

# IREP'2017

## S Y M P O S I U M

AUG 27<sup>th</sup> - SEPT 1<sup>st</sup> 2017 / ESPINHO, PORTUGAL

### Provisional Programme v1.0 – Paper Sessions

The following Programme for IREP'2017 is published to the convenience of presenting authors. It is provisional in the sense that the confirmation of the inclusion of the paper in the final proceedings and its publication is subject to the actual presentation of the paper in the conference.

#### **S01 - Large-scale optimization with uncertainty**

**August 28, Monday - 09:00 – 10:30**

- 1 Robust Optimization taking into account forecasting errors and corrective actions**  
Stéphane Fliscounakis, RTE/DES, France  
Hatim Djelassi, RWTH Aachen University, Germany  
Alexander Mitsos, RWTH Aachen University, Germany  
Patrick Panciatici, RTE/DES, France
  
- 58 Operational Aware Large-Scale FACTS Placement and Sizing for Transmission System Reinforcement**  
Vladimir Frolov, Skoltech, Russia  
Priyanko Guha Thakurta, Skoltech, India  
Scott Backhaus, LANL, United States America  
Janusz Bialek, Center for Energy Systems, Skolkovo Institute of Science and Technology (Skoltech), Russia  
Michael Chertkov, LANL, United States America
  
- 72 Optimal Siting and Sizing of Energy Storage Systems for Wind Integration**  
Nhi Thi Ai Nguyen, Politecnico di Milano, Italy  
Dinh Duong Le, Danang University of Science and Technology, Vietnam  
Cristian Bovo, Politecnico di Milano, Italy  
Alberto Berizzi, Politecnico di Milano, Italy

**103 Stochastic Reformulations of the AC Optimal Power Flow Problem with Probabilistic Guarantees**

**Maria Vrakopoulou**, University of California - Berkeley, United States America  
**Jennifer Marley**, University of Michigan, United States America  
**Daniel Molzahn**, Argonne National Laboratory, United States America  
**Ian Hiskens**, University of Michigan, United States America

**S02 - Stochastic modelling and control of renewable energy sources I****August 28, Monday - 11:00 – 12:30****8 Robust Dynamic Load Dispatch under Uncertainties**

**Yutaka Sasaki**, Hiroshima University, Japan  
**Naoto Yorino**, Hiroshima University, Japan  
**Yoshifumi Zoka**, Hiroshima University, Japan  
**Imam Wahyudi Farid**, Hiroshima University, Japan  
**Shinya Sekizaki**, Hiroshima University, Japan

**14 Affine Arithmetic Formulation of the Unit Commitment Problem Under Uncertainty**

**David Romero-Quete**, Universidad Nacional de Colombia, Columbia  
**Claudio Canizares**, ECE, University of Waterloo, Canada

**15 Impact of Stochastic Dependence within Load and Non-synchronous Generation on Frequency Stability**

**Kazi Hasan**, The University of Manchester, United Kingdom  
**Robin Preece**, The University of Manchester, United Kingdom

**31 Resource adequacy in grids with deepening penetrations of integrated renewable resources**

**Mariola Ndrjo**, University of Illinois at Urbana-Champaign, United States America  
**George Gross**, University of Illinois at Urbana-Champaign, United States America

**S03 - Storage technologies for large-scale renewable generation****August 28, Monday - 14:00 – 16:00****29 Optimal Load Control for Frequency Regulation under Limited Control**

**John Pang**, California Institute of Technology, United States America  
**Linqi Guo**, California Institute of Technology, United States America  
**Steven Low**, California Institute of Technology, United States America

**34 Identification of Dynamic Simulation Models for Variable Speed Pumped Storage Power Plants**

**Carlos Moreira**, INESC TEC and FEUP, Portugal  
**Nuno Fulgêncio**, INESC TEC, Portugal  
**Bernardo Silva**, INESC TEC, Portugal  
**Christophe Nicolet**, Power Vision Engineering, Switzerland  
**Antoine Béguin**, Power Vision Engineering, Switzerland

