

Introduction:
Dr.Ing. Mohammed
ALSAADI

Project coordinator
at DERlab office



The poster for the HyLeiT Workshop #5 features a background image of an industrial facility with a worker in a yellow safety vest. At the top left, it displays the logos for 'Leitprojekt H2Giga' and 'HyLeiT'. The main title is 'HyLeiT Workshop #5 Modeling of Electrolysis Plants on Component and System Level', with the date '14th of November 2024' below it. Five circular portraits of the speakers are arranged in two rows. The bottom of the poster lists the moderator and organizer.

HyLeiT Workshop #5
Modeling of Electrolysis
Plants on Component and
System Level
14th of November 2024

Nils Nemsow
Karlsruhe Institute of
Technology (KIT)

Michael Rix
Process Systems Engineering
RWTH Aachen University

Nils Wiese
Fraunhofer IEE

Chao Liu
Technical University of Denmark

Mehdi Ghazavi Dozein
Faculty of Engineering, Monash University

Moderator: Fraunhofer IEE, Dr.Ing. Norbert Henze
Organiser: DERlab, Dr.Ing. Mohammed ALSAADI

Agenda

10:00am – 12:30pm (one short coffee break ~ 11.30)

- Welcome and short introduction of DERlab (Mohammed Al-Saadi, DERlab, Germany)
- Opening and moderation (Norbert Henze, Fraunhofer IEE, Germany)
 - Aims and motivation of this workshop
 - Introduction about the HyLeiT project
- Dynamic Modeling of Electrolyzers Using the eCherry Library
 - (Michael Rix, RWTH Aachen, Germany)
- H2-in-the-Loop: System level modelling of hydrogen energy storage plants
 - (Nils Nemsow, KIT Karlsruhe, Germany)
- Grid Code Compliance of Electrolysis System: LVRT and FPAPR
 - (Chao Liu, DTU Lyngby, Denmark)
- System Support Services from Hydrogen Electrolysis Plants: Fundamentals and Modelling
 - (Mehdi Ghazavi Dozein, Monash University, Australia)
- Grid Integration of Electrolyzers in the Power System
 - (Nils Wiese, Fraunhofer IEE, Germany)

→ Discussion

12:30pm – 1pm Conclusions and end of meeting

DERlab Background

- DERlab is a Network of Excellence started as a European Project in 2005
- DERlab legal entity was founded on 2008
- DERlab is an association of leading laboratories and stakeholders in the field of DER equipment and systems, developing joint requirements and quality criteria for the connection and operation of DER and supporting consistent development of DER technologies.
- In 2024, DERlab celebrated 16 Years anniversary

DERlab Network and services

- Around 40 members
- DERlab members offer accredited testing, validation and certification of DER-units and SG-equipment.
- Services
 - Contribution to standardisation activities
 - Knowledge exchange
 - Joint Activities
 - Information
 - Visibility



Previous Workshops

DERlab / HyLeiT Workshop: “Market development of electrolysis systems taking system services into account”, Online, 08.11.2023.

DERlab / HyLeiT Workshop: “Modeling of electrolysis plants on component and system level”, Online, 05.12.2023.

DERlab / HyLeiT Workshop: “Grid connection requirements for Electrolysis Plants”, Online, 11.09.2024.

Upcoming Workshops

- DERlab / HyLeiT Workshop: “Grid Forming”, Q1, 2025.
- DERlab / HyLeiT Workshop: “Challenges of Electrolysis systems at relatively weak connection points”, Q2, 2025.
- DERlab / HyLeiT Workshop: “Final Event”, before Sep., 2025.



European Distributed Energy Resources Laboratories e. V.



October 2024

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email: PR

Organisational Details

The slides for all workshops are available online in the DERlab website: <https://der-lab.net/derlab-co-organised-events/>

Please mute your microphones unless you are the presenter



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