

September 8, 2025

**FELIPE LARA OBREQUE**

**Full Professor,**  
Institute for Advanced Studies,  
University of Tarapacá, Arica, Chile.

● **Contact Information:**

Institute for Advanced Studies.  
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● **Education:**

1. Ph.D. Thesis: Second Order Asymptotic Analysis in Optimization.  
Advisor: Fabián Flores-Bazán, University of Concepción, Concepción, Chile.  
Co-Advisor: Nicolas Hadjisavvas, University of the Aegean, Syros, Greece.  
Doctoral Scholarship through Beca CONICYT Doctorado in Chile (from 03-2011 to 02-2015).
2. Profession: Mathematical Engineer, University of Concepción, October 27, 2010. Concepción, Chile.  
Thesis: Efficiency in Nonconvex Multiobjective Optimization.  
Advisor: Fabián Flores-Bazán, University of Concepción, Concepción, Chile.  
Undergraduate Thesis work under research project Fondecyt 107-0689 (2010).
3. Graduate: Licentiate in Science of Mathematical Engineer, University of Concepción 2009, Concepción, Chile.

● **Postdoctoral Positions:**

1. Postdoctoral of Excellence at Getulio Vargas Foundation (FGV), School of Applied Mathematics (EMAp), Rio de Janeiro, Brazil.  
From 2018 to 2019.  
Scholarship: Getulio Vargas Foundation.
2. Postdoctoral fellow at Instituto Nacional de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, Brazil.  
From 2017 to 2018.  
Advisor: Alfredo Iusem.  
Scholarship: CNPq, PDJ-273583.

3. Postdoctoral fellow at University of Tarapacá, Arica, Chile.  
From 2015 to 2017.  
Advisor: Rubén López.  
Scholarship: Fondecyt 3160205 Postdoctorado.

- **Research Interest:**

1. Nonconvex Optimization;
2. First-order methods;
3. Equilibrium Problems;
4. Machine Learning;
5. Mathematical/Digital Finance.

- **Academic Experience:**

1. Full Professor (from March 2025 to present): Institute for Advanced Studies, University of Tarapacá, Arica, Chile.
2. Assistant Professor (from August 2022 to February 2025): Institute for Advanced Studies, University of Tarapacá, Arica, Chile.
3. Assistant Professor (from August 2019 to July 2022): Department of Mathematics, Faculty of Sciences, University of Tarapacá, Arica, Chile.
4. Part Time Instructor (2009, 2010 and 2015): Department of Mathematical Engineering, Faculty of Physical and Mathematical Sciences, University of Concepción. Concepción, Chile.

- **Academic Administration:**

1. Director of the Ph.D. Program in Sciences with Mention in Mathematics, Faculty of Sciences, University of Tarapacá, Arica, Chile. (2020–2021).

- **Editorial Service:**

1. **Editorial Board:**

- (a) Associate Editor of *Optimization* (WoS/ISI Journal, Taylor & Francis Ltd. United Kingdom).  
Since September 2024.  
[https : //www.tandfonline.com/journals/gopt20/about](https://www.tandfonline.com/journals/gopt20/about) – this – journal#editorial – board
- (b) Associate Editor of *Fixed Point Methods and Optimization* (Tulipa Opera Scholarum, Hong Kong).  
Since September 2024.  
[https : //tulipa – os.com/fpmo/editorial-board.php](https://tulipa-os.com/fpmo/editorial-board.php)

## 2. Editor of Special Issues:

- (a) Optimization and Variational Analysis in 2025 (*In Progress*).  
<https://link.springer.com/collections/hdaafibbf>  
Journal of Optimization Theory and Applications JOTA (WoS/ISI Journal, Springer, New York, United States).
- (b) The Spring School and Workshop on Variational Analysis and Optimization (ICOVAO-25), (*In Progress*).  
<https://think.taylorandfrancis.com/special-issues/special-issue-icovao-2025/>  
Optimization (WoS/ISI Journal, Taylor & Francis Ltd. United Kingdom).
- (c) New Developments on Optimization, Variational Analysis and Their Applications: Special Issue in Honor of Fabián Flores-Bazán, (*In Progress*).  
<https://link.springer.com/journal/10957/updates/27064240>  
Journal of Optimization Theory and Applications JOTA (WoS/ISI Journal, Springer, New York, United States).

## • Conference Organizations:

- 1. ICOVAO-2025: International Conference on Variational Analysis, Optimization and Its Applications. March 10-15 of 2025.  
Vietnam Institute for Advanced Study in Mathematics (VIASM), Hanoi, Vietnam.  
Chair of the Organizing/Scientific Committees.
- 2. ChiPOVA-2024: Chilean-Peruvian Conference on Optimization and Variational Analysis 2024: Celebrating the 60th birthday of Prof. Fabián Flores-Bazán. May 06-10 of 2024.  
University of Tarapacá, Arica, Chile.  
Chair of the Organizing Committee.

