

ELLEN HIDEMI FUKUDA'S CV

Address: System Optimization Laboratory
Department of Applied Mathematics and Physics
Graduate School of Informatics, Kyoto University
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PROFESSIONAL AFFILIATIONS / POSITIONS

Apr/2019 – present Associate Professor
Graduate School of Informatics, Kyoto University (Japan)

Oct/2013 – Mar/2019 Assistant Professor
Graduate School of Informatics, Kyoto University (Japan)

Aug/2011 – Sep/2013 Visiting Researcher
Graduate School of Informatics, Kyoto University (Japan)

Mar/2011 – Sep/2013 Postdoctoral Researcher
Institute of Mathematics, Statistics and Computer Science,
University of Campinas (Brazil)
Supervisor: Prof. Roberto Andreani

EDUCATION

Mar/2007 – Feb/2011 Ph.D. in Applied Mathematics
Institute of Mathematics and Statistics, University of São Paulo (Brazil)
Thesis: *Topics in differentiable exact penalties*
Supervisor: Prof. Paulo J. S. Silva

Mar/2005 – Feb/2007 M.Sc. in Computer Science
Institute of Mathematics and Statistics, University of São Paulo (Brazil)
Thesis: *Volume algorithm and nondifferentiable optimization*
Supervisor: Prof. Paulo J. S. Silva

Mar/2001 – Feb/2005 B.Sc. in Computer Science
Institute of Mathematics and Statistics, University of São Paulo (Brazil)
Monograph: *Information retrieval using computational linear algebra*
Supervisor: Prof. Paulo J. S. Silva

COMPLEMENTARY EDUCATION

Apr/2010 – Sep/2010 Special research student
Graduate School of Informatics, Kyoto University (Japan)
Supervisor: Prof. Masao Fukushima

Jan/2008 – Feb/2008 Summer course in Functional Analysis
National Institute for Pure and Applied Mathematics (Brazil)

RESEARCH INTERESTS

Nonlinear programming, nonsmooth optimization, conic optimization, vector and multiobjective optimization, semidefinite programming, numerical optimization, etc.

PUBLICATIONS

REFEREED JOURNAL ARTICLES

1. K. Okabe, Y. Yamakawa and E. H. Fukuda. A revised sequential quadratic semidefinite programming method for nonlinear semidefinite optimization. *Submitted, 2022*.
2. H. Tanabe, E. H. Fukuda and N. Yamashita. An accelerated proximal gradient method for multiobjective optimization. *Submitted, 2022*.
3. Y. Yamakawa, T. Ikegami, E. H. Fukuda and N. Yamashita. An equivalent nonlinear optimization model with triangular low-rank factorization for semidefinite programs. *Submitted, 2021*.
4. H. Tanabe, E. H. Fukuda and N. Yamashita. Convergence rates analysis of multiobjective proximal gradient method. To appear in *Optimization Letters, 2022*.
5. H. Tanabe, E. H. Fukuda and N. Yamashita. New merit functions and error bounds for non-convex multiobjective optimization. *Submitted, 2020*.
6. R. Andreani, E. H. Fukuda, G. Haeser, H. Ramírez, D. O. Santos, P. J. S. Silva and T. P. Silveira. Erratum to: new constraint qualifications and optimality conditions for second order cone programs. *Set-Valued and Variational Analysis, 30:329–333, 2022*.
7. E. H. Fukuda, L. M. Mito and G. Haeser. Second-order analysis for semidefinite and second-order cone programming via sequential optimality conditions. *Submitted, 2020*.
8. E. H. Fukuda, L. M. Graña Drummond and A. M. Masuda. A conjugate directions-type procedure for quadratic multiobjective optimization. *Optimization, 71(2):419–437, 2022*.
9. T. H. L. Dinh, M. Kaneko, E. H. Fukuda and L. Boukhatem. Energy efficient resource allocation optimization in fog radio access networks with outdated channel knowledge. *IEEE Transactions on Green Communications and Networking, 5(1):146–159, 2021*.
10. R. Andreani, E. H. Fukuda, G. Haeser, D. O. Santos and L. D. Secchin. On the use of Jordan algebras for improving global convergence of an augmented Lagrangian method in nonlinear semidefinite programming. *Computational Optimization and Applications, 79:633–648, 2021*.
11. R. Andreani, E. H. Fukuda, G. Haeser, D. O. Santos and L. D. Secchin. Optimality conditions for nonlinear second-order cone programming and symmetric cone programming. *Submitted, 2019*.