- 67 Dealing with dynamic security due to reversible hydro power plants in islanded power systems - A study case for increasing renewables integration**  
Maria Helena Vasconcelos, INESC TEC and FEUP, Portugal  
Pedro Beires, INESC TEC, Portugal  
Carlos Moreira, INESC TEC and FEUP, Portugal  
João Abel Peças Lopes, INESC TEC and FEUP, Portugal
- 74 Modelling of electrolyzers in hydrogen vehicle refuelling stations for provision of ancillary services**  
Lingxi Zhang, University of Manchester, United Kingdom  
Stephen Clegg, University of Manchester, United Kingdom  
Pierluigi Mancarella, University of Manchester, United Kingdom
- 92 Hydroelectric Power System Model and its Application to an Optimal Dispatch Design**  
Dimitra Apostolopoulou, University of Oxford, United Kingdom  
Malcolm McCulloch, University of Oxford, United Kingdom

**S04 - Dynamic modelling, assessment and control of uncertain power systems I**

August 28, Monday - 16:30 – 18:30

- 6 Frequency Control in Networked Microgrids with Voltage-Sensitive Loads**  
Kun Liu, The University of Hong Kong, Hong Kong  
Tao Liu, The University of Hong Kong, Hong Kong  
David Hill, The University of Hong Kong, Hong Kong
- 20 Efficient Identification of Transient Instability States of Uncertain Power Systems**  
Panagiotis Papadopoulos, The University of Manchester, United Kingdom  
Jovica Milanovic, The University of Manchester, United Kingdom
- 23 Creation of Synthetic Electric Grid Models for Transient Stability Studies**  
Ti Xu, University of Illinois at Urbana-Champaign, United States America  
Adam B. Birchfield, Texas A&M University, United States America  
Komal S. Shetye, University of Illinois at Urbana-Champaign, United States America  
Thomas J. Overbye, Texas A&M University, United States America
- 27 Rapid Assessment of Unstable Mode Variability in Power Grids**  
Yusheng Xue, State Grid EPRI, Southeast University, China  
Tiangang Huang, Southeast University, China  
Kit Po Wong, The University of Western Australia, Australia
- 28 System Stability Issues arising from Distributed Sources under adverse network conditions**  
Costas Vournas, National Technical University of Athens, Greece  
Theodoros Souxas, National Technical University of Athens, Greece

**S05 - Wide-area security assessment and control I**

August 29, Tuesday - 09:00 – 10:30

- 9 A Method for Evaluating Power System Security Region under Uncertainties**  
Naoto Yorino, Hiroshima University, Japan  
Yuki Nakamura, Hiroshima University, Japan  
Abdillah Muhammad, Hiroshima University, Japan  
Yutaka Sasaki, Hiroshima University, Japan  
Yoshiharu Okumoto, Hiroshima University, Japan
- 32 Incorporation of Distance-Protection Tripping to the Direct Methods for Transient Stability Assessment**  
Valentin Azbe, University of Ljubljana, Faculty of Electrical Engineering, Slovenia  
Rafael Mihalic, University of Ljubljana, Faculty of Electrical Engineering, Slovenia
- 37 Wide-Area Generation Control between Control Regions with High Renewable Penetration**  
Christoph Lackner, Rensselaer Polytechnic Institute, United States America  
Joe Chow, Rensselaer Polytechnic Institute, United States America
- 50 Studying the Electromechanical Oscillations using Ambient Synchrophasor Data**  
Phuc Huynh, Department of ECE, University of Illinois at Urbana Champaign, United States America  
Qianli Chen, Department of CEE, University of Illinois at Urbana Champaign, United States America  
Ahmed Elbanna, Department of CEE, University of Illinois at Urbana Champaign, United States America  
Hao Zhu, Department of ECE, University of Illinois at Urbana Champaign, United States America

**S06 - Dynamic modelling, assessment and control of uncertain power systems II**

August 29, Tuesday - 11:00 – 12:30

- 81 Transient Stability Assessment of Power Systems With Uncertain Renewable Generation**  
Hugo Villegas Pico, Purdue University, United States America  
Dionysios Aliprantis, Purdue University, United States America  
Xiaojun Lin, Purdue University, United States America
- 100 A Model-Predictive Control Strategy for Alleviating Voltage Collapse**  
Jonathon Martin, Department of Electrical Engineering and Computer Science, University of Michigan, United States America  
Ian Hiskens, Department of Electrical Engineering and Computer Science, University of Michigan, United States America
- 101 Co-Simulation of Transmission and Distribution Networks with a Hybrid Three-Phase/Single-Phase Formulation**  
Glauco N. Taranto, FEDERAL UNIVERSITY OF RIO DE JANEIRO – COPPE, Brazil  
José Mauro T. Marinho, FEDERAL UNIVERSITY OF RIO DE JANEIRO – COPPE, Brazil
- 104 Validity Range of Fundamental Frequency Simulations under High Levels of Variable Generation Technologies**  
Claudia Rahmann, University of Chile, Chile  
J. Vega, University of Chile, Chile  
F. Valencia, University of Chile, Chile