## • Research Projects:

### Ongoing projects:

- 1. Ecos-Sud-France and Anid-Chile through ECOS-Anid ECOS240031:  
*Dynamical systems associated to nonconvex optimization problems*.  
From April 2025 until March 2028.  
Main Researcher (Coordinator of the Chilean Team).
- 2. ANID-Chile through Fondecyt Regular 1241040:  
*A further study on quasiconvex functions with applications in continuous optimization and variational inequalities*.  
From April 2024 until March 2027.  
Main Researcher.
- 3. UTA-ResearchGroups Project 8802-25 (University of Tarapacá internal Research Project for Research Groups):

*Interacciones entre Optimización, Sistemas Dinámicos y Geometría.*

From April 2025 until December 2026.

Main Researcher.

4. VIASM (Vietnam Institute for Advances Study in Mathematics):  
*Variational Analysis and Stability in Optimization.*  
First Semester of 2026.  
Member of the Researcher Group.

**Previous:**

5. ANID–Chile, MEAE–France and CONCYTEC–Peru through Math-AMSud project AMSUD-220020:  
*Optimality conditions and proximal methods for generalized convex optimization problems.*  
From July 2023 until June 2025.  
Main Researcher (International Coordinator).
6. VIASM (Vietnam Institute for Advances Study in Mathematics):  
*New methods for solving nonconvex optimization problems.*  
March/April 2025.  
Co-Main Researcher (Co-Head of the Research Group).
7. ANID–Chile through Fondecyt Regular 1220379:  
*Further developments on quasiconvex functions with applications in continuous optimization and equilibrium problems.*  
From April 2022 until March 2024.  
Main Researcher.
8. UTA Mayor (Chile) 4749-20 de 2020 (University of Tarapacá internal Research Project):  
*Derivadas direccionales globales en optimización continua no suave y desigualdades variacionales.*  
From August 2020 to July 2022.  
Main Researcher.
9. CONICYT–Chile through Fondecyt Iniciación 11180320:  
*Further developments in asymptotic analysis under generalized convexity assumptions with applications in continuous optimization and variational inequalities.*  
From November 2018 until October 2021.  
Main Researcher.

● **Papers in International Refereed Journals (WOS/ISI)**

**Published/Accepted:**

1. F. LARA, L.H. YEN, On the minimization of the sum of nonconvex functions with applications to mathematical programming. *J. Global Optim.*, DOI: 10.1007/s10898-025-01520-6, (2025).

2. F. LARA, N.V. TUYEN, T.V. NGHI, Weak sharp minima at infinity and solution stability in mathematical programming via asymptotic analysis. *J. Global Optim.*, DOI: 10.1007/s10898-025-01516-2, (2025).
3. F. LARA, R.T. MARCAVILLACA, T.V. THANG, A subgradient projection method for quasiconvex multiobjective optimization. *Optimization*, DOI: 10.1080/02331934.2024.2436577, (2025).
4. F. LARA, R.T. MARCAVILLACA, P.T. VUONG, Characterizations, dynamical systems and gradient methods for strongly quasiconvex functions. *J. Optim. Theory Appl.*, Vol. 206, article number 60, (2025).
5. S.-M. GRAD, F. LARA, R.T. MARCAVILLACA, Strongly quasiconvex functions: what we know (so far). *J. Optim. Theory Appl.*, Vol. 205, article number 38, (2025).
6. L.P. HAI, F. LARA, B.S. MORDUKHOVICH, Regular subgradients of optimal value functions with applications to variational calculus and bilevel programming. *J. Optim. Theory Appl.*, Vol. 205, article number 36, (2025).
7. S.-M. GRAD, F. LARA, R.T. MARCAVILLACA, Proximal point type algorithms with relaxed and inertial effects beyond convexity. *Optimization*, Vol. 73, Issue 11, 3393–3410, (2024).
8. S.-M. GRAD, F. LARA, R.T. MARCAVILLACA, Relaxed-inertial proximal point algorithms for nonconvex pseudomonotone equilibrium problems with applications, *J. Optim. Theory Appl.*, Vol. 203, Issue 3, 2233–2262, (2024).
9. A. IUSEM, F. LARA, R.T. MARCAVILLACA, L.H. YEN, A two-steps proximal point algorithm for nonconvex equilibrium problems with applications to fractional programming. *J. Global Optim.*, Vol. 90, Issue 3, 755–779, (2024).
10. J. CHOQUE, F. LARA, R.T. MARCAVILLACA, A subgradient projection method for quasiconvex minimization. *Positivity*, Vol. 28, Issue 5, Paper 64, (2024).
11. F. LARA, R.T. MARCAVILLACA, L. H. YEN, An extragradient projection method for strongly quasiconvex equilibrium problems with applications. *Comp. Appl. Math.*, Vol. 43, Issue 3, N. 128, 21 pp. (2024).
12. F. LARA, R.T. MARCAVILLACA, Bregman type proximal point algorithms for quasiconvex minimization. *Optimization*, Vol. 73, Issue 3, 497–515, (2024).
13. A. KABGANI, F. LARA, Semistrictly and neatly quasiconvex programming using lower global subdifferentials. *J. Global Optim.*, Vol. 86, Issue 4, 845–865, (2023).

