

Tutorial – PowerTech 2023

Title: Modelling, control and stability analysis of low-inertia power systems

Day: 25 June 2023

Duration: 4.5 hours (each presentation is 40 minutes + 10 minutes questions, and 2x10 minutes breaks)

Moderator: Federico Milano, University College Dublin, Ireland

Presenters (5)

Petros Aristidou, Cyprus University of Technology, Cyprus

Junru Chen, Xinjiang University, China

Ahsan Murad, DigSILENT Power Factory, Germany

Taulant Kërçi, EirGrid, Ireland

Federico Milano, University College Dublin, Ireland

Agenda

- *Introduction*, by Federico Milano
- *Dynamic Response of Inverter-based Resources in the Ireland and Northern Ireland Power Systems*, by Taulant Kërçi
- *Blending optimization methods with dynamic analysis for low-inertia power systems*, by Petros Aristidou
- *Break*
- *Synchronization stability of grid-connected converters*, by Junru Chen
- *Tentative: Experience on the implementation of converter controllers in a power system software tool*, by Ahsan Murad
- *Break*
- *Complex modelling of converter-interfaced generation*, by Federico Milano
- *Closure*, by Federico Milano