

Felipe Maldonado

PhD Candidate of  
Computer Science

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*Imagination is more important than knowledge.  
Knowledge is limited. Imagination encircles the world.  
Albert Einstein.*

## Education

- 2015–now **PhD Candidate**, *Australian National University, [ANU College of Engineering & Computer Science](#)*, Research School of Computer Science/ Data61 Decision Sciences Group.  
Canberra, Australia
- 2011–2012 **Mathematical Engineering (Masters Equivalent)**, *University of Chile, [Department of Mathematical Engineering](#)*, Thesis: Study of an adaptive dynamic for repeated games and its applications to a traffic game. Graduated with highest distinction.  
Santiago, Chile
- 2005–2010 **Bachelor in Engineering Sciences, major in Mathematics**, *University of Chile, [Department of Mathematical Engineering](#)*.  
Santiago, Chile

## Publications

- Working paper **Compete or collaborate: Pricing strategies under a consumer choice model with network effects.**, *Expected submission: December 2018*.
- 2018 **Popularity Signals in Trial-Offer Markets with Social Influence and Position Bias**, *[European Journal of Operational Research](#)*, Volume 266 (2) 775-793, 16 April 2018.
- 2016 **Asymptotic Optimality of Myopic Optimization in Trial-Offer Markets with Social Influence**, *25th International Joint Conference on Artificial Intelligence ([IJCAI-16](#))*, New York 9th-15th July, 2016.
- 2016 **Aligning Popularity and Quality in Online Cultural Markets**, *10th International AAAI Conference on Web and Social Media ([ICWSM-16](#))*, Cologne 17th-20th May, 2016.
- 2012 **Study of an Adaptive Dynamic for Repeated Games and its Applications to a Traffic Game**, *Mathematical Engineering Thesis*.

## Professional Experience

- August 2018–now **Research Assistant**, *[QuantEcon](#)*, and *[Research School of Economics](#)*.  
Flexible, Experiential Learning in Economics: Implementing Interactive Lecture Notes with an Integrated Editorial Solution. Development and improvement of [Sphinx extension](#).
- November 2017 **Data Analyst**, *[CSIRO Data61](#)*, Decision Sciences Group.  
Queensland Urban Utilities project: Schedule for new billing system
- April 2015 - now **NICTA PhD Student**, *[CSIRO Data61](#)*, Decision Sciences Group.

August 2013 - **Consultant**, *Optilog Consultores*, Applied Mathematics.  
 August 2015 Research and Development on several subjects: scheduling, routing and general optimisation problems.  
 March **Casual Lecturer**, *University of Concepción, Chile*, Teaching.  
 2013-Jan Linear and Non Linear Programming, Linear Algebra, Differential Calculus, Ordinary Differential  
 2015 Equations, Modelling and Simulation in Operation Research.  
 Nov 2012- **Mathematical Consultant**, *Betazeta*, Research and Development.  
 March 2013 Project: An incentive compatible mechanism for consumer generated content.  
 Spring **Professional Internship**, *CMM University of Chile Faculty of Physical and Mathe-*  
 Semester *matical Sciences*, Network Economics and Risk Analysis Laboratory (Under supervision  
 2010 and of Dr. Alejandro Jofré ).  
 Summer 2011 Project: Computation of Economic Equilibrium in Incomplete Markets (with cluster implemen-  
 tation).

## Teaching Assistant Experience, Australian National University, Research School of Computer Science and Mathematical Science Institute

Autumn 2018 **Applied Mathematics 1: Ordinary Differential Equations.**  
 Dr. Katharine Turner.  
 Spring 2017 **Mathematics and Applications 2: Linear Algebra, Differential and Integral Calculus.**  
 Dr. Joan Licata and Dr. Scott Morrison.  
 Spring 2017 **Introduction to Programming for Data Scientists.**  
 Dr. Armin Haller  
 Autumn 2017 **Mathematics and Applications 1.**  
 Dr. David Smyth and Neil Montgomery.

## Teaching Assistant Experience, University of Chile Faculty of Physical and Mathematical Sciences

Spring 2011 **Algorithmic Game Theory.**  
 Dr. Roberto Cominetti.  
 Autumn 2011 **Calculus of Several Variables.**  
 Dr. Michal Kowalczyk.  
 Spring 2010 **Advanced Calculus and Applications: Vector Calculus and Fourier Analysis.**  
 Dr. Álvaro Hernández.  
 Autumn 2010 **Ordinary Differential Equations.**  
 Dr. Michal Kowalczyk.