14. S.-M. GRAD, F. LARA, R.T. MARCAVILLACA, Relaxed-inertial proximal point type algorithms for quasiconvex minimization, *J. Global Optim.*, Vol. 85, Issue 3, 615–635, (2023).
15. F. LARA, Characterizations of nonconvex optimization problems via variational inequalities. *Optimization*, Vol. 71, Issue 9, 2471–2490, (2022).
16. A. KABGANI, F. LARA, Strong subdifferentials: theory and applications in nonconvex optimization. *J. Global Optim.*, Vol. 84, Issue 2, 349–368, (2022).
17. F. LARA, On nonconvex pseudomonotone equilibrium problems with applications. *Set-Valued Var. Anal.*, Vol. 30, Issue 2, 355–372, (2022).
18. A. IUSEM, F. LARA, Proximal point algorithms for quasiconvex pseudomonotone equilibrium problems. *J. Optim. Theory Appl.*, Vol. 193, Issue 1-3, 443–461, (2022).
19. F. LARA, On strongly quasiconvex functions: existence results and proximal point algorithms. *J. Optim. Theory Appl.*, Vol. 192, Issue 3, 891–911, (2022).
20. S.-M. GRAD, F. LARA, An extension of the proximal point algorithm beyond convexity, *J. Global Optim.*, Vol. 82, Issue 2, 313–329, (2022).
21. F. LARA, A. KABGANI, On global subdifferentials with applications in nonsmooth optimization. *J. Global Optim.*, Vol. 81, Issue 4, 881–900, (2021).
22. S.-M. GRAD, F. LARA, Solving mixed variational inequalities beyond convexity. *J. Optim. Theory Appl.*, Vol. 190, Issue 2, 565–580, (2021).
23. A. IUSEM, F. LARA, A note on Existence results for noncoerive mixed variational inequalities in finite dimensional spaces. *J. Optim. Theory Appl.*, Vol. 187, Issue 2, 607–608, (2020).
24. A. IUSEM, F. LARA, Quasiconvex optimization and asymptotic analysis in Banach spaces. *Optimization*, Vol 69, Issue 11, 2453–2470, (2020).
25. N. HADJISAVVAS, F. LARA, D.T. LUC, A general asymptotic function with applications in nonconvex optimization. *J. Global Optim.*, Vol. 78, Issue 1, 49–68, (2020).
26. L.F. BUENO, G. HAESER, F. LARA, F.N. ROJAS, An augmented Lagrangian method for quasi-equilibrium problems. *Comp. Optim. Appl.*, Vol. 76, Issue 3, 737–766, (2020).
27. F. LARA, Optimality conditions for nonconvex nonsmooth optimization via global derivatives. *J. Optim. Theory Appl.*, Vol 185, Issue 1, 134–150, (2020).