**S07 - Stochastic modelling and control of renewable energy sources II**

August 29, Tuesday - 14:00 – 16:00

- 38 Operational Planning of Active Distribution Grids under Uncertainty**  
Stavros Karagiannopoulos, ETH Zurich EEH - Power Systems Laboratory, Switzerland  
Line Roald, Los Alamos National Laboratory, United States America  
Petros Aristidou, School of Electronic and Electrical Engineering, University of Leeds, United Kingdom  
Gabriela Hug, Power Systems Laboratory, ETH Zurich, Switzerland
- 39 Quantification of the Benefits of Campus Utility System Operations as a Microgrid**  
Siddhartha Nigam, University of Illinois at Urbana-Champaign, United States America  
George Gross, University of Illinois at Urbana-Champaign, United States America
- 48 Power System Optimization with Uncertainty and AC Power Flow: Analysis of an Iterative Algorithm**  
Line Roald, Los Alamos National Laboratory, United States America  
Daniel Molzahn, Argonne National Laboratory, United States America  
Aldo Tobler, ETH Zurich, Switzerland
- 75 Bidding Strategy in Energy and Regulation Markets for A Wind Power Plant**  
Ehsan Nasrolahpour, University of Calgary, Canada  
Carrie Houston, Wind Energy Institute of Canada, Canada  
Scott Harper, Wind Energy Institute of Canada, Canada  
Marianne Rodgers, Wind Energy Institute of Canada, Canada  
Hamidreza Zareipour, University of Calgary, Canada  
William D. Rosehart, University of Calgary, Canada
- 82 Introducing machine learning for power system operation support**  
Donnot Benjamin, RTE, LRI, INRIA, France  
Guyon Isabelle, UPSud Paris-Saclay, LRI, INRIA, France  
Schoenauer Marc, LRI, INRIA, France  
Marot Antoine, RTE R&D, France  
Panciatici Patrick, RTE R&D, France

**S08 - Wide-area security assessment and control II**

August 30, Wednesday - 09:00 – 10:30

- 70 Study of nonminimum phase zeros in test power systems from wide-area control designs**  
Mohammadreza Hatami, Washington State University, United States America  
Vaithianathan "Mani" Venkatasubramanian, Washington State University, United States America  
Sandip Roy, Washington State University, United States America  
Patrick Panciatici, RTE, France  
Thibault Prevost, RTE, France  
Xavier Florent, RTE, France
- 79 Using Demand Response to Shape the Fast Dynamics of the Bulk Power Network**  
Kasra Koorehdavoudi, Washington State University, Pullman, WA, United States America  
Mengqi Yao, University of Michigan, Ann Arbor, MI, United States America  
Johanna L. Mathieu, University of Michigan, Ann Arbor, MI, United States America  
Sandip Roy, Washington State University, Pullman, WA, United States America

- 93 PMU-Based Monitoring of Power System Dynamics Using Maximum Lyapunov Exponents – TERNA Case Study**  
**Guanqun Wang**, Burns & McDonnell, United States America  
**Chen-Ching Liu**, Washington State University, United States America  
**Mahendra Patel**, Electric Power Research Institute, United States America  
**Evangelos Farantatos**, Electric Power Research Institute, United States America  
**Giorgio Giannuzzi**, TERNA Rete Italia SpA, Italy  
**Roberto Zaottini**, TERNA Rete Italia SpA, Italy
- 95 On Networked VIP Monitoring of Voltage Stability**  
**Miroslav Begovic**, Texas A&M University, United States America  
**Aaqib Peerzada**, Texas A&M University, United States America  
**Reynaldo Nuqui**, ABB, United States America  
**Benjamin Picone**, ERCOT, United States America