12. L. Amichi, M. Kaneko, E. H. Fukuda, N. El Rachkidy and A. Guitton. Joint allocation strategies of power and spreading factors with imperfect orthogonality in LoRa networks. *IEEE Transactions on Communications*, 68(6):3750–3765, 2020.
13. K. Mita, E. H. Fukuda and N. Yamashita. Nonmonotone line searches for unconstrained multiobjective optimization problems. *Journal of Global Optimization*, 75(1):63–90, 2019.
14. E. H. Fukuda, L. M. Graña Drummond and F. M. P. Raupp. A barrier-type method for multiobjective optimization. *Optimization*, 69(11):2471–2487, 2020.
15. H. Tanabe, E. H. Fukuda and N. Yamashita. Proximal gradient methods for multiobjective optimization and their applications. *Computational Optimization and Applications*, 72(2):339–361, 2019.
16. B. F. Lourenço, E. H. Fukuda and M. Fukushima. Optimality conditions for problems over symmetric cones and a simple augmented Lagrangian method. *Mathematics of Operations Research*, 43(4):1233–1251, 2018.
17. E. H. Fukuda and B. F. Lourenço. Exact augmented Lagrangian functions for nonlinear semidefinite programming. *Computational Optimization and Applications*, 71(2):457–482, 2018.
18. B. F. Lourenço, E. H. Fukuda and M. Fukushima. Optimality conditions for nonlinear semidefinite programming via squared slack variables. *Mathematical Programming*, 168(1-2):177–200, 2018.
19. E. H. Fukuda and M. Fukushima. A note on the squared slack variables technique for nonlinear optimization. *Journal of the Operations Research Society of Japan*, 60(3):262–270, 2017.
20. E. H. Fukuda and M. Fukushima. The use of squared slack variables in nonlinear second-order cone programming. *Journal of Optimization Theory and Applications*, 170(2):394–418, 2016.
21. E. H. Fukuda, L. M. Graña Drummond and F. M. P. Raupp. An external penalty-type method for multicriteria. *TOP*, 24(2):493–513, 2016.
22. E. H. Fukuda and L. M. Graña Drummond. A survey on multiobjective descent methods. *Pesquisa Operacional*, 34(3):585–620, 2014.
23. E. H. Fukuda and L. M. Graña Drummond. Inexact projected gradient method for vector optimization. *Computational Optimization and Applications*, 54(3):473–493, 2013.
24. R. Andreani, E. H. Fukuda and P. J. S. Silva. A Gauss-Newton approach for solving constrained optimization problems using differentiable exact penalties. *Journal of Optimization Theory and Applications*, 156(2):417–449, 2013.
25. E. H. Fukuda, P. J. S. Silva and M. Fukushima. Differentiable exact penalty functions for nonlinear second-order cone programs. *SIAM Journal on Optimization*, 22(4):1607–1633, 2012.
26. E. H. Fukuda and L. M. Graña Drummond. On the convergence analysis of the projected gradient method for vector optimization. *Optimization*, 60(8-9):1009–1021, 2011.

