

Antoine Lesage-Landry

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- Employment** **Energy & Resources Group, University of California, Berkeley**
Postdoctoral Scholar, August 2019 – present
- Dept. of Electrical and Electronic Eng., The University of Melbourne**
Visiting Scholar, January 2018 – April 2018 and February 2019
- Education** **University of Toronto**, Toronto, ON, Canada
Ph.D., Electrical Engineering, November 2019
- École Polytechnique de Montréal**, Montréal, QC, Canada
B.Eng., Engineering Physics, June 2015
- Dissertation** “Online Optimization for Demand Response”
Design of performance-guaranteed, online optimization-based approaches for real-time demand response under uncertainty.
- Professional affiliation** **Junior Engineer**, Ordre des Ingénieurs du Québec (OIQ)
- Teaching** **Electrical & Computer Engineering, University of Toronto**
Teaching Assistant, Mathematical Methods in Power Systems, Fall 2018
Teaching Assistant, Calculus III, Fall 2015*–2018, Summer 2017
Teaching Assistant, Electricity & Magnetism, Winter 2016–2017
*Teaching Assistant Award, Fall 2015
- Engineering Physics, École Polytechnique de Montréal**
Teaching Assistant, Mathematical Methods of Physics II, Winter 2015
Laboratory Teaching Assistant, Atomic & Molecular Physics, Winter 2014
- Publications** **Journal Papers**
- J10. **Antoine Lesage-Landry**, Joshua A. Taylor, and Duncan S. Callaway. Online Convex Optimization with Binary Constraints. *Automatic Control, IEEE Transactions on*. Under review. May 2020.
- J9. **Antoine Lesage-Landry**, Joshua A. Taylor, and Iman Shames. Second-order Online Nonconvex Optimization. *Automatic Control, IEEE Transactions on*. Under review. August 2019.
- J8. **Antoine Lesage-Landry** and Duncan S. Callaway. Dynamic and Distributed Online Convex Optimization for Demand Response of Commercial Buildings. To appear in *IEEE Control Systems Letters*. April 2020.

- J7. **Antoine Lesage-Landry**, Iman Shames, and Joshua A. Taylor. Predictive Online Convex Optimization. *Automatica*, 113, March 2020.
- J6. Olivier Ouellette, **Antoine Lesage-Landry**, Benjamin Scheffel, Sjoerd Hoogland, F. Pelayo García de Arquer, and Edward H. Sargent. Spatial Collection in Colloidal Quantum Dot Solar Cells. To appear in *Advanced Functional Materials*. October 2019.
- J5. **Antoine Lesage-Landry**, Han Wang, Iman Shames, Pierluigi Mancarella, and Joshua A. Taylor. Online Convex Optimization of Multi-energy Building-to-grid Ancillary Services. To appear in *Control Systems Technology, IEEE Transactions on*. September 2019.
- J4. **Antoine Lesage-Landry**, Siyu Chen, and Joshua A. Taylor. Estimating the Frequency Coupling Matrix from Network Measurements. To appear in *Control of Network Systems, IEEE Transactions on*. August 2019.
- J3. **Antoine Lesage-Landry** and Joshua A. Taylor. A Second-order Cone Model of Transmission Planning with Alternating and Direct Current Lines. *European Journal of Operational Research*, 281 (1): 174-185, February 2020.
- J2. **Antoine Lesage-Landry** and Joshua A. Taylor. Setpoint Tracking with Partially Observed Loads. *Power Systems, IEEE Transactions on*, 32 (5): 5615 - 5627, September 2018.
- J1. **Antoine Lesage-Landry** and Joshua A. Taylor. The Multi-armed Bandit with Stochastic Plays. *Automatic Control, IEEE Transactions on*, 63 (7): 2280-2286, July 2018.

