a software tool for planning maintenance activities (2009–2010).
15. *Buenos Aires City*. Optimization of the design and assignment of a combinatorial auction for the procurement of Internet connection to the city schools (2009).

16. *Skretting – Comercializadora Nutreco Chile Ltda. (Chile)*. Development of a software tool for ship routing (2008–2009).
 17. *Multiexport Foods S.A. (Chile)*. Development of a software tool for planning salmon seeding and harvesting activities (2008).
 18. *Buenos Aires City Government*. Optimization of waste collection via integer programming techniques (2007).
 19. *Asociación de Clubes Liga Argentina de Voleibol (ACLAV)*. Design of the fixture for the Argentine Professional Volleyball League with integer programming techniques (2007–2020).
 20. *Tyssa S.A. (Grupo Telefónica)*. Implementation of simulation algorithms for a call center (2000).
-

E. Advisorships

- Advisor of four finished Ph.D. theses, and co-advisor of two finished Ph.D. theses. Advisor of three Ph.D. theses to be defended in 2022 and 2023.
 - Advisor or co-advisor of 24 completed M.Sc. theses.
 - Advisor of two doctoral fellowships and two post-doctoral fellowships (CONICET, Argentina).
-

F. Funding

1. STIC-AmSud International Project: *Solving the routing and spectrum assignment problem* (2022–2023). General coordinator. 22STIC-08.
2. ANPCyT PICT Project: *Combinatoria poliedral: propiedades, algoritmos y aplicaciones* (2019–2022). Researcher within the coordinating group. PICT 2018-04209.
3. CONICET PIP Project: *Optimización combinatoria, grafos, redes y competencia: problemas metodológicos y aplicaciones al mundo real* (2014–2016). Researcher. PIP 1122012 0100450CO.
4. STIC-AmSud International Project: *Solving Combinatorial Optimization problems with Stable Sets Constraints* (2013–2014). Coordinator of the Argentine group. 13STIC-05.
5. ANPCyT PICT Project: *Aplicación de teoría poliedral a problemas de programación lineal entera y mixta* (2012–2014). Researcher. ANPCyT PICT-2010-0361.
6. ANPCyT PICT Project: *Optimización combinatoria y grafos: teoría y aplicaciones para la búsqueda en Internet* (2012–2014). Researcher. ANPCyT PICT-2009-0119.

7. ANPCyT PICTO Project: *Matemática aplicada* (2011–2012). Researcher. ANPCyT PICTO-2008-00089.
8. ANPCyT PICT Project: *Problemas teóricos y aplicaciones en grafos y optimización combinatoria* (2009–2012). Researcher within the coordinating group. ANPCyT PICT-2007-00518.
9. ANPCyT PICT Project: *Métodos numéricos para ecuaciones diferenciales y aplicaciones* (2009–2012). Researcher within the coordinating group. ANPCyT PICT-2007-00910.
10. UBACyT Project: *Grafos y optimización combinatoria: teoría y aplicaciones* (2008–2011). Researcher. UBACyT X069.
11. PROSUL/CNPq International Project: *Otimização discreta e grafos: teoria, algoritmos e aplicações* (2005–2007). Researcher. PROSUL Proc. 490333/2004-4.
12. UBACyT Project: *Modelos y técnicas para problemas de optimización combinatoria* (2004–2007). Researcher. UBACyT X212.
13. UBACyT Project: *Modelos y técnicas para problemas de optimización combinatoria* (2001–2003). Student. UBACyT X036.
14. CONICET PID Project: *Modelos y técnicas para problemas de optimización combinatoria* (2001–2004). Student. CONICET PID 644/98.
15. ANPCyT PICT Project: *Modelos y técnicas para problemas de optimización combinatoria* (2002–2006). Student. ANPCyT PICT 11-09112.

G. Professional activities

G.1. Editorial activities

1. Section Editor of IFORS News, the quarterly newsletter of the International Federation of Operational Research Societies (2019–).
2. Co-editor of the feature cluster in the “European Journal of Operational Research” devoted to the Joint ALIO/EURO International Conference 2021-2022 on Applied Combinatorial Optimization (2022–).
3. Program committee member of the 2012, 2013, 2019, 2020, and 2022 editions of the Conferencia Latinoamericana de Informática (CLEI).
4. Program committee member of the XIII Latin American Theoretical Informatics Symposium (LATIN 2018).
5. Program committee member of the 2009, 2011, 2012, 2013, 2015, and 2018 editions of the Simpósio Brasileiro de Pesquisa Operacional (SOBRAPO).