SPECIAL ISSUES

1. E. H. Fukuda. About the special issue (in Japanese). Special issue on “32nd RAMP Symposium”, *Operations Research Society of Japan*, to appear, 2021.
2. E. H. Fukuda. Descent methods for multiobjective optimization: extending single-objective optimization methods (in Japanese). *Systems, Control and Information*, vol. 62, pp. 352–357, September 2018.
3. E. H. Fukuda. Multiobjective optimization: basis of descent methods (in Japanese). Special issue on “29th RAMP Symposium”, *Operations Research Society of Japan*, vol. 63, pp. 146–152, March 2018.
4. E. H. Fukuda and M. Fukushima. Second-order cone programming and a method using squared slack variables (in Japanese). Special issue on “Theory on second-order cone programming”, *Operations Research Society of Japan*, vol. 59, pp. 707–715, December 2014.

CONFERENCE PROCEEDINGS

1. E. H. Fukuda, B. F. Lourenço and M. Fukushima. A survey on second-order conditions for nonlinear symmetric cone programming via squared slack variables. *RIMS Kôkyûroku*, vol. 2108, Kyoto, Japan, April 2019.
2. E. H. Fukuda. Descent methods in multiobjective optimization (in Japanese). *Proceedings of the 29th RAMP Symposium*, vol. 29, pp. 115–124, Tsukuba, Japan, October 2017.
3. K. Mita, E. H. Fukuda and N. Yamashita. On using nonmonotone line search techniques in steepest descent methods for multiobjective optimization (in Japanese). *Proceedings of the 61st Annual Conference of the Institute of Systems, Control and Information Engineers*, Kyoto, Japan, May 2017.
4. I. Isonishi, E. H. Fukuda and N. Yamashita. A new DC method for BMI-constrained optimization (in Japanese). *Proceedings of the 61st Annual Conference of the Institute of Systems, Control and Information Engineers*, Kyoto, Japan, May 2017.
5. E. H. Fukuda and B. F. Lourenço. Constructing a continuously differentiable exact augmented Lagrangian function for nonlinear semidefinite programming. *RIMS Kôkyûroku*, vol. 2027, pp. 150–157, Kyoto, Japan, April 2017.
6. D. Tsuyuguchi, E. H. Fukuda, M. Hu and M. Fukushima. Reformulating multi-leader-follower games with smoothing method (in Japanese). *RIMS Kôkyûroku*, vol. 1981, pp. 149–157, Kyoto, Japan, January 2016.
7. E. H. Fukuda, B. F. Lourenço and M. Fukushima. A note on nonlinear semidefinite programming and the squared slack variables technique. *RIMS Kôkyûroku*, vol. 1981, pp. 143–148, Kyoto, Japan, January 2016.

CONFERENCE PRESENTATIONS

Talks in international conferences: 16 / Talks in domestic conferences: 18

The list below does not include the presentations given by my co-authors.

1. E. H. Fukuda. Recent developments in multiobjective descent methods. *66th Annual Conference of the Institute of Systems, Control and Information Engineers*, Kyoto, Japan, 2022/05/19 (invited talk).
2. E. H. Fukuda, T. Tanaka and N. Yamashita. A new uncertainty model for positive-valued parameters with applications. *22nd Conference of the International Federation of Operational Research Societies*, Seoul, South Korea (online), 2021/08/24 (invited talk).
3. R. Andreani, E. H. Fukuda, G. Haeser, D. O. Santos and L. D. Secchin. Sequential optimality conditions: extensions for nonlinear semidefinite and nonlinear second-order cone programming problems (in Japanese). *RIMS Workshop: Theory, Algorithms and Applications of Mathematical Optimization*, Kyoto, Japan (online), 2020/08/24 (contributed talk).
4. E. H. Fukuda, K. Mita and N. Yamashita. A hybrid-type nonmonotone line search for multiobjective optimization. *International Conference on Optimization: Techniques and Applications 2019*, Hakodate, Japan, 2019/08/29 (invited talk).
5. E. H. Fukuda, K. Mita and N. Yamashita. On using nonmonotone line searches in multiobjective descent methods. *30th European Conference on Operational Research*, Dublin, Ireland, 2019/06/25 (organized/contributed talk).
6. E. H. Fukuda, I. Isonishi and N. Yamashita. A new DC method for nonlinear conic optimization with applications to problems with BMI constraints. *International Workshop on Control and Optimization*, Kyoto, Japan, 2018/11/07 (invited talk).
7. E. H. Fukuda, B. F. Lourenço and M. Fukushima. Second-order conditions for nonlinear symmetric conic programming problems (in Japanese). *RIMS Workshop: New Trends of Numerical Optimization in Advanced Information-Oriented Society*, Kyoto, Japan, 2018/08/07 (contributed talk).
8. E. H. Fukuda, B. F. Lourenço and M. Fukushima. Nonlinear symmetric cone problems: optimality conditions and an augmented Lagrangian method. *XII Brazilian Workshop on Continuous Optimization*, Foz do Iguacu, Brazil, 2018/07/24 (contributed talk).
9. E. H. Fukuda, I. Isonishi and N. Yamashita. Solving nonlinear conic programming problems with a new DC approach. *23rd International Symposium on Mathematical Programming*, Bordeaux, France, 2018/07/04 (contributed talk).
10. E. H. Fukuda. Descent methods for multiobjective optimization (in Japanese). *The 29th RAMP Symposium*, Tsukuba, Japan, 2017/10/13 (invited talk).
11. E. H. Fukuda and B. F. Lourenço. On the construction of exact augmented Lagrangian functions for nonlinear semidefinite optimization. *SIAM Conference on Optimization*, Vancouver, Canada, 2017/05/24 (organized/invited talk).