Conference Papers

- C5. Rodrigo Henríquez, **Antoine Lesage-Landry**, Joshua A. Taylor, Daniel Olivares, and Matías Negrete-Pincetic. Managing Load Contract Restrictions with Online Learning. *Signal and Information Processing (GlobalSIP), IEEE Global Conference on*, November 2017.
- C4. Amr Mohamed, **Antoine Lesage-Landry**, and Joshua A. Taylor. Dispatching Thermostatically Controlled Loads for Frequency Regulation Using Adversarial Multi-armed Bandits. *Electrical Power and Energy Conference (EPEC), 2017 IEEE*, October 2017.
- C3. **Antoine Lesage-Landry** and Joshua A. Taylor. Online Convex Optimization for Demand Response. *X Bulk Power Systems Dynamics and Control Symposium, IREP'2017 Symposium.*, August 2017.
- C2. **Antoine Lesage-Landry** and Joshua A. Taylor. Learning to Shift Thermostatically Controlled Loads. *Proceedings of the 50th Hawaii International Conference on System Sciences*, January 2017.

- C1. Sébastien Loranger, **Antoine Lesage-Landry**, Elton Soares de Lima Filho, Galina Nemova, Noelio O. Dantas, Paulo C. Morais, and Raman Kashyap. Spectroscopic and life-time measurements of quantum dot doped glass for optical refrigeration: A feasibility study. *SPIE OPTO. International Society for Optics and Photonics*, February 2013.
- Seminars and Talks
- T6. *Predictive Online Convex Optimization for Demand Response*. 2019 INFORMS Annual Meeting, Seattle, WA. October 2019. Invited.
- T5. *A Second-order Cone Model of AC-DC Transmission Expansion Planning*. Canadian Operational Research Society 61st Annual Conference, Saskatoon, SK. May 2019.
- T4. *Online Convex Optimization for Demand Response in Power Systems*. Conference on Information Sciences and Systems, Johns Hopkins University. Baltimore, MD, March 2019. Invited.
- T3. *Renewable Integration & Demand Response*. ECE1476 – LEDs & Solar Cells, University of Toronto, Toronto, ON. November 2018.
- T2. *Online Learning for Demand Response*. The University of Melbourne, Australia, February 2018.
- T1. *Estimation du mouvement de tumeur pulmonaire: un modèle basé sur des images diagnostiques 3D*. Student Conference of the Clinical Medical Physicists Association of Québec. Québec City, QC, November 2014.
- Awards and Fellowships
- Postdoctoral Fellowship**
Natural Sciences and Engineering Research Council of Canada (NSERC), 2019–2021
- Doctoral Research Scholarship**
Fonds de recherche du Québec – Nature et Technologies (FQRNT), 2017–2019
- Teaching Assistant Award**
ECE department and ECE Student Club, University of Toronto, 2015
- Master’s Research Scholarship**
FRQNT, 2016–2017
- Canada Graduate Scholarship-Master’s Program**
NSERC, 2015–2016
- Graduated with Distinction**
École Polytechnique de Montréal, 2015
- de Vinci Profile**
École Polytechnique de Montréal, 2015
- Action-Poly Citation**
École Polytechnique de Montréal, 2015
- Aramark Involvement Scholarship**
Polytechnique Student Association and Aramark, 2014
- Guy Faucher Scholarship**
Polytechnique Foundation, 2014

Undergraduate Student Research Awards (USRA)

NSERC, 2014, 2013 (declined), 2012

Coopoly Involvement Award

Coopoly, École Polytechnique de Montréal, 2015

Best student presentation award

Clinical Medical Physicists Association of Québec

Participation and initiation to academic research program scholarship

Polytechnique Foundation

Service

Journal referee

Automatica, European Journal of Operational Research, IEEE Transactions on {Automatic Control, Control on Network Systems, Control Systems Technology, Power Systems, Smart Grid}, IEEE Journal of Selected Topics in Signal Processing

Conference referee

IEEE-PES General Meeting, IEEE Conference on Decision and Control

Languages,
Skills and
Sports

French & English

Python, MATLAB, Wolfram Mathematica, TensorFlow and \LaTeX .

Rock climbing, mountain/road biking, hiking, hockey, Ultimate Frisbee.