

RODRIGO HENRÍQUEZ-AUBA

contact@henriquezauba.com

EDUCATION

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| AUG 2017 – | University of California , Berkeley, CA, United States.
Ph.D. Electrical Engineering and Computer Sciences.
Current GPA: 4.0/4.0 |
| AUG 2014 - OCT 2016 | Pontificia Universidad Católica de Chile , Santiago, Chile.
M.Sc. Electrical Engineering.
Thesis: <i>Participation of Demand Response Aggregators in Electricity Markets: Optimal Portfolio Management.</i> |
| MAR 2009 - AUG 2014 | Pontificia Universidad Católica de Chile , Santiago, Chile.
B.Sc. Electrical Engineering.
Ranking: 1 of 608 (0.16%) |

ACADEMIC EXPERIENCE

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| AUG 2020 - DEC 2020 | University of California , Berkeley, CA, United States.
Teaching Assistant: EE128 - Feedback Control Systems (Fa-2020). |
| MAY 2020 - AUG 2020 | National Renewable Energy Laboratory , Golden, CO, United States.
Graduate Internship.
Software development in NREL-SIIP project related to Power Systems Dynamics simulations. |
| JAN 2018 - MAY 2018 | University of California , Berkeley, CA, United States.
Teaching Assistant: EE127/227AT - Optimization Models in Engineering (Sp-2018). |
| MAR 2011 - DEC 2016 | Pontificia Universidad Católica de Chile , Santiago, Chile.
Teaching Assistant and Laboratory Assistant.
Electrical Circuits (2-2016), Applied Optimization and Control for Power Systems (1-2016, 2-2015), Electrical Design (1-2015), Automatic Control (1-2015), Electrical Machines Laboratory (2-2014, 1-2015 & 2-2015), Electricity Generation (1-2014), Electric Traction (1-2014), Power Electronics (2-2013 & 2-2014), Electrical Machines (2-2013, 1-2014 & 2-2014), Electrical Materials (1-2012, 1-2013 & 1-2014), Power Systems (1-2012 & 1-2013), Electromagnetic Theory (2-2012), Differential Equations for Engineering School (2-2011) and Calculus I for Engineering School (1-2011 & 2-2011). |
| APR 2016 - AUG 2016 | University of Toronto , Toronto, Canada.
International Visiting Graduate Student.
Research with Professor Josh Taylor on “Managing Load Contracts Restrictions with Online Learning”. |

PROFESSIONAL EXPERIENCE

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| OCT 2016 - JUL 2017 | Pontificia Universidad Católica de Chile , Santiago, Chile.
Research Engineer at Energy Optimization, Control and Markets Laboratory.
Research in several projects related to energy systems. |
| JAN 2014 - FEB 2014 | TRANSELEC S.A. , Santiago, Chile.
Professional Internship.
Research in maintenance and monitoring on power transformers. |

