

HVDC Colloquium programme:

Day 1, 18 March 2026:

- 9:00 Coffee and Welcome
- 9:30 Keynote: **Nils Charels, Elia:**
HVDC at Elia: existing systems, pipeline for projects and view on the future
- 10:00 Session: Operation of AC/DC grids and offshore energy integration I**
Chair: Dirk Van Hertem, KU Leuven.
- 10:00 **Giacomo Bastianel, KU Leuven:**
Day-ahead transmission grid topology optimization considering renewable energy sources' uncertainty
- 10:25 **Carsten Thomas Gaterman, Technische Universität Ilmenau:**
Curative System Operation with HVDC Overlay Networks – An Overview of the Project OVANET
- 10:50 Break
- 11:15 Session: Operation of AC/DC grids and offshore energy integration II**
Chair: Hakan Ergun, KU Leuven.
- 11:15 **Matin Kamenica, Technical University of Denmark:**
Emergency Power Control Application Cases in Offshore Energy Hubs
- 11:40 **Özlem Mahmutogullari, KU Leuven:**
Adaptive Robust Optimization for Frequency-Constrained Market Clearing in HVDC-Connected Offshore Grids
- 12:05 **Leonel Noris, Technical University of Denmark:**
Offshore Wind Blackstart & Restoration: Research Roadmap
- 12:30 Lunch
- 13:30 Session: Protection of AC/DC networks**
Chair: Geraint Chaffey, KU Leuven.
- 13:30 **Alban Duvivier, Technical University of Denmark:**
Current Limiting During and After Faults in Converter Based System
- 13:55 **Joachim Vermunicht, KU Leuven:**
Analysis of Substation Stray Capacitance impact on the Functional Performance of HVDC Line Protection
- 14:20 **Abdolhamid Farshadi, Technische Universität Braunschweig:**
MBSE-Based Concept-Level Protection Implementation for HVDC grid protection system development
- 14:45 **Alexander Novikov, Technical University of Denmark:**
Challenges of Impedance-Based Protection for Subsea Cables in Offshore Wind Power Plants
- 15:10 **Abolfazl Mohammadi, KU Leuven:**
Remote MMC Model Selection Method in HVDC Grids for Protection Studies
- 15:35 Break
- 15:55 Session: Control and stability of AC/DC systems I**
Chair: Jef Beerten, KU Leuven.
- 15:55 **Nicolae Darii, Technical University of Denmark:**
Stability and Interoperability Assessment of Offshore Wind Power Plants (Under Information and IP Constraints)
- 16:20 **Luis Müller, KU Leuven:**
DC voltage control of multi-terminal bipolar HVDC systems under unbalanced conditions
- 16:45 **Victor D. Reyes Dreke, TU Delft:**
Lyapunov-based robust control of MMC currents of MTDC transmission systems
- 17:10 **Yuexuan Li, Universitat Politècnica de Catalunya:**
Small-Signal Stability Analysis of HVDC-Interconnected Offshore Wind Power Plants
- 17:35 **Eros Avdiaj, KU Leuven:**
Essential Voltage Source Characteristics for Grid Forming Converters
- 19:00 Dinner at Domus, Tiensestraat 8, 3000 Leuven.

HVDC Colloquium programme:

Day 2, 19 March 2026:

