

# RODRIGO ALBERTO CASTRO GONZALEZ

Américo Vespucio Sur, 880, Las Condes Santiago, Chile | +56 9 99194305 | rodrigocastrogonzalez@outlook.com

## EDUCATION

**2016**                      **MSc Industrial Engineering**, Universidad de Concepción, Concepción, Chile

**2015**                      **Electrical Engineer**, Universidad de Concepción, Concepción, Chile.

## EXPERIENCES

- March 2016 until present**                      **Control, Protection y Telecommunication Engineer, Transelec S.A, Santiago, Chile.**
- Engineering development, testing and commissioning of HVAC and UHVAC substation projects.
    - Design of substations protection and automation system.
    - Participation in projects power system studies (TRV, Insulation Coordination, Protection Coordination, etc.)
    - Participation in FAT, SAT and Commissioning Tests of Protection and Automation Systems.
    - Management of the required procedures, standards, quality and deadlines of these projects.
  - Direct boss: Mauricio Oyarzun, Engineering Manager, Project Engineering and Development Department, Transelec S.A., moyarzun@transelec.cl
- May 2015 until February 2016**                      **Research Assistant, Instituto Sistemas Complejos de Ingeniería, Concepción, Chile.**
- Development of a mathematical programming model and accurate resolution for simple instances.
  - Development of an evolutionary algorithm for solving complex instances.
  - Improving software presentation in OR specialized web site.
  - Direct Boss: Lorena Pradenas, Director of the Industrial Engineering Master Program, Universidad de Concepción, lpradenas@udec.cl
- January until March 2014**                      **Engineering Intern, BHP Billiton, Minera Escondida Ltda, Antofagasta, Chile.**
- Work on a team giving and implementing solution to a diverse of engineering problems.
  - Calculation and design of an electrical substation expansion.
  - Direct Boss: Julian Mansilla, NPI & CHO small projects and modifications superintendent, jmansilla@gmail.com

## PUBLICATIONS

- April 2016**                      **Future Power Systems and Grid Resiliency, 2016 CIGRÉ Canada Conference, CIGRÉ Canada, Vancouver, Canada.**
- Optimal placement and sizing of distributed generation units by multiobjective genetic algorithm in Chilean distribution networks.
  - Work developed as a research in the Industrial Engineering Department, Universidad de Concepción, Concepción, Chile
- December 2015**                      **Microgrids with renewable distributed generation, III Congreso Iberoamericano MIGEDIR 2015, Universidad Nacional de Costa Rica, Guanacaste, Costa Rica.**
- Optimal allocation of distributed generation based on non-renewable energies, in electrical distribution systems, considering, technical, economic, social and environmental objectives.
  - Work developed as a research in the Presented at the Electrical Engineering Department, Universidad de Concepción, Chile.
- July 2015**                      **European Conference on Operational Research, EURO 2015, University of Strathclyde, Glasgow, UK.**
- Wind farm layout optimization using a genetic algorithm
    - Iteratively place wind turbines in positions where wind potential is the greatest and prevent excessive wake effect.
  - Work developed as a research in the Industrial Engineering Department, Universidad de Concepción, Concepción, Chile.

## RELEVANT ACTIVITIES

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- 2017**      **First Digital Substation Pilot Project in Chile, Transelec S.A., Substation Itahue, Chile.**
- Project manager and technical leader of the first digital substation pilot project in Chile.
  - This pilot project was a 154kV line bay application in Substation Itahue.
  - Participation of the three main relay vendors in Chile: SIEMENS, GE and ABB.
- 2017**      **60<sup>th</sup> Analysis and Protection of Power Systems (APPS) Course, GE St. Leonard's Building, Stafford, UK.**
- Selected to participate by GE and the Engineering & Project Development Vice presidency of TRANSELEC.
- 2015**      **Electrical Engineering Best Student 2015, Universidad de Concepción, Concepción, Chile.**
- Selected by the Electrical Engineering Department of the Universidad de Concepción as the best student in Electrical Power Systems.
- 2014 and 2015**      **Captain, First XV University Rugby Team, Universidad de Concepción, Concepción, Chile.**
- Selected by teammates and coach as captain.
  - 5<sup>th</sup> place at the national university league and 1<sup>st</sup> place at the local university league in 2014.
  - 5<sup>th</sup> place at the national university league and 1<sup>st</sup> place at the local university league in 2015.
- 2007**      **UK and Ireland Rugby and Hockey Tour, Saint John's School, Concepción, Chile.**
- Selected by coach to be part of the First XV Saint John's School Rugby Team.
  - One month playing against schools from England, Wales, Scotland, Northern Ireland and Republic of Ireland.

## SKILLS

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<b>Programming:</b>	Matlab, MathCAD, Python, CPLEX, Lingo, Octave
<b>Simulation:</b>	ARENA, DIgSILENT, SIMIO, PSCAD, EMTP-RV
<b>Languages:</b>	Spanish (Native), English (Advanced), French (Basic Communication)