

COST Action PEARL PV CA16235

Performance and Reliability of Photovoltaic Systems:
Evaluations of Large-Scale Monitoring Data



Training School IV

Potential of monitoring tools, advanced operation and maintenance practice for security and predictability of PV performance

08 – 11 March 2022

Host: University of Twente, Enschede, The Netherlands

Provisional Programme

This is expected to be a hybrid physical/on-line event, depending on the circumstances relating to the control of Covid-19. On-line participation will be available for those who are unable to travel. Timings are based on Central European Time.

Schedule of events

Tuesday 08 March 2022 – Day 1

Time	Activity	Lecturer
09:30-10:00	Registration and Opening of the Training School	Angèle Reinders / University of Twente Wilfried Van Sark/ Utrecht University, Copernicus Institute Jeffrey Kettle / University of Glasgow
10:00-11:30	Participants introduction – training school participants introduce themselves and their research activities / team building	Chair: Aleksandra Krstic-Furundzic / Univ.Belgrade
11:30-12:00	<i>Coffee break</i>	
12:00-13:00	Product development for PV performance control	Angèle Reinders / University of Twente
13:00-14:00	<i>Lunch break</i>	
14:00-15:00	Data monitoring & analytics for better PV performance and grid integration	Jonathan Leloux / Polytechnic University of Madrid, Spain
15:00-15:45	Fabrication of Al-BSF cells; assembly of crystalline-silicon-based modules	Jurriaan Schmitz / University of Twente
15:45-16:15	<i>Coffee break</i>	
16:15-17:00	PV reliability review	Jurriaan Schmitz / University of Twente

Wednesday 09 March 2022 – Day 2

Time	Activity	Lecturer
09:30-10:30	PV performance monitoring in a 100% renewable society	Wilfried Van Sark/ Utrecht University, Copernicus Institute
10:30-11:30	Understanding potential-induced degradation (PID) of photovoltaic (PV) modules	Mahmoud Dhimish / University of York, UK
11:30-12:00	<i>Coffee break</i>	
12:00-13:00	PV Module forensics and characterization of material degradation in the field	Gernot Orenski / Polymer Competence Center Leoben GmbH (PCCL)
13:00-14:00	<i>Lunch break</i>	
14:00-14:45	Excursion – visit to PV plants	Group visit
14:45-15:45		
15:45-16:15	<i>Coffee break</i>	
16:15-17:00	Workshop - explanation of the task Facilitated discussion	Aleksandra Krstic-Furundzic / Univ. Belgrade, Cedric Caruana, Univ. Malta ---

Thursday 10 March 2022 – Day 3

Time	Activity	Lecturer
09:30-10:30	PV fault detection and classification using AI-based technologies	Mahmoud Dhimish / University of York, UK
10:30-11:30	Photovoltaic and Solar Forecasting	Eli Shirazi / University of Twente
11:30-12:00	<i>Coffee break</i>	
12:00-13:00	The role of digitalization in advanced operation and maintenance practices	Atse Louwen / EURAC Research
13:00-14:00	<i>Lunch break</i>	
14:00-14:15	Workshop - Group exercise	---
14:15-15:30	Workshop - Group exercise	---
15:30-16:00	<i>Coffee break</i>	
16:00-17:00	Workshop - Group exercise Preparation of group presentations for wrap-up session on Friday	---

Friday 11 March 2022 – Day 4

Time	Activity	Lecturer
09:30–10:15	Preparation of group presentations for wrap-up session	Aleksandra Krstic-Furundzic/ Univ. Belgrade,
10:15–11:00	Preparation of group presentations for wrap-up session	Cedric Caruana, Univ. Malta ---
11:00–11:30	Coffee break	
11:30–12:45	Interactive poster session and reports on task	Aleksandra Krstic-Furundzic/ Univ. Belgrade, Cedric Caruana, Univ. Malta Angèle Reinders / Univ. Twente, Wilfried Van Sark/ Univ. Utrecht, Jeffrey Kettle / Univ. Glasgow
12:45–13:30	Wrap-up and closure of the training school/ joined lunch for on-site participants	Angèle Reinders / Univ. Twente, Wilfried Van Sark/ Univ. Utrecht, Jeffrey Kettle / Univ. Glasgow Aleksandra Krstic-Furundzic/ Univ. Belgrade, Cedric Caruana, Univ. Malta

Address of the venue:

University of Twente, Enschede, The Netherlands

Contact persons:

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Training School Manager: Dr. Cedric Caruana, University of Malta, at cedric.caruana@um.edu.mt

Local organizers:

Prof. Dr. Angèle Reinders / University of Twente, at a.h.m.e.reinders@utwente.nl

Prof. Dr. Wilfried Van Sark/ University of Utrecht, Copernicus Institute, at w.g.j.h.m.vansark@uu.nl

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