12. E. H. Fukuda and B. F. Lourenço. Constructing exact augmented Lagrangian functions for nonlinear semidefinite programming problems (in Japanese). *RIMS Workshop: The State-of-the-Art Optimization Technique and Future Development*, Kyoto, Japan, 2016/08/26 (contributed talk).
13. E. H. Fukuda, B. F. Lourenço and M. Fukushima. Second-order conditions for nonlinear semidefinite optimization problems via slack variables approach. *The Fifth International Conference on Continuous Optimization*, Tokyo, Japan, 2016/08/08 (invited talk).
14. E. H. Fukuda. Exact penalty methods for optimization problems (in Japanese). *Workshop on Optimization: Foundations and Frontiers*, Yokohama, Japan, 2016/03/19 (invited talk).
15. E. H. Fukuda. Research on nonlinear programming, nonlinear second-order cone programming and multiobjective optimization (in Japanese). *Kansai Region Meeting from Operations Research Society of Japan – Memorial Lecture*, Osaka, Japan, 2016/03/05 (invited talk).
16. E. H. Fukuda, B. F. Lourenço and M. Fukushima. Reformulating nonlinear semidefinite programming problems with squared slack variables (in Japanese). *Operations Research Society of Japan – Fall Conference*, Fukuoka, Japan, 2015/09/11 (contributed talk).
17. E. H. Fukuda, B. F. Lourenço and M. Fukushima. Nonlinear semidefinite programming problems and the squared slack variables technique (in Japanese). *RIMS Workshop: Optimization for New Generations – Modeling and Computation*, Kyoto, Japan, 2015/09/01 (contributed talk).
18. E. H. Fukuda, B. F. Lourenço and M. Fukushima. Studies on squared slack variables for nonlinear second-order cone and semidefinite programming. *22nd International Symposium on Mathematical Programming*, Pittsburgh, United States, 2015/07/14 (contributed talk).
19. E. H. Fukuda and M. Fukushima. On the use of squared slack variables in nonlinear programming and nonlinear second-order cone programming. *9th International Conference on Optimization: Techniques and Applications*, Taipei, Taiwan, 2013/12/13 (contributed talk).
20. E. H. Fukuda and M. Fukushima. Using squared slack in nonlinear second-order cone programming (in Japanese). *OR Meeting for Young Researchers*, Kyoto, Japan, 2013/11/07 (invited talk).
21. E. H. Fukuda and M. Fukushima. Slack variables in nonlinear second-order cone programming problems (in Japanese). *RIMS Workshop: Optimization – Theory and Applications*, Kyoto, Japan, 2013/08/30 (contributed talk).
22. E. H. Fukuda and M. Fukushima. Slack variables in nonlinear second-order cone programming. *The Fourth International Conference on Continuous Optimization*, Lisbon, Portugal, 2013/07/30 (invited talk).
23. E. H. Fukuda and M. Fukushima. Slack variables in nonlinear second-order cone programming problems (in Japanese). *Optimization: Modeling and Algorithms 2013*, Tokyo, Japan, 2013/03/11 (contributed talk).