28. F. LARA, On the existence of a saddle value for nonconvex and non-coercive bifunctions. *Minimax Theory Appl.*, Vol. 5, Issue 1, 65–76, (2020).
29. A. IUSEM, F. LARA, Existence results for noncoerive mixed variational inequalities in finite dimensional spaces. *J. Optim. Theory Appl.*, Vol. 183, Issue 1, 122–138, (2019).
30. A. IUSEM, F. LARA, The q-asymptotic function in c-convex analysis. *Optimization*, Vol. 68, Issue 7, 1429–1445, (2019).
31. F. LARA, R. LÓPEZ, B.F. SVAITER, A further study on asymptotic functions via variational analysis. *J. Optim Theory Appl.*, Vol. 182, Issue 1, 366–382, (2019).
32. F. LARA, Quadratic fractional programming under asymptotic analysis. *J. Convex Anal.*, Vol. 26, Issue 1, 15–32, (2019).
33. A. IUSEM, F. LARA, Optimality conditions for vector equilibrium problems with applications, *J. Optim. Theory Appl.*, Vol. 180, Issue 1, 187–206, (2019).
34. N. HADJISAVVAS, F. LARA, J.E. MARTÍNEZ-LEGAZ, A quasiconvex asymptotic function with applications in optimization. *J. Optim. Theory Appl.*, Vol. 180, Issue 1, 170–186, (2019).
35. F. LARA, A note on Regularizers for structured sparsity. *Adv. Comp. Math.*, Vol. 44, Issue 4, 1321–1323, (2018).
36. A. IUSEM, F. LARA, Second order asymptotic functions and applications to quadratic programming. *J. Convex Anal.*, Vol. 25, Issue 1, 271–291, (2018).
37. F. LARA, Second-order asymptotic analysis for noncoercive convex optimization. *Math. Meth. Oper. Res.*, Vol. 86, Issue 3, 469–483, (2017).
38. F. LARA, Generalized asymptotic functions in nonconvex multiobjective optimization problems. *Optimization*, Vol. 66, Issue 8, 1259–1272, (2017).
39. F. LARA, R. LÓPEZ, Formulas for asymptotic functions via conjugates, directional derivatives and subdifferentials. *J. Optim. Theory Appl.*, Vol. 173, Issue 3, 793–811, (2017).
40. F. FLORES-BAZÁN, N. HADJISAVVAS, F. LARA, I. MONTENEGRO, First -and second-order asymptotic analysis with applications in quasiconvex optimization. *J. Optim. Theory Appl.*, Vol. 170, Issue 2, 372–393, (2016).
41. F. FLORES-BAZÁN, N. HADJISAVVAS, F. LARA, Second order asymptotic analysis: basic theory. *J. Convex Anal.*, Vol. 22, Issue 4, 1173–1196, (2015).
42. F. FLORES-BAZÁN, F. LARA, Inner and outer estimates for solutions sets and their asymptotic cones in vector optimization. *Optim. Letters*, Vol. 6, Issue 7, 1233–1249, (2012).

**Submitted:**

- 43. S.-M. GRAD, F. LARA, R.T. MARCAVILLACA, Properties and proximal point type methods for strongly quasiconvex functions in Hilbert spaces. (2023).
- 44. C. ESCUDERO, F. LARA, M. SAMA, Optimal trade characterizations in multi-asset crypto-financial markets. arXiv: 2405.06854, (2024).
- 45. F. LARA, T.V. THANG, Proximal point type algorithms for solving multiobjective optimization problems beyond convexity. (2024).
- 46. F. LARA, R. PANDEY, V. SINGH, Optimality conditions and duality for multiobjective fractional bilevel optimization problems. (2024).
- 47. R. PANDEY, F. LARA, V. SINGH, Optimality conditions and duality for nonconvex nonsmooth bilevel optimization problems via lower global subdifferentials. (2024).
- 48. F. LARA, C. VEGA, Delayed feedback in online non-convex optimization: a non-stationary approach with applications. arXiv: 2412.14506, (2024).
- 49. N. HADJISAVVAS, F. LARA, R.T. MARCAVILLACA, P.T. VUONG, Heavy ball and Nesterov accelerations with Hessian-driven damping for nonconvex optimization, arXiv: 2506.15632, (2025).
- 50. M. AHOOKHOSH, A. IUSEM, A. KABGANI, F. LARA, Asymptotic convergence analysis of high-order proximal-point methods beyond sublinear rates, arXiv: 2505.20484, (2025).
- 51. F. LARA, A. RAMOS, On optimality conditions for mathematical programming problems based on strong subdifferentials, (2025).
- 52. F. LARA, R. PANDEY, V. SINGH, KKT-type optimality conditions for nonconvex nonsmooth bilevel optimization problems via lower global subdifferentials. (2025).
- 53. M.H. ALIZADEH, F. LARA, Existence results and KKT optimality conditions for generalized quasiconvex functions, (2025).
- 54. J. DE BRITO, F. LARA, D. LIU, Extending linear convergence of the proximal point algorithm: the quasar-convex case, arXiv: 2509.04375, (2025).

**Metrics and Impact** (September 8, 2025):

| Website        | Citations | <i>h</i> -index |
|----------------|-----------|-----------------|
| Google Scholar | 521       | 14              |
| Researchgate:  | 523       | 15              |
| Mathscinet:    | 287       | X               |
| ZbMath Open:   | 305       | X               |

Furthermore, recent papers were based mainly on Felipe Lara's work and mention specifically that their main aim is to continue or generalize his results. Among these, *the following papers mention his works and/or his name in their abstract*:

1. N. PISCHKE, On the proximal point algorithm for strongly quasiconvex functions in Hadamard spaces, <https://arxiv.org/abs/2411.06910>, (2024).
2. N.M. NAM, J. SHARKASKY, On strong quasiconvexity of functions in infinite dimensions, <https://arxiv.org/abs/2409.17450>, (2024).
3. S. WANG, Z. ZHU, L. YU, Stochastic golden ratio algorithm to nonconvex stochastic mixed variational inequality problem, *J. Global Optim.*, DOI: 10.1007/s10898-024-01445-6, (2024).