**S09 - Dynamic modelling, assessment and control of uncertain power systems III**

August 30, Wednesday - 11:00 – 12:30

- 30 Robust Transient Stability Assessment via Reachability Analysis**  
**Dongchan Lee**, Massachusetts Institute of Technology, United States America  
**Konstantin Turitsyn**, Massachusetts Institute of Technology, United States America
- 36 Dynamic performance of the frequency containment reserve - Experience from the Nordic system**  
**Robert Eriksson**, Swedish National Grid, Sweden  
**Magnus Perninge**, Linneaus University, Sweden
- 40 Dynamic Behaviour of Distribution Networks with TSO-DSO Interconnection Power Flow Control**  
**Daniel Mayorga Gonzalez**, TU Dortmund University, Germany  
**Lena Robitzky**, TU Dortmund University, Germany  
**Ulf Häger**, TU Dortmund University, Germany  
**Christian Rehtanz**, TU Dortmund University, Germany  
**Johanna Myrzik**, TU Dortmund University, Germany
- 51 Impact of Active Distribution Networks on Voltage Stability of Electric Power Systems**  
**Lena Robitzky**, TU Dortmund University, Germany  
**Daniel Mayorga Gonzalez**, TU Dortmund University, Germany  
**Chris Kittl**, TU Dortmund University, Germany  
**Christoph Strunck**, TU Dortmund University, Germany  
**Jannik Zwartscholten**, TU Dortmund University, Germany  
**Sven Christian Müller**, logarithmo GmbH, Germany  
**Ulf Häger**, TU Dortmund University, Germany  
**Johanna Myrzik**, TU Dortmund University, Germany  
**Christian Rehtanz**, TU Dortmund University, Germany

**S10 - Electricity markets**

August 30, Wednesday - 14:00 – 16:00

- 53 Impact assessment of performance-based regulation market design on the performance of plug-in electric vehicles aggregators: An integrated approach**  
Stylianos Vagropoulos, Aristotle University of Thessaloniki, Greece, Greece  
Anastasios Bakirtzis, Aristotle University of Thessaloniki, Greece, Greece
- 65 Data-Driven Security-Constrained OPF**  
Florian Thams, Technical University of Denmark, Denmark  
Lejla Halilbašić, Technical University of Denmark, Denmark  
Pierre Pinsom, Technical University of Denmark, Denmark  
Spyros Chatzivasileiadis, Technical University of Denmark, Denmark  
Robert Eriksson, Swedish National Grid, Sweden
- 68 A Locational Price for Power Injection Fluctuations of Variable Generation and Load**  
Adria Brooks, University of Wisconsin-Madison, United States America  
Bernard Lesieutre, University of Wisconsin-Madison, United States America
- 76 A Decentralized Privacy-Based Electricity Market Scheme for Responsive Demands**  
Miadreza Shafie-khah, C-MAST/UBI, Portugal  
Gerardo Osório, C-MAST/UBI, Portugal  
João Catalão, INESC TEC and FEUP, Portugal
- 98 Cooperative Game Theory for Non-linear Pricing of Load-side Distribution Network Support**  
Archie Chapman, University of Sydney, Australia  
Sleiman Mhanna, University of Sydney, Australia  
Gregor Verbic, University of Sydney, Australia

**S11 - Distributed versus centralized decision models**

August 30, Wednesday - 16:30 – 18:30

- 19 Dynamic Equivalent of a Distribution Grid Hosting Dispersed Photovoltaic Units**  
Gilles Chaspierre, University of Liege, Belgium  
Patrick Panciatici, RTE, France  
Thierry Van Cutsem, FNRS and University of Liège, Belgium
- 55 Component-based dual decomposition and ADMM in the OPF problem**  
Sleiman Mhanna, The University of Sydney, Australia  
Gregor Verbic, The University of Sydney, Australia  
Archie Chapman, The University of Sydney, Australia
- 63 Voltage Support Solutions in Networks with High Levels of Variable Renewable Generation**  
C. Yaman Evrenosoglu, ABB Corporate Research, Switzerland  
Adamantios Marinakis, ABB Corporate Research, Switzerland  
Marija Zima-Bockarjova, ABB Corporate Research, Switzerland  
Nikolaos Savvopoulos, ABB Corporate Research, Switzerland  
Alexandre Oudalov, ABB Power Grids Division, Switzerland

