

Felipe André Maldonado Caro

*PhD Student of Computer
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*Imagination is more important than knowledge.
Knowledge is limited. Imagination encircles the world.
Albert Einstein.*

Education

- 2015–now **PhD Student**, *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

Professional Experience

- March 2015 - now **NICTA PhD Student**, *[Data61 \(Former NICTA\)](#)*, Decision Sciences Group.
- August **Consultant**, *[Optilog Consultores](#)*, Apply Mathematics.
- 2013–now Research and Development on several subjects: scheduling, routing and general optimization problems.
- March **Lecturer**, *[University of Concepción, Chile](#)*, Teaching.
- 2013–Jan Linear and Non Linear Programming, Linear Algebra, Differential Calculus, Ordinary Differential
- 2015 Equations, Modeling and Simulation in Operation Research.
- Oct 2012– **Project Engineer**, *[Betazeta](#)*, Research and Development.
- March 2013 Project: Social Networks Analysis.
- Nov 2011– **Mathematical Consultant**, *[Betazeta](#)*, Research and Development.
- March 2012 Project: Mechanism design and incentive compatibility.
- August 2011– **Project Engineer**, *[CMM University of Chile Faculty of Physical and Mathematical Sciences](#)*, Stochastic and Statistics Simulation Laboratory (Under supervision of PhD. Joaquín Fontbona).
- Jan 2012 Project: Coda Wave Analysis (Sismic Data from El Teniente mine).
- Summer 2011 **Professional Internship III**, *[CMM University of Chile Faculty of Physical and Mathematical Sciences](#)*, Network Economics and Risk Analysis Laboratory (Under supervision of PhD. Alejandro Jofré).
- Project: Implementation of algorithm in a Cluster for Computation of Economic Equilibrium in Incomplete Markets.

- Spring Semester 2010 **Laboratory Assistant**, *CMM University of Chile Faculty of Physical and Mathematical Sciences*, Network Economics and Risk Analysis Laboratory (Under supervision of PhD. Alejandro Jofré).
Project: Computation of Economic Equilibrium in Incomplete Markets.
- Summer 2010 **Professional Internship II**, *Optimisa S.A.*
Project: Quadrature Modeling Process based on the operation of VISA, Under supervision of Alfredo Piquer G.
- Summer 2008 **Professional Internship I**, *Ernst & Young*.
Actuarial Mathematics, under supervision of Alexis Quiroz.

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

- Spring 2011 **Game Theory**.
Professor Roberto Cominetti.
- Fall 2011 & Fall 2007 **Calculus of Several Variables**.
Professor Michal Kowalczyk.
- Fall 2011 & Spring 2010 **Introduction to Calculus** .
Professor Cristián Reyes.
- Spring 2010 **Advanced Calculus and Applications**.
Professor Álvaro Hernández.
- Fall 2010 **Ordinary Differential Equations**.
Professor Michal Kowalczyk.
- Summer 2010 **Probabilities** , Project Matemáticas Bicentenario.
Professor Piere-Paul Romagnoli.

Colaborations and Short-term Visits

- Oct-Dec 2015 **Visitor Scholar**, *Industrial & Operations Engineering Department, University of Michigan*, Ann Arbor, MI, USA.
& Apr-May 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- 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

Computer Skills

- SO Linux, Mac OS, Windows.
- Programming JAVA, Python.
- Scientific Matlab, Maple, Octave, K-nitro, Cplex, LocalSolver.
- Typography L^AT_EX, MS Office.
- Web Design HTML, Hugo

Database MySQL, Visual Fox Pro.
Web Google Analytics.
Analytics
Others Github.