6. Program committee member of the 2015 and 2017 editions of the Latin-American Algorithms, Graphs, and Optimization Symposium (LAGOS).
7. Program committee member of the 2013 and 2016 editions of the Triennial Symposium on Transportation Analysis (TRISTAN).
8. Program committee member of the Simposio de Investigación Operativa 2015 (SIO 2015).
9. Co-editor of the special issue of “Discrete Applied Mathematics” devoted to the VI Latin-American Algorithms, Graphs, and Optimization Symposium (2011–2012).
10. Co-chair of the VI Latin-American Algorithms, Graphs, and Optimization Symposium (LAGOS) program committee (2011).

G.2. Organization of conferences, symposia, and sessions

- *XXI Latin Ibero-American Conference on Operations Research (CLAIO 2022)*. Buenos Aires, Argentina (December 2022). Co-chair.
- *Joint ALIO/EURO International Conference 2021-2022 on Applied Combinatorial Optimization*. Viña del Mar, Chile (April 2022). ALIO co-chair.
- Session *Investigación operativa* within the VIII Congreso de Matemática Aplicada, Computacional e Industrial (VIII MACI). La Plata, Argentina (May 2021). Co-chair.
- *Simposio argentino de informática industrial e investigación operativa (SIIIO 2020)* within the XLIX Jornadas Argentinas de Informática (49 JAIIO). Buenos Aires, Argentina (October 2020). Co-chair.
- *Simposio argentino de informática industrial e investigación operativa (SIIIO 2018)* within the XLVII Jornadas Argentinas de Informática (47 JAIIO). Buenos Aires, Argentina (September 2018). Co-chair.
- *MIP@AR 2018 – Tercer workshop argentino de programación entera y combinatoria poliedral*. Buenos Aires, Argentina (May 2018). Co-organizer.
- *MIP@AR 2016 – Primer workshop argentino de programación entera y combinatoria poliedral*. Buenos Aires, Argentina (April 2016). Co-organizer.
- *Simposio de investigación operativa (SIO 2014)* within the XLIII Jornadas Argentinas de Informática (43 JAIIO). Buenos Aires, Argentina (September 2014). Co-chair.
- Session *Investigación operativa y aplicaciones* within the IV Congreso de Matemática Aplicada, Computacional e Industrial (May 2013). Co-chair.
- *VI Latin-American Algorithms, Graphs, and Optimization Symposium (LAGOS 2011)*. Bariloche, Argentina (April 2011). Co-chair.
- *Segundo Seminario de la Red Latinoamericana “Optimización discreta y grafos: teoría, algoritmos y aplicaciones”*. Buenos Aires, Argentina (June 2010). Organizer.

- *Seminario/Taller de la Red Latinoamericana Prosul - Optimización discreta y grafos: teoría, algoritmos y aplicaciones*. Buenos Aires, Argentina (May 2009). Organizer.
- *IV Latin-American Algorithms, Graphs, and Optimization Symposium (LAGOS 2007)*. Puerto Varas, Chile (November 2007). Member of the organizing committee.

G.3. Participation in professional societies

- Representative of the Argentine Association of Informatics (SADIO) before the Latin-Iberoamerican Association of Operations Research (ALIO), since 2015.
 - Correspondent for the Argentine Association of Informatics (SADIO) and for the Latin-Iberoamerican Association of Operations Research (ALIO) before the International Federation of Operational Research Societies (IFORS), since 2018.
 - Member of the Argentine Association of Informatics (SADIO) since 2006.
-

H. Outreach activities

1. General organizer of the “Escuela de Ciencias Informáticas” ECI 2013 (School of Sciences, University of Buenos Aires).
 2. Regular participation in talks for prospective computer science students at the National University of General Sarmiento (2010–) and at the University of Buenos Aires (2006–).
 3. Participation in 19 journalistic pieces, 9 interviews in radio and television, and 5 university PR pieces involving divulgation of operations research techniques.
-

I. Personal information

- Born March 12, 1976 in Buenos Aires, Argentina. Married, two children. Argentine citizenship.
-