- 71    Foreseeing New Control Challenges in Electricity Prosumer Communities**  
Frédéric Olivier, University of Liège, Belgium  
Daniele Marulli, Politecnico di Torino, Italy  
Damien Ernst, University of Liège, Belgium  
Raphaël Fonteneau, University of Liège, Belgium
- 80    Coordination of Distributed Energy Resources in Lossy Networks for Providing Frequency Regulation**  
Hanchen Xu, University of Illinois at Urbana-Champaign, United States America  
Samuel Utomi, University of Illinois at Urbana-Champaign, United States America  
Alejandro Dominguez-Garcia, University of Illinois at Urbana-Champaign, United States America  
Peter Sauer, University of Illinois at Urbana-Champaign, United States America

## **S12 - Dynamic modelling, assessment and control of uncertain power systems IV** August 31, Thursday - 09:00 – 10:30

- 60    Evaluation of Suitability of Different Transient Stability Indices for Identification of Critical System States**  
Amirhossein Sajadi, University of Manchester, United Kingdom  
Robin Preece, University of Manchester, United Kingdom  
Jovica Milanovic, University of Manchester, United Kingdom
- 64    Increasing the Resilience of Low-inertia Power Systems by Virtual Inertia and Damping**  
Dominic Groß, ETH Zürich, Switzerland  
Saverio Bolognani, ETH Zürich, Switzerland  
Bala Kameshwar Poolla, ETH Zürich, Switzerland  
Florian Dörfler, ETH Zürich, Switzerland
- 66    Primary Frequency Control in Future Power Systems - The ELECTRA Project Approach under the Web-of-Cells Concept**  
António Coelho, INESC TEC, Portugal  
Filipe Soares, INESC TEC, Portugal  
Carlos Moreira, INESC TEC and FEUP, Portugal  
Bernardo Silva, INESC TEC, Portugal
- 73    A Hierarchy of Models for Microgrids With Grid-Feeding Inverters**  
Olaolu Ajala, University of Illinois at Urbana-Champaign, United States America  
Murilo Almeida, Typhoon HIL, Inc., United States America  
Ivan Celanovic, Typhoon HIL, Inc., United States America  
Peter Sauer, University of Illinois at Urbana-Champaign, United States America  
Alejandro Dominguez-Garcia, University of Illinois at Urbana-Champaign, United States America

## **S13 - Data analytics for power systems** August 31, Thursday - 11:00 – 12:30

- 2    Recent Results of PMU Data Analytics by Exploiting Low-dimensional Structures**  
Meng Wang, Rensselaer Polytechnic Institute (RPI), United States America  
Joe Chow, Rensselaer Polytechnic Institute, United States America  
Pengzhi Gao, Rensselaer Polytechnic Institute, United States America  
Yingshuai Hao, Rensselaer Polytechnic Institute, United States America  
Wenting Li, Rensselaer Polytechnic Institute, United States America  
Ren Wang, Rensselaer Polytechnic Institute, United States America



- 12 On the Statistical Settings of Generation and Load in a Synthetic Grid Modeling**  
Seyyed Hamid Elyas, Virginia Commonwealth University, United States America  
Zhifang Wang, Virginia Commonwealth University, United States America  
Robert J. Thomas, Cornell University, United States America
- 24 Statistically Characterizing the Electrical Parameters of the Grid Transformers and Transmission Lines**  
Mir Hadi Athari, Virginia Commonwealth University, United States America  
Zhifang Wang, Virginia Commonwealth University, United States America
- 49 The Validation of Synthetic Power System Cases**  
Eran Schweitzer, Arizona State University, United States America  
Anna Scaglione, Arizona State University, United States America  
Robert Thomas, Cornell University, United States America

**S14 - Risk, reliability and resilience****August 31, Thursday - 14:00 – 16:00**

- 3 Survivability of the Electric Grid**  
Eugene Litvinov, ISO New England, United States America  
Feng Zhao, ISO New England, United States America
- 52 Probabilistic Reliability Management Approach and Criteria for Power System Short-term Operational Planning**  
Efthymios Karangelos, Universite de Liege, Belgium  
Louis Wehenkel, Universite de Liege, Belgium
- 59 Fast and Robust Determination of Power System Emergency Control Actions**  
Michael Chertkov, Los Alamos National Laboratory, United States America  
Marc Vuffray, Los Alamos National Laboratory, United States America  
Sidhant Misra, Los Alamos National Laboratory, United States America  
Line Roald, Los Alamos National Laboratory, United States America
- 96 Identification and Handling of Critical Constraints in Time-Constrained SCOPF Analysis of Power Systems**  
Jagadeesh Gunda, The University of Edinburgh, United Kingdom  
Duo Fang, The University of Edinburgh, United Kingdom  
Sasa Djokic, The University of Edinburgh, United Kingdom
- 97 Predictive Asset Management Under Weather Impacts Using Big Data, Spatiotemporal Data Analytics and Risk Based Decision-Making**  
Mladen Kezunovic, Texas A&M University, United States America  
Tatjana Dokic, Texas A&M University, United States America