● **PostDoc / Ph.D. / Master / Undergraduate Advisor.**

**Postdoc:**

1. Cristián Vega Cereño, University of Tarapacá.  
From July 2024 to Present (until March 2026).  
Grant: University of Tarapacá.
2. Raúl Tintaya Marcavillaca. University of Tarapacá.  
From April 2021 to December 31 of 2023.  
Grant: Universidad de Tarapacá.

**Master:**

1. Juan Choque Flores. Master in Mathematics, University of Tarapacá.  
Thesis: *First order algorithms for quasiconvex minimization*.  
Defended on October 27 of 2022.

**Undergraduate:**

1. Michael Olguín Gómez. University of Tarapacá.  
Thesis: *A review on asymptotic sets and functions in convex optimization*.  
Defended on January 14 of 2022.

● **Contributions at International Mathematics Meetings.**

1. JFCO-25: French-Chilean Optimization Workshop 2025.  
*Heavy ball and Nesterov acceleration with Hessian driven damping in nonconvex optimization*.  
July 08 to 11 of 2025, Rouen, France.
2. EUROPT 2025: Workshop on Advances in Continuous Optimization.  
*Linear convergence of the proximal point algorithm beyond convexity*.  
July 29 to July 02 of 2025, Southampton, United Kingdom.

3. CariOPT Workshop on Optimization and Applications.  
*Optimal trade characterizations in crypto financial markets.*  
 May 05–07 of 2025, Rio de Janeiro, Brazil.
4. IV ICOVAO, International Conference on Variational Analysis and Optimization.  
*On the linear convergence of the proximal gradient algorithm beyond convexity.*  
 January 14–17, Santiago, Chile.
5. (GCM-2024) XIV International Symposium on Generalized Convexity and Monotonicity. PLENARY Speaker:  
*A review on strongly quasiconvex functions: existence, characterizations and algorithms.*  
 September 02–06 of 2024, Pisa, Italy.
6. IV Workshop on Continuous Optimization on Riemannian Manifolds. PLENARY Speaker:  
*Proximal point type algorithms for nonconvex pseudomonotone equilibrium problems.*  
 August 13–16 of 2024, Parnaíba, Piauí, Brazil.
7. (ICAM-2024) International Conference on Applied Mathematics:  
*Further properties on strongly quasiconvex functions with applications.*  
 July 11–13 of 2024, Ho Chi Minh, Vietnam.
8. (VAO-2024) International workshop: Variational Analysis and Optimization II. PLENARY Speaker:  
*Characterizations of strongly quasiconvex functions and its applications in the gradient method.*  
 May 30–31 of 2024, Milan, Italy.
9. (NOPTA-2024) Workshop on Nonsmooth Optimization and Applications. SEMI-PLENARY Speaker:  
*On the minimization of the sum of nonconvex functions with applications.*  
 March 08–12 of 2024, Antwerp, Belgium.
10. XIV Brazilian Workshop on Continuous Optimization.  
*On the minimization of the sum of two nonconvex functions with applications.*  
 March 04–09 of 2024, Rio de Janeiro, Brazil.
11. (LAWOC) VIII Latin American Workshop on Optimization and Control.  
*Further properties on strongly quasiconvex functions with applications.*  
 February 26 to March 01 of 2024, Córdoba, Argentina.
12. 3rd International Conference on Variational Analysis and Optimization.

