Felipe André Maldonado Caro

PhD Candidate of Computer Science

Building 108, North Rd,
Australian National University, Canberra, ACT
✆ *(+61) 4666 49530*
✉ *Felipe.Maldonado@data61.csiro.au*
FelipeMaldonado.github.io

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

Professional Experience

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-now   **Consultant**, *Optilog Consultores*, Applied Mathematics.
Research and Development on several subjects: scheduling, routing and general optimization problems.

March 2013-Jan 2015   **Lecturer**, *University of Concepción, Chile*, Teaching.
Linear and Non Linear Programming, Linear Algebra, Differential Calculus, Ordinary Differential Equations, Modeling and Simulation in Operation Research.

Oct 2012-March 2013   **Project Engineer**, *Betazeta*, Research and Development.
Project: Social Networks Analysis.

Nov 2011-March 2012   **Mathematical Consultant**, *Betazeta*, Research and Development.
Project: Mechanism design and incentive compatibility.

August 2011-Jan 2012   **Project Engineer**, *CMM University of Chile Faculty of Physical and Mathematical Sciences*, Stochastic and Statistics Simulation Laboratory (Under supervision of PhD. Joaquín Fontbona).
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, 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 and 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	**Game Theory**. Professor Roberto Cominetti.
Autumn 2011	**Calculus of Several Variables**. Professor Michal Kowalczyk.
Spring 2010	**Advanced Calculus and Applications: Vector Calculus and Fourier Analysis**. Professor Álvaro Hernández.
Autumn 2010	**Ordinary Differential Equations**. Professor Michal Kowalczyk.

Colaborations and Short-term Visits

Oct-Dec 2015 & Apr-May 2016	**Visitor Scholar**, *Industrial & Operations Engineering Department, University of Michigan*, Ann Arbor, MI, USA. Work with Pascal Van Hentenryck
Jul, Sep 2015 & March 2016	**Visitor Scholar**, *Melbourne Business School*, Melbourne, Australia. 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.
Programmming	Java, Python.
Scientific	Matlab, Maple, Octave, K-nitro, Cplex, LocalSolver.
Typography	LaTeX, MS Office, Keynote
Web Design	HTML, Hugo
Database	MySQL, Visual Fox Pro.
Web Analytics	Google Analytics.
Others	Github.

Courses, Conferences and Seminars

June, 26 - 30, 2017	**AMSI Optimise 2017: AMSI Optimise**, *Monash University*, *Melbourne, Australia*, Poster presentation of current research.
December, 12-21, 2012	**School and Workshop on Dynamics Games and its Applications Dynamics Games**, *Universidad Técnica Federico Santa María*, *Valparaiso, Chile*. Organizer: Center for Mathematical Modeling (CMM), Department of Mathematical Engineering, University of Chile, UTFSM, Théorie des Jeux.
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).
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).
March, 14-20, 2011	**Course: "Equilibrium Princing 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*. Organiser: 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.

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

Publications

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*.

Interests

Studies My academic interests are focused in the area of optimisation, specifically in Convex Analysis, Economic Behaviour and Game Theory. Also I'm interested in Social Networks and Machine Learning.

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

Sports I practice several sports, but my favourites are tennis and volleyball (current member of the ANU- Volleyball team).

References

Pascal Van Hentenryck
pvanhent[at]umich.edu

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

Roberto Cominetti
roberto.cominetti[at]uai.cl

Lexing Xie.
lexing.xie[at]anu.edu.au