**S15 - Large-scale integration of inverter-based energy resources****August 31, Thursday - 16:30 – 18:30**

- 5 Convex Relaxation of OPF in Multiphase Radial Networks with Delta Connections**  
Changhong Zhao, National Renewable Energy Laboratory, United States America  
Emiliano Dall'Anese, National Renewable Energy Laboratory, United States America  
Steven Low, California Institute of Technology, United States America

- 43 A QCQP Approach for OPF in Multiphase Radial Networks with Wye and Delta Connections**  
**Ahmed S. Zamzam**, University of Minnesota, United States America  
**Changhong Zhao**, National Renewable Energy Laboratory, United States America  
**Emiliano Dall'Anese**, National Renewable Energy Laboratory, United States America  
**Nicholas D. Sidiropoulos**, University of Minnesota, United States America
- 45 DG Integration and Power Quality Management in Railway Power Systems: A Distributed Approach**  
**Weijie Pan**, Electrical and Computer Engineering Department, University of Florida, United States America  
**Surya Dhulipala**, Electrical and Computer Engineering Department, University of Florida, United States America  
**Arturo Bretas**, Electrical and Computer Engineering Department, University of Florida, United States America
- 62 Virtual Induction Machine Strategy for Converters in Power Systems with Low Rotational Inertia**  
**Uros Markovic**, Power Systems Laboratory, ETH Zurich, Switzerland  
**Petros Aristidou**, School of Electronic and Electrical Engineering, University of Leeds, United Kingdom  
**Gabriela Hug**, Power Systems Laboratory, ETH Zurich, Switzerland
- 90 An Analytical Approach for Loss Minimization and Voltage Profile Improvement in Distribution Systems with Renewable Energy Sources**  
**Seshadri Sravan Kumar Vanjari**, Indian Institute of Technology, Hyderabad, India  
**Le Xie**, Texas A&M University, United States America  
**P. R. Kumar**, Texas A&M University, United States America

**S16 - Distributed state estimation and observability + Operation and control of AC/DC systems + Non-disruptive load control**  
**September 1, Friday - 09:00 – 11:00**

- 46 Topology Estimation in Bulk Power Grids: Guarantees on Exact Recovery**  
**Deepjyoti Deka**, Los Alamos National Laboratory, United States America  
**Saurav Talukdar**, University of Minnesota Twin Cities, United States America  
**Michael Chertkov**, Los Alamos National Laboratory, United States America  
**Murti Salapaka**, University of Minnesota Twin Cities, United States America
- 83 ROBUST POWER SYSTEM STATE & TOPOLOGY COESTIMATION BASED ON NOVEL INFORMATION THEORY CONCEPTS**  
**Rogério Meneghetti**, Federal University of Santa Catarina, Brazil  
**Antonio Simões Costa**, Federal University of Santa Catarina, Brazil  
**Vladimiro Miranda**, INESC TEC and University of Porto, Portugal
- 102 Protection of Converter Interfaced Generation and Microgrids**  
**Sakis Meliopoulos**, Georgia Tech, United States America  
**George Cokkinides**, Georgia Tech, United States America  
**Yu Liu**, Georgia Tech, United States America  
**Rui Fan**, Georgia Tech, United States America  
**Paul Myrda**, Georgia Tech, United States America  
**Evangelos Farantatos**, Georgia Tech, United States America

- 13**    **Semi-implicit Formulation of Proportional-integral Controller Block with Non-windup Limiter According to IEEE Standard 421.5-2016**  
Davide Fabozzi, DlgSILENT GmbH, Germany  
Stefan Weigel, DlgSILENT GmbH, Germany  
Bernd Weise, DlgSILENT GmbH, Germany  
Fortunato Vilella, Elia Grid International, Belgium
- 7**      **Online Convex Optimization for Demand Response**  
Antoine Lesage-Landry, University of Toronto, Canada  
Joshua A. Taylor, University of Toronto, Canada