

Thiago Serra

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EDUCATION

Ph.D.	<i>Operations Research</i>	Carnegie Mellon University	2018
M.S.	<i>Operations Research</i>	Carnegie Mellon University Advisor: John Hooker	2015
M.S.	<i>Computer Science</i>	University of Sao Paulo Advisor: Yoshiko Wakabayashi	2012
B.S.	<i>Computer Engineering</i>	University of Campinas	2008
	<i>Certificate of Studies Abroad</i>	IST, University of Lisbon	2007

PROFESSIONAL APPOINTMENTS

2018–2019	<i>Visiting Research Scientist</i>	Mitsubishi Electric Research Labs, USA
2016 & 2017	<i>Summer Intern</i>	Mitsubishi Electric Research Labs, USA
2009–2013	<i>Operations Research Analyst</i>	PETROBRAS, Brazil
2008–2009	<i>Operations Research Consultant</i>	Neolog Consulting, Brazil
2008–2008	<i>Software Engineer</i>	Metacortex Consulting, Brazil
2007–2007	<i>Software Engineering Intern</i>	Daitan Labs, Brazil
2003–2004	<i>R&D Intern</i>	Fiberwork Optical Communications, Brazil

PUBLICATIONS

Patents

A. Raghunathan, D. Bergman, and T. Serra. “*Systems and Methods for Joint Control of Multi-Modal Transportation Networks*”. U.S. Patent Application 15/785,540, filed October 2017 (pending).

International Conferences and Workshops

T. Serra, C. Tjandraatmadja, and S. Ramalingam. “*Bounding and Counting Linear Regions of Deep Neural Networks*”. ICML 2018.

A. Raghunathan, D. Bergman, J. Hooker, T. Serra, and S. Kobori. “*The Integrated Last-Mile Transportation Problem (ILMTP)*”. ICAPS 2018.

T. Serra, C. Tjandraatmadja, and S. Ramalingam. “*How Could Polyhedral Theory Harness Deep Learning?*”. Scientific Machine Learning Workshop, U.S. Department of Energy, 2018.

T. Serra, G. Nishioka, and F. Marcellino. “*The Offshore Resources Scheduling Problem: Detailing a Constraint Programming Approach*”. CP 2012.

S. Barcelos, T. Serra, R. F. Rando, E. L. Rigon, N. K. Sasaki, W. Arellano, A. Alkschbirs, D. Lima, and R. A. Oliveira. “*Polarization Mode Dispersion (PMD) Field Measurements: Audit of Newly Installed Fiber Plants*”. NFOEC 2005.

Under Review

E. Balas and T. Serra. “*When Lift-and-Project Cuts are Different*”.
Submitted to INFORMS Journal on Computing, first round.

T. Serra and J. Hooker. “*Compact Representation of Near-Optimal Integer Programming Solutions*”.
Submitted to Mathematical Programming, second round.

Working Papers

T. Serra. “*Reformulating the Disjunctive Cut Generating Linear Program*”.
(Winner of the INFORMS 2016 poster competition.)

T. Serra. “*Branching with Less Repetition*”.

AWARDS AND HONORS

2018 Carnegie Mellon Univ. Gerald L. Thompson Doctoral Dissertation Award in Management Science

2016 INFORMS Judith Liebman Award

2016 INFORMS Annual Meeting Interactive Presentation Award First Place Winner

2012 Brazilian Symposium on Operations Research Best Paper Runner-up

Undergraduate Distinctions

2009 Brazilian Computing Society Outstanding Student Award

2009 Sao Paulo Institute of Engineering Award

2009 Sao Paulo Regional Board of Engineering, Architecture, and Agronomy Honorable Mention

2004, 2005, 2007 ACM International Collegiate Programming Contest South America Bronze Medal