24. E. H. Fukuda, M. Fukushima and P. J. S. Silva. Solving nonlinear second-order cone programs via exact penalty functions. *5th International Conference on Optimization and Control with Applications*, Beijing, China, 2012/12/07 (invited talk).
25. E. H. Fukuda, M. Fukushima and P. J. S. Silva. Differentiable exact penalty functions for nonlinear second-order cone programs. *21st International Symposium on Mathematical Programming*, Berlin, Germany, 2012/08/21 (contributed talk).
26. E. H. Fukuda, M. Fukushima and P. J. S. Silva. Differentiable exact penalty functions for nonlinear second-order cone programs. *RIMS Workshop: The Bridge Between Theory and Application in Optimization Method*, Kyoto, Japan, 2012/07/23 (contributed talk).
27. E. H. Fukuda. Semismooth reformulation for nonlinear second-order cone programming (in Portuguese). *28th Brazilian Colloquium of Mathematics*, Rio de Janeiro, Brazil, 2011/07/26 (invited talk).
28. E. H. Fukuda, R. Andreani and P. J. S. Silva. A Gauss-Newton-type method for constrained optimization using exact penalties. *SIAM Conference on Optimization 2011*, Darmstadt, Germany, 2011/05/19 (invited talk).
29. E. H. Fukuda, R. Andreani and P. J. S. Silva. A Gauss-Newton approach for solving constrained optimization via exact penalty functions. *20th International Symposium on Mathematical Programming*, Chicago, United States, 2009/08/28 (contributed talk).
30. E. H. Fukuda and L. M. Graña Drummond. Inexact projected gradient method for vector optimization (in Portuguese). *27th Brazilian Colloquium of Mathematics*, Rio de Janeiro, Brazil, 2009/07/28 (invited talk).
31. E. H. Fukuda, R. Andreani and P. J. S. Silva. A Gauss-Newton-type method for differentiable exact penalties. *VIII Brazilian Workshop on Continuous Optimization*, Mambucaba, Brazil, 2009/07/13 (contributed talk).
32. E. H. Fukuda and P. J. S. Silva. Volume algorithm and nondifferentiable optimization (in Portuguese). *XXX National Congress of Computational and Applied Mathematics*, Florianópolis, Brazil, 2007/09/03 (invited talk).
33. E. H. Fukuda and P. J. S. Silva. Solving linear integer programs by Lagrangian dual approach: subgradient methods and volume algorithm (in Portuguese). *XXIX National Congress of Computational and Applied Mathematics*, Campinas, Brazil, 2006/09/20 (contributed talk).
34. E. H. Fukuda and P. J. S. Silva. Information retrieval using computational linear algebra (in Portuguese). *13th International Symposium of Undergraduate Research*, São Carlos, Brazil, 2005/11/09 (contributed poster).

AWARDS / HONORS

- 2015 *Research Encourage Award*, for a promising young researcher in Operations Research, Operations Research Society of Japan
- 2012 *Best Ph.D. Thesis 2011* in Applied Mathematics at University of São Paulo, University of São Paulo
- 2007 *Odelar Leite Linhares Prize*, for the best master thesis of the year in Brazil, Brazilian Society of Computational and Applied Mathematics
- 2006 *2nd Place in XI ACM South American Programming Contest*, São Paulo regional, ACM International Collegiate Programming Contest

SUPERVISED STUDENTS' AWARDS

- 2020 H. Tanabe, *Student Thesis Award 2020*, Operations Research Society of Japan.
- 2020 H. Tanabe, *14th ICT Innovation's Excellent Research Award*, Kyoto University.
- 2019 K. Mita, *Student Thesis Award 2019*, Operations Research Society of Japan.
- 2018 I. Isonishi, *Excellent Student Presentation Award at SSOR2018 Kansai Region*, Operations Research Society of Japan.
- 2018 H. Tanabe, finalist of *Young Author's Award in SICE Annual Conference 2018*, Society of Instrument and Control Engineers.