## Collaborations and Short-term Visits

Oct-Dec 2015 **Visitor Scholar**, *Industrial & Operations Engineering Department, University of*  
 & Apr-Jun *Michigan*, Ann Arbor, MI, USA.  
 2016 Work with Pascal Van Hentenryck  
 Jul, Sep 2015 **Visitor Scholar**, *Melbourne Business School*, Melbourne, Australia.  
 & March 2016 Work with Gerardo Berbeglia

## Awards/Scholarship

2015- ANU NICTA PhD Scholarship (Australian Postgraduate Award, APA)

2015-2018 ANU NICTA PhD Supplementary Scholarship  
 2015- ANU HDR Fee Remission Merit Scholarship  
 2006-2010 Moises Mellado Foundation Scholarship  
 2001-2010 Presidente de la República Scholarship

## Courses, Conferences, Seminars, Talks

December, **ASOR 2018 - Talk**, [ASOR-DORS 2018](#), Melbourne, Australia.  
 4-6, 2018 Talk: Compete or collaborate: Pricing strategies under a consumer choice model with network effects..

October, 2, **Guest Lecture**, [Research School of Economics, ANU](#), Computational Economics -  
 2018 ECON 3127/4414/8014.  
 Markov Chains: theory and computational implementation.

June, 26 - 30, **AMSI Optimise 2017: AMSI Optimise**, [Monash University](#), Melbourne, Australia,  
 2017 Poster presentation..

April, 5, **Department of Mathematical Engineering: Ing-mat**, [University of Concepción](#),  
 2017 [Chile](#), Seminar: A consumer choice model under the effects of social influence and position biases.

January, **Second Workshop on Algorithms and Dynamics for Games and Optimization**  
 25-29, 2016 [ADGO](#), [University of Santiago](#), Santiago, Chile.

December, **School and Workshop on Dynamics Games and its Applications** [Dynamics](#)  
 12-21, 2012 [Games](#), [Universidad Técnica Federico Santa María](#), Valparaiso, Chile.

March, 26-30, **XII Latin American Congress of Probability and Mathematical Statistics**  
 2012 [CLAPEM](#), [Hotel O'higgins](#), Vina del Mar, Chile.

February, **XVI Escuela Latinoamericana de Verano en Investigación Operativa**,  
 5-10, 2012 [ELAVIO 2012.](#), Vale dos Vinhedos, Bento Gonzalves, Río Grande do Sul, Brasil,  
 Presentation of work in progress (Mathematical Engineering thesis)).

March, 14-20, **Course: "Equilibrium Pricing in Incomplete Financial Markets in Discrete**  
 2011 **and Continuous Time"**, Prof. Dr. Ulrich Horst - [Humboldt University Berlin](#)  
 Department of Mathematics.  
 Organizer: [Center for Mathematical Modeling \(CMM\)](#).

March, 8-11, **14th Symposium for Systems Analysis in Forest Resources, SSAFR 2011.**,  
 2011 [Marbella Resort](#), Maitencillo, Chile.  
 Organiser: [Institute of Engineering Complex Systems \(ISCI\)](#).

## Computer Skills

SO Linux, Mac OS, Windows.  
 Programming Java, Python, Matlab, K-nitro, Cplex, LocalSolver.  
 Typography L<sup>A</sup>T<sub>E</sub>X, MS Office, Keynote  
 Web Design HTML, Hugo  
 Database MySQL, Visual Fox Pro.  
 Others Github, Sphinx.

## Relevant Coursework

[University of Chile Faculty of Physical and Mathematical Sciences](#):

Real and Functional Analysis.  
 Measure Theory.

Linear and Nonlinear Programming.  
Combinatorial Optimisation.  
Convex Analysis and Duality.  
Calculus of Variations, Variational Analysis, Optimal Control.  
Algorithmic Game Theory.  
Calculability and Computational Complexity.  
Information Theory applied to Statistics and Codification.  
Stochastic Calculus, Stochastic Models in Finance.

## Languages

Spanish Native  
English Proficient

## Interests

Studies My academic interests lie in the intersection of Economics and Computer Science, with a special focus on Game Theory, Consumer Behaviour and Online Markets.  
Music A huge fan of alternative music and lesser known bands.  
Sports I practice several sports, but my favourites are Tennis and Volleyball.

## Miscellaneous

2016 President of [ANU Chilean Society](#)

## Service

2018 **Reviewer**, *AAMAS (International Conference on Autonomous Agents and Multi-agent Systems)*.  
2018 **Reviewer**, *JAAMAS (Journal on Autonomous Agents and Multi-agent Systems)*,  
Invitation to review a fast tracked paper.

## References

**Pascal Van Hentenryck**  
pascal.vanhentenryck[at]isye.gatech.edu  
**Roberto Cominetti** .  
roberto.cominetti[at]uai.cl

**Gerardo Berbeglia.**  
g.berbeglia[at]mbs.edu