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

J9. **Antoine Lesage-Landry** and Duncan S. Callaway. Dynamic and Distributed Online Convex Optimization for Demand Response of Commercial Buildings. *IEEE Control Systems Letters*. Under review. January 2020.

J8. **Antoine Lesage-Landry**, Joshua A. Taylor, and Iman Shames. Second-order Online Nonconvex Optimization. *Automatic Control, IEEE Transactions on*. Under review. August 2019.

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, Sjœrd 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
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.