GRANTS / FELLOWSHIPS / SCHOLARSHIPS

As the principal investigator:

- Apr/2019 – Mar/2023 Grants-in-Aid for Scientific Research (C)
Japan Society for the Promotion of Science
- Apr/2019 – Mar/2020 Open Collaborative Research Program (with M. Kaneko)
National Institute of Informatics
- Apr/2018 – Mar/2019 Promoted Research Activity Funds
The Kyoto University Foundation
- Apr/2018 – Mar/2019 Open Collaborative Research Program (with M. Kaneko)
National Institute of Informatics
- Apr/2014 – Mar/2018 Grants-in-Aid for Scientific Research, Young Scientists (B)
Japan Society for the Promotion of Science
- Oct/2013 – Mar/2014 Research Funds for Young Scientists (Start-Up)
Kyoto University
- Apr/2011 – Sep/2013 Postdoctoral fellowship
The State of São Paulo Research Foundation
- Apr/2012 – Mar/2013 Research internships abroad
The State of São Paulo Research Foundation

Sep/2007 – Feb/2011 Ph.D. student scholarship
The State of São Paulo Research Foundation

Mar/2007 – Aug/2007 Ph.D. student scholarship
Coordination for the Improvement of Higher Education Personnel

Mar/2005 – Feb/2007 M.Sc. student scholarship
Coordination for the Improvement of Higher Education Personnel

Aug/2004 – Jan/2005 Undergraduate research scholarship
National Council for Scientific and Technological Development

As a collaborator:

Feb/2019 – Jan/2022 Chamada CNPq Universal (Brazil) (with B. F. Svaiter and others)
National Council for Scientific and Technological Development

Apr/2016 – Mar/2019 Grants-in-Aid for Scientific Research (C) (with A. F. Cruz)
Japan Society for the Promotion of Science

TEACHING EXPERIENCES

1. Teaching in Graduate School of Informatics, Kyoto University.

2019 – 2022 Operations research, advanced (continuous optimization)
 2019 – 2022 Logical systems (boolean algebra, digital circuits)
 2015, 2021 ELCAS Basic course for high school students (optimization with Python)
 2014 – 2020 Seminar on applied mathematics and physics
 (continuous and discrete optimization, sparse modeling, machine learning, etc)
 2015 – 2019 Applied mathematics and physics laboratory (continuous optimization)
 2013 – 2014 Applied mathematics and physics laboratory (linear programming)
 2017 Physics experiments (quantum mechanics)
 2014 Exercise on numerical analysis (continuous optimization)

2. Teaching Assistance in Institute of Mathematics and Statistics, University of São Paulo.

2004, 2008 Linear programming
 2003, 2006 Numerical linear algebra

SUPERVISION OF STUDENTS (CONCLUDED)

1. An uncertainty model for positive-valued parameters with application to robust optimization. Master thesis, March 2021.
2. A globally convergent Levenberg-Marquardt method for degenerate optimization with equality and inequality constraints. Master thesis, March 2021.
3. Numerical methods for vector-valued support vector machines with mutual support vectors. Undergraduate thesis, March 2021.
4. Improvement of the stabilized sequential quadratic semidefinite programming method for nonlinear programming problems. Undergraduate thesis, March 2021.