- On the minimization of the sum of two nonconvex functions with applications.*  
January 16–19 of 2024, Santiago, Chile.
13. (ISORA): 15th International Seminar on Optimization and Related Areas.  
*Characterizations of strongly quasiconvex functions with applications.*  
October 02–06 of 2023, Arequipa, Peru.
  14. (OR65 2023): The Operational Research Society Annual Conference:  
*Proximal point type algorithm for nonconvex pseudomonotone equilibrium problems with applications in fractional programming.*  
September 12–14 of 2023, Bath, United Kingdom.
  15. EUROPT 2023: Workshop on Advances in Continuous Optimization.  
*Proximal point type algorithm for nonconvex pseudomonotone equilibrium problems with applications in fractional programming.*  
August 23–25 of 2023, Budapest, Hungary.
  16. Primer Congreso Internacional Virtual de Matemáticas.  
*An study of nonconvex optimization problems via global directional derivatives.*  
December 07–11 of 2020, Arequipa, Peru.
  17. Nonsmooth Optimization and Its Applications:  
*Global Directional Derivatives with Applications to Generalized Convexity and Generalized Monotonicity.*  
September 17 of 2020. Urmia, Iran (online).
  18. (ISORA): 14th International Seminar on Optimization and Related Areas.  
*Optimality conditions for nonconvex optimization problems via global derivatives.*  
October 07–11 of 2019, Lima, Peru.
  19. XIII Brazilian Workshop on Continuous Optimization.  
*Global directional derivatives for nonconvex optimization problems.*  
September 23–27 of 2019, Rio de Janeiro, Brazil.
  20. (ICCOPT) 6th International Conference on Continuous Optimization.  
*Existence results for equilibrium problems and mixed variational inequalities.*  
August 05–08 of 2019, Berlin, Germany.
  21. 71st Workshop: Advances in Nonsmooth Analysis and Optimization.  
*Optimality conditions for nonconvex optimization via global derivatives.*  
June 24 to July 01 of 2019, Erice, Italy.
  22. XII Brazilian Workshop on Continuous Optimization.  
*A new quasiconvex asymptotic function with applications in Optimization.*  
July 23–27 of 2018, Foz de Iguazu, Brazil.

23. Colloquium & International Conference on Variational Analysis and Nonsmooth Optimization.  
*Optimality conditions for vector equilibrium problems with applications.*  
From June 28 to July 01 of 2018, Halle, Germany.
24. (NAOP-2018): Fourth Conference in Nonlinear Analysis and Optimization.  
*A quasiconvex asymptotic function with applications in optimization.*  
June 19–22 of 2018, Zanjan, Iran.
25. (ISORA): 13th International Seminar on Optimization and Related Areas.  
*Optimality conditions for pseudomonotone equilibrium problems.*  
October 09–13 of 2017, Lima, Peru.
26. XI International Conference on Parametric Optimization and Related Topics.  
*Quadratic fractional programming under asymptotic analysis.*  
September 19–22 of 2017, Prague, Czech Republic.
27. (12-GCM) XII International Symposium on Generalized Convexity and Monotonicity.  
*Asymptotic analysis for quasiconvex functions with applications.*  
August 27 to September 02 of 2017, Hajdúszoboszló, Hungary.
28. NewTOVAA: New Trends in Optimization and Variational Analysis for Applications.  
*Asymptotic function for generalized monotone operators.*  
December 07–10 of 2016, Quy Nhon, Vietnam.
29. 28th EURO 2016: European Conference on Operation Research.  
*Generalized asymptotic functions and applications in multiobjective optimization.*  
July 03–06 of 2016, Poznan, Poland.
30. EUROPT 2016: Workshop on Advances in Continuous Optimization.  
*The  $q$ -asymptotic function in generalized convexity theory.*  
July 01–02 of 2016, Warsaw, Poland.
31. XI Brazilian Workshop on Continuous Optimization.  
*Generalized asymptotic functions in generalized convexity theory.*  
May 22–27 of 2016, Manaus, Brazil.
32. (ISORA): 12th International Seminar on Optimization and Related Areas.  
*Asymptotic analysis for quasiconvex functions.*  
October 05–09 of 2015, Lima, Peru.
33. (ICCOPT): International Conference on Continuous Optimization.  
*Efficiency, proper efficiency and weak efficiency in multi-objective optimization.*  
July 26–29 of 2010, Santiago, Chile.

**To be done:**

34. (ISORA): 16th International Seminar on Optimization and Related Areas.  
*Additively decomposed star quasiconvex functions.*  
October 06–10 of 2025, Cusco, Peru.