Courses, Conferences and Seminars

- December, 12-21, 2012 **School and Workshop on Dynamics Games and its Applications** **Dynamics Games**, *Universidad Técnica Federico Santa María, Valparaíso, Chile.*
Organizer: [Center for Mathematical Modeling \(CMM\)](#), Department of Mathematical Engineering, University of Chile, UTFSM, Théorie des Jeux.
- Sep, 17 - Dec, 24, 2012 **Online Course: Networks: Friends, Money, and Bytes**, *Coursera.org.*
Instructor: [Professor Mung Chiang](#), Princeton University.
- July, 5, 2012 **International Seminar on Social Networks** **Social Networks**, *Gorbea Room, Faculty of Physical and Mathematical Sciences, University of Chile.*
Organizer: [Executive Education](#).
- March, 26-30, 2012 **XII Latin American Congress of Probability and Mathematical Statistics** **CLAPEM**, *Hotel O'higgins, Viña del Mar, Chile.*
Conference Organizers: [Universidad de Valparaíso](#), [Pontificia Universidad Católica de Valparaíso](#), [Pontificia Universidad Católica de Chile](#), [Universidad de Chile \(CMM\)](#).
- March, 14-15, 2012 **Talks: "Inventory Routing Problems" and "Optimization Problems in Transportation"**, *Maria Grazia Speranza- Università di Brescia (Italy).*
Organizer : [Millenium Institute of Engineering Complex Systems](#).
- February, 5-10, 2012 **XVI Escuela Latinoamericana de Verano en Investigación Operativa, ELAVIO 2012.**, *Vale dos Vinhedos, Bento Gonçalves, Río Grande do Sul , Brasil,*
Presentation of work in progress (Mathematical Engineering thesis)).
Organizers: [Universidad Federal de Rio Grande do Sul](#), [Universidad Federal de Santa Maria](#) and [Universidad Federal de la Pampa](#).
- November, 9-15, 2011 **Course: "Social Learning and Coordination"**, *Prof. Dr. Christophe Chamley - Boston University / Paris School of Economics.*
Organizer: [Center for Mathematical Modeling \(CMM\)](#).
- August, 22-31, 2011 **Course: "Theory And Numerical Resolution Of Complementary Problems"**, *Prof. Dr. Alberto Seeger - University of Avignon, France.*
Organizer: [Center for Mathematical Modeling \(CMM\)](#).
- March, 28, 2011 **Talk: "The Dynamic Response of Chilean Electricity Generators to Alternative Environmental Policies"**, *Speakers: Alexander Galetovic, Cristián Hernández, Cristián Muñoz, Luz María Neira.*
Organizer: [Institute of Engineering Complex Systems\(ISCI\)](#).
- March, 22, 2011 **Talk "Risk averse and distribution robust stochastic programming"**, *Speaker: Shabbir Ahmed, ISyE, Georgia Tech.*
Organizer: [Institute of Engineering Complex Systems \(ISCI\)](#).
- March, 14-20, 2011 **Course: "Equilibrium Pricing in Incomplete Financial Markets in Discrete and Continuous Time"**, *Prof. Dr. Ulrich Horst - Humboldt University Berlin Department of Mathematics.*
Organizer: [Center for Mathematical Modeling \(CMM\)](#).
- March, 8-11, 2011 **14th Symposium for Systems Analysis in Forest Resources, SSAFR 2011.**, *Marbella Resort, Maitencillo, Chile.*
Organizer: [Institute of Engineering Complex Systems \(ISCI\)](#).

Relevant Coursework

University of Chile Faculty of Physical and Mathematical Sciences:

Real Analysis.
Functional Analysis.
Measure Theory.
Linear and Nonlinear Programming.
Combinatorial Optimization.
Convex Analysis and Duality.
Calculus of Variations, Variational Analysis, Optimal Control.
Game Theory.
Partial Differential Equations, Fourier Analysis.
Information Theory applied to Statistics and Codification.
Stochastic Calculus, Stochastic Models in Finance.

Languages

Spanish Native
English Advanced

TOEFL = 95.

Publications

- 2016 **Popularity Signals in Trial-Offer Markets**, *Submitted to [Operations Research](#)*.
- 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*.

Interests

Studies My academic interests are focused in the area of optimization, specifically in Combinatorial Optimization, Convex Analysis and Game Theory. Also I'm interested in Social Networks, Recommendations Systems and Machine Learning.

Music A huge fan of alternative music and lesser known bands.

Sports I practice several sports, but my favorites are tennis, basketball and volleyball.

TV Shows Watch TV Shows is my main hobby, my favorites are Supernatural and Fringe.

Miscellaneous

- 2016 I am the current President of [ANU Chilean Society](#)

References

Pascal Van Hentenryck
pvanhent[at]umich.edu

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

Roberto Cominetti
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