5. On the use of differentiable exact penalty functions for nonlinear semidefinite programming. Master thesis, March 2020.
6. A new sequential quadratic programming method for constrained multiobjective optimization problems. Master thesis, March 2020.
7. Augmented Lagrangian method for conditional value-at-risk optimization. Undergraduate research, March 2020.
8. A new weighted multiobjective Nash equilibrium game and a related existence theory. Undergraduate research, March 2020.
9. A new descent method for unconstrained multiobjective optimization. Undergraduate research, March 2020.
10. Merit functions for multiobjective optimization and convergence rates analysis of multiobjective proximal gradient methods. Master thesis, September 2019.
11. Nonmonotone techniques for descent multiobjective methods. Master thesis, March 2019.
12. An efficient DC method for nonlinear conic optimization. Master thesis, March 2019.
13. Levenberg-Marquardt method for nonlinear programming using penalty functions. Undergraduate research, March 2019.
14. Beamforming methods for cloud radio access networks and models with uncertainties. Undergraduate research, March 2019.
15. Differentiable exact augmented Lagrangian functions for nonlinear second-order cone programs. Master thesis, March 2018.
16. Proximal gradient method for multiobjective optimization and applications in robust multicriteria optimization. Undergraduate research, March 2018.
17. Exact penalty functions for nonlinear semidefinite programming. Undergraduate research, March 2018.
18. Nonlinear second-order cone programming problems and the stabilized sequential quadratic programming. Master thesis, March 2017.
19. An equivalent nonlinear optimization model with triangular low-rank factorization for semidefinite programs. Master thesis, March 2017.
20. A new DC method for BMI-constrained optimization problems and convergence results. Undergraduate research, March 2017.
21. Nonmonotone line search in multiobjective settings. Undergraduate research, March 2017.
22. General slack variables for nonlinear second-order cone programming. Undergraduate research, March 2017.
23. The use of smoothing methods in multi-leader-follower games. Master thesis, March 2016.
24. A descent method for robust multiobjective optimization in the presence of implementation errors. Master thesis, March 2016.
25. General exact augmented Lagrangian functions for nonlinear second-order cone programming. Undergraduate research, March 2016.

26. Differentiable exact penalty functions for nonlinear optimization with easy constraints. Master thesis, March 2015.
27. Test problems and methods for nonlinear second-order cone programming problems. Undergraduate research, March 2015.
28. Steepest descent method for multiobjective optimization and its effectiveness. Undergraduate research, March 2014.

EDITORIAL DUTIES

1. 2021 – present: Associate editor, Computational Optimization and Applications.
2. 2015 – 2017 : Associate editor, Journal of the Operations Research Society of Japan.
3. 2011 – present: Paper reviewer, for more than 20 different international journals.

OTHER DUTIES

1. October 2019: Young leader, STS Forum 16th Annual Meeting.

WORKING COMMITTEES

In academic societies:

2021 – present Steering Committee, Operations Research Society of Japan, Kansai Region

In academic conferences:

2021 – 2022 10th IFAC Symposium on Robust Control Design – ROCOND 2022 (Kyoto)

2019 – 2020 RAMP Symposium 2020 (Kyoto)

2019 – 2020 Operations Research Society of Japan – Spring Conference 2019 (Nara)

2016 – 2017 Operations Research Society of Japan – Fall Conference 2017 (Osaka)

In Graduate School of Informatics, Kyoto University:

2022 Academic affairs (vice - undergraduate in applied mathematics and physics)

2020–2021 Public relations and evaluation committee

2020 Representative for experiments and exercises's disciplines (undergraduate)

2019 Academic affairs (undergraduate in applied mathematics and physics)

2019 Academic affairs (undergraduate in informatics and mathematical science)

2018 Library committee

2016 Information security working group

2016 System operations working group

2015,2019 Harassment prevention committee

2014 Public relations committee

PROFESSIONAL SOCIETIES

2013 – present Mathematical Optimization Society (MOS)
2013 – present Operations Research Society of Japan (ORSJ)
2005 – present Society for Industrial and Applied Mathematics (SIAM)

LANGUAGES

Portuguese	native
English	fluent
Japanese	native speaking/listening, advanced reading/writing
Spanish	intermediate listening/reading, basic speaking/writing
French	basic