

# Marcelo Ricardo Figueroa-Candia

## Contact Information

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## Education

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2009 – Today *Master(c) of Science in Engineering Sciences with a major in Computational Sciences*, Universidad de Concepción, Chile.  
2003 – 2010 *Mathematical Engineer* (professional degree equivalent to six years of university education), Universidad de Concepción, Chile.  
2003 – 2007 *Bachelor Degree in Engineering Sciences* (academic degree), Universidad de Concepción, Chile.

## Academic Experience

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2010 – Today *Lecturer*, Faculty of Engineering, Universidad Católica de la Santísima Concepción, Concepción, Chile (Subjects of Differential Calculus, Vectorial Calculus, Numerical Analysis, Linear Algebra).  
2010 – Today *Lecturer*, Faculty of Engineering and Technology, Universidad San Sebastián, Concepción, Chile (Subjects of Introduction to Calculus, Vectorial Calculus, Algebra, Linear Algebra).  
2004 – 2009 *Assistant Student*, Faculty of Physical and Mathematical Sciences, Universidad de Concepción, Concepción, Chile (Subjects of Differential Calculus, Integral Calculus and Numerical Analysis).  
2010 *Assistant Student*, Faculty of Engineering, Universidad de Concepción, Concepción, Chile (Subjects of Logic and Complexity, and Introduction to Software Engineering).

## Research

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2009 – Today *Researcher* in project “Topological Properties of Networks: A Qualitative Reasoning Approach” (Master’s Thesis).  
2010 – 2011 *Researcher* in project “A Reinforcement Learning Solution for the Unit Commitment Problem”, submitted paper.  
2009 – 2010 *Researcher* in project “The Unit Commitment Problem Modeled as a Markov Process Solved with Reinforcement Learning”.  
2008 – 2009 *Researcher* in project “Mathematical Models to Support the Management of Forest Fire Prevention” (Undergraduate Thesis).  
2007 – 2010 *Researcher* in project “Monthly Mean Surface Pressure Along the Southern Chile Coast: Links with Synoptic Climatological Centres”, submitted paper.

## Work Experience

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- 2007 – Today *Web Developer*, Department of Mathematical Engineering and Center for Mathematical Engineering Research, Universidad de Concepción, Concepción, Chile.
- 2008 *Internship*, Operations Department at the port company Portuaria Coronel S.A., Coronel, Chile.
- 2008 *Internship*, Operations Research Department at the timber industry MASISA S.A., Cabrero, Chile.
- 2007 *Consultant Engineer*, Technological Development Unit, Universidad de Concepción, Concepción, Chile.

## Awards and Honors

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- 2011 Granted with *Fulbright Scholarship* for Ph.D. studies, Fulbright Chile, USA-Chile.
- 2010 Awarded with *Distinction Honors*, undergraduate studies, Universidad de Concepción, Chile.
- 2009 – 2011 Honored with *Graduate School Scholarship*, funding to pursue the Master in Engineering Sciences program with a major in Computer Sciences, Universidad de Concepción, Chile.
- 2003 Granted with *Top Ten Admission Scores Scholarship*, funding for first year of undergraduate studies, Mathematical Engineering, Universidad de Concepción, Chile.
- 2002 Honored with *National Maximum Score*, Test for University Admissions, mathematics part, funding to pursue undergraduate studies in Chile, Chile.

## Volunteer Activities

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- 2008 – 2010 Chaired as *Student Representative* at the Faculty Board of the Physical and Mathematical Sciences Faculty, Universidad de Concepción.
- 2007 – 2009 Chaired as *Student Representative* at the Undergraduate Board of the Mathematical Engineering Department, Universidad de Concepción.
- 2007 Participated in the *Organizing Committee* of the conference to promote the integral formation of engineering students “I Seminario Formación Integral de un Ingeniero en el Siglo XXI”, Electrical Department, Universidad de Concepción, Concepción.

## Social Work

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- 2009 Participated as *Director* in the social intervention project “Jornadas de Intervención Social y Urbana”, School of Engineering, Universidad de Concepción.
- 2008 – 2010 *Presided* the Youth's Group of the First Baptist Church of Concepción.
- 2009 Participated as *Volunteer Teacher* for “Instituto de Formación y Capacitación Popular” INFOCAP, taught an entrepreneurial course for adults, Concepción.

## Skills

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### Languages

- Spanish, native fluency.
- English, advanced fluency.

### *Computing*

- Software: MATLAB, ArcGIS, PostGIS.
- Programming: Fortran, HTML, PHP, SQL, JavaScript, LaTeX.

### **Fields of Interest**

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- Engineering Systems
- Transportation Systems and Logistics
- Applied Mathematics
- Computer Science

### **Other Interests**

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- Guitar playing, advanced acoustic guitar playing, self-taught. Since 1999.
- Reading, especially scientific essays, novels, and socio-historical essays.