- 9:00 Coffee and Welcome
- 9:30 Keynote: **Luca Di Rienzo, Politecnico di Milano:**
Electromagnetic Modeling of HVDC Cables
- 10:00 Session: Operation of AC/DC grids and offshore energy integration III**
Chair: Asimena Korompili, University of Manchester.
- 10:00 **Jordi Béjar-Rabascall, Universitat Politècnica de Catalunya:**
Power Flow Controller for Congestion Management in Meshed HVDC Networks
- 10:25 **Corné du Plooy, KU Leuven:**
HVDC Control Flexibility and Inertia as Explicit Resilience Resources Beyond Cost-Optimal Dispatch
- 10:50 Break
- 11:15 Session: Control and stability of AC/DC systems II**
Chair: Dionysios Moutavelis, Universitat Politècnica de Catalunya.
- 11:15 **Robbe Vander Eeck, KU Leuven:**
Small-signal stability of converter-dominated power systems with digital control
- 11:40 **Saeed Hosseinnataj, Université de Lille:**
Application of DC voltage droop control to MTDC with DC Breaker
- 12:05 **Luis Caro, Technical University of Denmark:**
Grid support, control and stability of offshore wind power plants
- 12:30 Lunch
- 13:10 Session: Power electronics and system components in HVDC**
Chair: Hanchi Zhang, Aalborg University.
- 13:10 **Ivan Moreno-Ochando, Universitat Politècnica de Catalunya:**
Multi-port AC/DC/DC Power Converters
- 13:35 **Husnain Jawad, University of Porto:**
From Harmonics to Hydrogen: Bounding AC/DC Topology Sensitivity of Levelised Cost of Hydrogen in Large Offshore Wind–Electrolysis Systems
- 14:00 **Carla Horneman, Technical University of Denmark:**
Sustained overvoltages in cables in multi-terminal HVDC systems
- 14:25 **Johan Boukhenfouf, Université de Lille:**
Comparative Sizing of Modular Multilevel DC-DC Converters
- 14:50 **Jaume Girona-Badia, Universitat Politècnica de Catalunya:**
Resource-Aware Grid-Forming Synchronization Control
- 15:15 Break
- 15:40 Panel session (with professors and senior researchers)
- 17:00 End
- 18:00 Reception by the City of Leuven by Liesbeth Vandermeeren, the alderman of Leuven at PSI, Tiensestraat 102, 3000 Leuven.

HVDC Colloquium programme:

Day 3, 20 March 2026:

- 9:00 Coffee and Welcome
- 9:30 Keynote: **Jef Beerten & Jeroen Tant, KU Leuven:**
Modern Tools for HVDC Stability Studies
- 10:00 Session: Control and stability of AC/DC systems III**
Chair: Jaume Girona-Badia, Universitat Politècnica de Catalunya.
- 10:00 **Asimena Korompili, University of Manchester:**
Review on Evolving VSC HVDC Control Developments
- 10:25 **Jan Kircheis, KU Leuven:**
PowerImpedanceACDC.jl: Fast Small-Signal Stability Analysis of Future AC/DC grids
- 10:50 Break
- 11:15 **Session: Models and data transfer in HVDC systems**
Chair: Luca Di Rienzo, Politecnico di Milano.
- 11:15 **Moritz Deitert, RWTH Aachen:**
Enabling EMT Studies in German Benchmark Grid through Automated Data Transfer
- 11:40 **Ferran Bohigas-Daranas, Universitat Politècnica de Catalunya:**
Use of CIM models, based on IEC 61970 Standards, for information exchange in HVDC Digital Twins systems
- 12:05 **Mohammadtaher Azampour, University of Groningen:**
Patent Protection and Interoperability of Control Systems in Multi-Terminal Multi-Vendor (MVMT) High Voltage Direct Current (HVDC) Transmission
- 12:30 Lunch
- 13:30 Session: Operation of AC/DC grids and offshore energy integration IV**
Chair: Nicolaos A. Cutululis, Technical University of Denmark.
- 13:30 **Germano Mugambi, Technical University of Denmark:**
Impact of New Connections on the Stability Margins of an Existing Offshore Wind Power Plant
- 13:55 **Ricardo Gallo Caicedo, KU Leuven:**
Optimal Scheduling of Power Flow Controllers in HVDC for Congestion Management
- 14:20 **Dionysios Moutevelis, Universitat Politècnica de Catalunya:**
Modelling, Dynamics and Optimal Operation of HVAC-Connected Offshore Wind Power Plants
- 14:45 **Vítor Henrique Pereira de Melo, KU Leuven:**
Observability and Redundancy Analysis for State Estimation in AC/DC networks
- 15:10 **Kriti Agrawal, Hitachi Energy Research:**
Multi-stage polynomial regression for small-signal stability constrained OPF for hybrid AC/DC grids
- 15:35 **Oscar Damanik, KU Leuven:**
Asymmetrical operation in meshed bipolar HVDC grids: insights and considerations
- 16:00 Break and Closing
- 19:00 Social event at ESAT, Kasteelpark Arenberg 10, 3001 Heverlee.