● **Invited Researcher by Scientific Institutions.**

1. Western Autonomous University, Cali, Colombia. (From July 25 to August 25, 2025). Invited by Lilian Sepúlveda.
2. Piaui Federal University (UFPI), Teresina, Piaui, Brazil. (From May 08 to 23, 2025). Invited by Joao Carlos Souza.
3. Hanoi Pedagogical University 2 (HPU2), Phu Yen, Vietnam. (From February 24 to April 25, 2025). Invited by Nguyen Van Tuyen.
4. School of Applied Mathematics (EMAp), Getulio Vargas Foundation (FGV), Rio de Janeiro, Brazil. (From January 27 to February 24, 2025). Invited by Alfredo Iusem.
5. Vietnam Institute for Advances Studies in Mathematics (VIASM), Hanoi, Vietnam. (From May 16 to July 15, 2024). Invited by Nguyen Dong Yen.
6. Colombian National University, Medellin, Colombia. (From October 23 to November 21, 2023). Invited by Diego Muñoz.
7. ENSTA-Paris (Paris Technological Institute), Palaiseau, France. (From August 28 to September 15, 2023). Invited by Sorin-Mihai Grad.
8. University of Burgundy (UB), Dijon, France (From June 13 to June 29, 2023). Invited by Abderrahim Jourani.
9. Dongguan University of Technology (DGUT), Dongguan city, Guangdong Province, P.R. of China (From April 02 to May 02, 2023). Invited by Jinyun Yuan.
10. Institute of Mathematics, Vietnam Academy of Sciences and Technology (VAST), Hanoi, Vietnam. (From March 06 to March 31, 2023). Invited by Nguyen Dong Yen.
11. Instituto Nacional de Matemática Pura e Aplicada IMPA, Rio de Janeiro, Brazil. (From February 28 to April 07, 2022). Invited by Alfredo Iusem.
12. Instituto Nacional de Matemática Pura e Aplicada IMPA, Rio de Janeiro, Brazil. (From August 23 to September 17, 2021). Invited by Alfredo Iusem.
13. Instituto Nacional de Matemática Pura e Aplicada IMPA, Rio de Janeiro, Brazil. (From January 14 to February 14, 2019). Invited by Alfredo Iusem.
14. University of the Aegean, Hermoupolis, Syros, Greece. (From July 01 to 11 of 2019). Invited by Nicolas Hadjisavvas.

15. University of the Aegean, Hermoupolis, Syros, Greece. (From July 02 to 10 of 2018). Invited by Nicolas Hadjisavvas.
16. University of Avignon, Avignon, France. (From June 11 to 15, 2018). Invited by Dinh The Luc.
17. Instituto Nacional de Matemática Pura e Aplicada IMPA, Rio de Janeiro, Brazil. (From January 24 to February 24, 2017). Invited by Alfredo Iusem.
18. King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. (From December 12 to 22, 2016). Invited by Nicolas Hadjisavvas.
19. Universidad Autónoma de Barcelona, Barcelona, Spain. (From November 15 to 29, 2016). Invited by Juan Enrique Martínez-Legaz.
20. Instituto Nacional de Matemática Pura e Aplicada IMPA, Rio de Janeiro, Brazil. (From May 02 to June 02, 2016). Invited by Alfredo Iusem.
21. Instituto Nacional de Matemática Pura e Aplicada IMPA, Rio de Janeiro, Brazil. (From February 04 to March 05, 2016). Invited by Alfredo Iusem.

● **Invited Talks by Scientific Institutions.**

1. Applied Mathematical Seminar;  
*Optimal trade characterizations in crypto-financial markets*,  
August 13 of 2025. Faculty of Engineering and Basic Sciences.  
Western Autonomous University, Cali, Colombia.
2. Mathematical Seminar;  
*Heavy-ball and Nesterov accelerations with Hessian driven damping in nonconvex optimization*,  
August 06 of 2025. Faculty of Mathematics and Statistics.  
Ton Duc Thang University, Ho Chi Minh city, Vietnam.
3. Optimization Seminar;  
*New developments on generalized convexity, parts I and II*,  
March 06 and 29 of 2025. Faculty of Mathematics  
Hanoi Pedagogical University 2, Phu Yen, Vietnam.
4. Coloquio de Matemática Aplicadas;  
*Further properties for strongly quasiconvex functions with applications to the gradient method*,  
August 29 of 2024. Department of Applied Mathematics.  
Distance Education National University (UNED), Madrid, Spain.
5. Mini-course Optimization Theory and Applications;  
*A review on strongly quasiconvex functions: existence, characterizations and algorithms*,  
June 19 of 2024.

