



# JOINT EDLAB – PEMD SUMMER MEETING

## Agenda

- 09:30 – 09:40 Silverio BOLOGNANI (*EDLab-PD*), Roberto PETRELLA (*PEMD/EDLab-UD*) – **Welcome**
- 09:40 – 10:00 Matteo BELIGOJ (*EDLab-PD*) – **Novel control solution for electrified hydraulic crane**
- 10:00 – 10:20 Giuseppe GALATI (*EDLab-PD*) – **Modelling of a rotating signal injection-based position observer for sensorless synchronous electric drives**
- 10:20 – 10:40 Ismaele DE MARTIN (*EDLab-VI*) – **Continuous control-set MPC with minimum current magnitude criterion**
- 10:40 – 11:00 Mattia IURICH (*PEMD/EDLab-UD*) – **Bidirectional DC-DC converter supplying pulsed current for solid oxide fuel-cell**
- 11:00 – 11:20 **Coffee break**
- 11:20 – 11:40 Riccardo BREDA (*PEMD/EDLab-UD*) – **Novel sustainable high-performance drives: modular multilevel converters and rare-earth free synchronous machines**
- 11:40 – 12:00 Giacomo ANDRIOLI (*PEMD/EDLab-UD*) – **Relevance of modular high-power converters and their control for the energy transition**
- 12:00 – 12:20 Luca CINTI (*EDLab-PD*) – **Optimal pole shaping for electrically excited synchronous motors**
- 12:20 – 12:40 Chiara CONTÒ (*EDLab-PD*) – **Pole-changing in synchronous machines: a reluctance-permanent magnet hybrid motor**
- 12:40 – 13:00 Roberto PETRELLA (*PEMD/EDLab-UD, SAL, Koala Electronics s.r.l.*) – **Research and industrial projects and collaborations**
- 13:00 – 13:40 **Lunch and coffee**
- 13:40 – 14:00 **PEMD laboratory visit**
- 14:00 – 16:00 Luca PERETTI (*KTH*) – **Rare-earth magnet-free electric drive alternatives: the case of variable phase-pole induction machine drives**



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## Organizers:

Roberto PETRELLA & Sandro CALLIGARO, PEMD/EDLab-UD

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**Wednesday, July 5<sup>th</sup> 2023, 9:30 – 16:00**

**“Sala Arancio” Meeting Room, DPIA, UniUD**