

# 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
- Polytechnique 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, Polytechnique 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. To appear in *Automatic Control, IEEE Transactions on*. November 2020.
- J8. **Antoine Lesage-Landry**, Han Wang, Iman Shames, Pierluigi Mancarella, and Joshua A. Taylor. Online Convex Optimization of Multi-energy Building-to-grid Ancillary Services. *Control Systems Technology, IEEE Transactions on*, 28 (6): 2416 - 2431. November 2020.

- J7. **Antoine Lesage-Landry** and Duncan S. Callaway. Dynamic and Distributed Online Convex Optimization for Demand Response of Commercial Buildings. *IEEE Control Systems Letters*, 4 (3): 632-637, July 2020.
- J6. **Antoine Lesage-Landry**, Siyu Chen, and Joshua A. Taylor. Estimating the Frequency Coupling Matrix from Network Measurements. *Control of Network Systems, IEEE Transactions on*, 7 (2): 724 - 733. June 2020.
- J5. **Antoine Lesage-Landry**, Iman Shames, and Joshua A. Taylor. Predictive Online Convex Optimization. *Automatica*, 113: 108771, March 2020.
- J4. **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.
- J3. 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. *Advanced Functional Materials*, 3 (1): 1908200. January 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
- S7. *Online Convex Optimization with Binary Constraints for Demand Response*. 2020 INFORMS Annual Meeting, online. November 2020. Invited.
- S6. *Predictive Online Convex Optimization for Demand Response*. 2019 INFORMS Annual Meeting, Seattle, WA. October 2019. Invited.
- S5. *A Second-order Cone Model of AC–DC Transmission Expansion Planning*. Canadian Operational Research Society 61<sup>st</sup> Annual Conference, Saskatoon, SK. May 2019.
- S4. *Online Convex Optimization for Demand Response in Power Systems*. Conference on Information Sciences and Systems, Johns Hopkins University. Baltimore, MD, March 2019. Invited.
- S3. *Renewable Integration & Demand Response*. ECE1476 – LEDs & Solar Cells, University of Toronto, Toronto, ON. November 2018.
- S2. *Online Learning for Demand Response*. The University of Melbourne, Australia, February 2018.
- S1. *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**  
Polytechnique Montréal, 2015
- de Vinci Profile**  
Polytechnique Montréal, 2015
- Action-Poly Citation**  
Polytechnique 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, Polytechnique 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 Control Systems Letter, IEEE Journal of Selected Topics in Signal Processing

**Conference referee**

IEEE-PES General Meeting, IEEE Conference on Decision and Control, Power Systems Computation Conference

Languages,  
Skills and  
Sports

French & English

Python, MATLAB, Wolfram Mathematica, TensorFlow and L<sup>A</sup>T<sub>E</sub>X.

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