2006 Portuguese National Programming Contest (MIUP) Third Place

2003 Brazilian Olympiad in Informatics Gold Medal

2002 Sao Paulo State Olympiad in Physics Bronze Medal

FELLOWSHIPS, GRANTS, AND SCHOLARSHIPS

2018	MIP Workshop Travel Support
2018	Carnegie Mellon Graduate Student Conference Funding
2017	MIP Workshop Travel Support
2017	Carnegie Mellon Graduate Student Conference Funding
2015	Tepper School of Business Dean's Fund
2013–2017	William Larimer Mellon Fellowship
2006–2007	Luso-American Development Foundation Scholarship
2004–2005	Sao Paulo Res. Fndn. Undergraduate Res. Grant
2003–2004	Sao Paulo Res. Fndn. Innovative Res. in Small Business Grant

INVITED PRESENTATIONS

Carnegie Mellon University	Host: Chrysanthos Gounaris	March 2018
Brookhaven National Laboratory	Host: Shinjae Yoo	February 2018
Northeastern University	Host: Rozhin Doroudi	June 2017
University of Campinas	Host: Alan Godoy S. Mello	May 2013

CONFERENCE PRESENTATIONS

Scientific Machine Learning Workshop, 2018
INFORMS Annual Meeting 2012, 2015, 2016, 2017
INFORMS Optimization Society Conference 2016, 2018
INFORMS Computing Society Conference 2017
MOPTA 2016
CP 2012
SPARK, ICAPS 2012
COPLAS, ICAPS 2012
CPAIOR 2011

Posters

MIP 2016, 2017, 2018
NemFest 2017
INFORMS Annual Meeting 2016

TEACHING EXPERIENCE

Instructor

Fall 2016	<i>Mathematical Models for Consulting</i>	Carnegie Mellon University, Undergraduate
	Registered: 25	Overall Teaching: 4.67/5.00 Overall Evaluation: 4.50/5.00

Recitation Leader

Spring 2017	<i>Optimization</i>	Carnegie Mellon University, MBA
Spring 2016	<i>Optimization</i>	Carnegie Mellon University, MBA

Office Hours

Spring 2016	<i>Disjunctive Programming</i>	Carnegie Mellon University, PhD
Fall 2016	<i>Optimization</i>	Carnegie Mellon University, MBA
Fall 2016	<i>Applications of Operations Research</i>	Carnegie Mellon University, MBA
Fall 2006	<i>File Structures</i>	University of Campinas, Undergraduate

TEACHING-RELATED TRAINING

<i>Future Faculty Program</i>	Eberly Center, Carnegie Mellon University	2014-2017
<i>Teaching Effectiveness Colloquium</i>	INFORMS	2016, 2017
<i>Acting for Non-Majors</i>	School of Drama, Carnegie Mellon University	2015
<i>Language and Culture for Teaching</i>	ICC, Carnegie Mellon University	2013

ACADEMIC SERVICE

Session Organizer

2018 INFORMS Annual Meeting: “*Machine Learning and Discrete Optimization*” (Exp.)
2018 INFORMS Optimization Society Conference: “*New Paradigms for Cut Generation*”
2017 INFORMS Annual Meeting: “*Decision Diagrams for Optimization*”
2017 INFORMS Computing Society Conference: “*New Paradigms for Cut Generation*”
2016 INFORMS Optimization Society Conference: “*New Paradigms for Cut Generation*”
2012 INFORMS Annual Meeting: “*Applications in the Energy Sector of Emerging Countries*”

Peer Review

Constraints
CP 2016, 2017
CPAIOR 2017, 2018
AAAI-17

Leadership and Volunteering

2018–	<i>Committee Member</i>	INFORMS Undergraduate Operations Research Prize
2017–	<i>Member</i>	INFORMS Education Strategy Committee
2016–	<i>Mentor</i>	Brazilian Students Association (BRASA)

2012, 2014–	<i>Contributor</i>	INFORMS Annual Meeting Blog
2017–2018	<i>Consulting Board Member</i>	CMU INFORMS
2015–2017	<i>President</i>	CMU INFORMS
2014–2015	<i>Co-Founder, Secretary</i>	CMU INFORMS
2015	<i>Twitter Curator</i>	ISMP 2015
2014–2015	<i>Events Officer</i>	Public Comm. for Researchers (CMU)

LANGUAGES

Portuguese (native)
English (fluent)

PROFESSIONAL MEMBERSHIPS

2012– INFORMS
2015– SIAM

REFERENCES

Available upon request.