- Vietnam Institute for Advanced Study in Mathematics (VIASM),  
Hanoi, Vietnam.
6. Seminar of the Department of Mathematical Engineering;  
*Further properties for strongly quasiconvex functions with applications*,  
April 04 of 2024, Institute of Information and Communication Technologies, Electronics and Applied Mathematics.  
Catholic University of Louvain, Louvain-La-Neuve, Belgium.
  7. Colloquio de Matemática:  
*An overview on strongly quasiconvex functions: existence, optimality and first-order algorithms*.  
October 27 of 2023. Department of Mathematics.  
Universidad Nacional de Colombia, Medellín, Colombia.
  8. Seminar of the Center for Optimization and Applications:  
*On strongly quasiconvex functions: existence results and proximal point algorithms*.  
May 04 of 2023, Academy of Mathematics and System Sciences.  
Chinese Academy of Sciences, Beijing, P. R. of China.
  9. Seminar of the Department of Mathematics:  
*On strongly quasiconvex functions: existence results and proximal point algorithms*.  
April 24 of 2023, Department of Mathematics.  
Shanghai Jiao Tong University (SJTU), Shanghai, P.R. of China.
  10. Seminar of the School of Computer Sciences and Technology:  
*On strongly quasiconvex functions: existence results and proximal point algorithms*.  
April 12 of 2023, School of Computer Sciences and Technology.  
Dongguan University of Technology (DGUT), Dongguan, P.R. of China.
  11. Seminar on Numerical Analysis and Scientific Computing:  
*On strongly quasiconvex functions II: open problems*.  
March 29 of 2023, Institute of Mathematics.  
Vietnam Academy of Sciences and Technology (VAST), Hanoi, Vietnam.
  12. Seminar on Numerical Analysis and Scientific Computing:  
*On strongly quasiconvex functions I: existence results and generalized subdifferentials*.  
March 22 of 2023, Institute of Mathematics.  
Vietnam Academy of Sciences and Technology (VAST), Hanoi, Vietnam.
  13. Seminario de Matemática Aplicada;  
*An overview on strongly quasiconvex functions with applications*.  
August 18 of 2022.  
Getulio Vargas Foundation (FGV), Rio de Janeiro, Brazil.

14. Webnário Programa de Posgraduacao em Matemática:  
*On strongly quasiconvex functions: existence results and proximal point algorithms.*  
 March 30 of 2022.  
 Universidade Federal de Amazonas, Manaus, Brazil.
15. Optimization Seminar of the Center of Mathematical Modeling:  
*On strongly quasiconvex functions: theory and applications.*  
 October 06 of 2021.  
 University of Chile, Santiago, Chile, (2021).
16. Colloquium de Optimicao:  
*Análise assintótica para problemas de optimizao quase-convexos.*  
 August 23 of 2018.  
 University of Sao Paulo, Sao Paulo, Brazil.
17. Workshop on Nonlinear Analysis and its Applications;  
*An overview on quasiconvex asymptotic analysis: theory and applications.*  
 June 23 of 2018, Institute of Physics and Mathematics.  
 University of Isfahan, Isfahan, Iran.
18. Seminario PRPPG (Parana Programa de PosGraduacao) em Matemática;  
*Asymptotic analysis with applications in quasiconvex optimization,*  
 March 23 of 2018.  
 Universidade Federal do Parana, Coritiba, Brazil.
19. Workshop in Optimization and Equilibrium;  
*Quadratic fractional programming under asymptotic analysis,*  
 April 24-25 of 2017, Departamento de Ingeniería Matemática.  
 University of Concepción, Concepción, Chile.
20. Workshop in Applied Mathematics:  
*A new second order asymptotic function and applications to quadratic programming,*  
 December 14 of 2016.  
 King Fahd University of Petroleum and Minerals, Dhahran, Kingdom of Saudi Arabia.
21. Seminarios do IMPA, Optimicao;  
*Generalized asymptotic functions and their connections with generalized convexity theory,*  
 February 18 of 2016.  
 Instituto Nacional do Matematica Pura e Aplicada, IMPA, Rio de Janeiro, Brazil.
22. Mathematics Seminar;  
*Generalized asymptotic functions,*  
 November 06 of 2015.  
 Catholic University of Concepción, Concepción, Chile.

23. Optimization and Equilibrium, Seminars;  
*Second order asymptotic analysis; theory and applications*,  
 September 10 of 2014.  
 Center for Mathematical Modeling (CMM), University of Chile, Santiago, Chile.
24. Workshop in Optimization;  
*Second order asymptotic analysis in the convex case*,  
 November 29 of 2013. Departamento de Ingeniería Matemática,  
 University of Concepción, Concepción, Chile.

● **Peer Review:**

**Journals:**

SIAM Journal on Optimization; Journal Optimization Theory and Applications; Journal of Global Optimization; Optimization; Set-Valued and Variational Analysis; RAIRO Operation Research; Annals of Operation Research; TOP, Transaction in Operation Research; Operation Research Letters; Optimization Letters; Optimization, Methods & Software; Computational and Applied Mathematics; Positivity; Applicable Analysis; Journal of Convex Analysis; Journal of Industrial and Management Optimization; Vietnam Journal of Mathematics; Minimax Theory and Applications; Bulletin of the Iranian Mathematical Society.

**Reviews:**

1. Mathematical Reviews, American Mathematical Society, since September 2017.
2. Zentralblatt fur Mathematik, since September 2023.

● **For a Reference Letter.**

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