SELECTED PAPERS AND PUBLICATIONS

- JUN 2021 | **R. Henríquez-Auba**, J. D. Lara, D. S. Callaway & C. Barrows
Transient Simulations With a Large Penetration of Converter-Interfaced Generation: Scientific Computing Challenges And Opportunities. *IEEE Electrification Magazine*, vo. 9, no. 2, pp. 72-82, 2021.
- MAY 2021 | **R. Henríquez-Auba**, P. Hidalgo-Gonzalez, P. Pauli, D. Kalathil, D. S. Callaway & K. Poolla
Sharing economy and optimal investment decisions for distributed solar generation. *Applied Energy*, vo. 294, pp. 117029, 2021.
- OCT 2020 | **R. Henríquez-Auba**, J. D. Lara, C. Roberts & D. S. Callaway
Grid forming inverter small signal stability: Examining role of line and voltage dynamics. *46th Annual Conference of IEEE Industrial Electronics Society, 2020. IECON*, pp. 4063-4068, 2020.
- JUL 2020 | R. Dobbe, P. Hidalgo-Gonzalez, S. Karagiannopoulos, **R. Henríquez-Auba**, G. Hug, D. S. Callaway & C. J. Tomlin
Learning to control in power systems: Design and analysis guidelines for concrete safety problems. *Electric Power Systems Research*, vo. 189, pp. 106615, 2020.
- DEC 2019 | P. Hidalgo-Gonzalez, **R. Henríquez-Auba**, D. S. Callaway & C. J. Tomlin
Frequency Regulation using Sparse Learned Controllers in Power Grids with Variable Inertia due to Renewable Energy. *IEEE 58th Conference on Decision and Control (CDC)*, pp. 3253-3259, 2019.
- AUG 2019 | P. Hidalgo-Gonzalez, **R. Henríquez-Auba**, D. S. Callaway & C. J. Tomlin
Frequency regulation using data-driven controllers in power grids with variable inertia due to renewable energy. *IEEE Power & Energy Society General Meeting (PESGM)*, pp. 1-5, 2019.
- JUL 2019 | J. Johnston, **R. Henríquez**, B. Maluenda & Matthias Fripp
Switch 2.0: A Modern Platform for Planning High-Renewable Power Systems. *SoftwareX*, vo. 10, pp. 100251, 2019.
- DEC 2018 | **R. Henríquez-Auba**, P. Pauli, D. Kalathil, D. S. Callaway & K. Poolla
The Sharing Economy for Residential Solar Generation. *IEEE 57th Conference on Decision and Control (CDC)*, pp. 7322-7329, 2018.
- AUG 2018 | L. Gacitua, P. Gallegos, **R. Henríquez-Auba**, A. Lorca, M. Negrete-Pincetic, D. Olivares, A. Valenzuela & G. Wenzel
A comprehensive review on expansion planning: Models and tools for energy policy analysis. *Renewable and Sustainable Energy Reviews*, vo. 98, pp. 346-360, 2018.
- JAN 2018 | F. Salah, **R. Henríquez**, G. Wenzel, D. Olivares, M. Negrete-Pincetic & Christof Weinhardt
Portfolio Design of a Demand Response Aggregator with Satisficing Consumers. *IEEE Transactions on Smart Grid*, vo. 10, no. 3, pp. 2475-2484, 2019.
- JUL 2017 | **R. Henríquez**, A. Lesage-Landry, J. A. Taylor, D. Olivares & M. Negrete-Pincetic
Managing Load Contracts Restrictions with Online Learning. *IEEE GlobalSIP 2017 Conference*, pp. 1035-1039, 2017.
- FEB 2017 | **R. Henríquez**, G. Wenzel, D. Olivares & M. Negrete-Pincetic
Participation of Demand Response Aggregators in Electricity Markets: Optimal Portfolio Management. *IEEE Transactions on Smart Grid*, vo. 9, no. 5, pp. 4861-4871, 2018.

SELECTED AWARDS AND RECOGNITIONS

AUG 2017	University of California, Berkeley, CA, United States. VMWare Honorary Fellowship for funding my first year at UC Berkeley.
NOV 2016	Pontificia Universidad Católica de Chile, Santiago, Chile. Award "School of Engineering" for best GPA obtained in the undergrad.
AUG 2015	Pontificia Universidad Católica de Chile, Santiago, Chile. Excellence Teaching Assistant Award at the School of Engineering.
MAR 2011 - DEC 2012	Pontificia Universidad Católica de Chile, Santiago, Chile. Honor Scholarship for Academic Excellence.

PROFESSIONAL SKILLS

PROGRAMMING: MATLAB, CVX, Python/Pyomo, Julia/JuMP, \LaTeX & Xpress Mosel.

SOFTWARE: MS Office Suite & Adobe Illustrator.

LANGUAGES: Spanish (Native)
English (TOEFL iBT: 109 – 28R/28L/27W/26S)