



Sandia National Laboratories



PVPerformance
MODELING COLLABORATIVE

Call for Abstracts and Sponsors for the 2025 European PVPMC Workshop in Ayia Napa, Cyprus (October 29-30, 2025)

Co-organized by Sandia National Laboratories, EPL Technology Frontiers Ltd, Phaethon Centre of Excellence at the University of Cyprus, this **two-day** workshop will examine the technical aspects of PV module and system performance, including performance modeling, analytics, digitalization and grid integration challenges and solutions.

An optional 3rd day will include a technical tour. Logistical information and the registration link will be forthcoming.

We are soliciting technical presentation proposals from the community. If you have modeling approaches, new data, or other interesting results to share please consider submitting a short abstract describing what you would like to present. Final sessions will depend on topics submitted.

- **Solar resource and system modeling**
 - Solar resource modeling, assessment, and input data quality
 - PV performance modeling, including bifacial and tracking systems
 - PV module characterization techniques
 - Curtailment modeling and PV + BESS integration
 - Modeling approaches for expected energy yield
- **Performance monitoring and operational analytics**
 - Performance monitoring and diagnostics
 - KPIs, capacity testing and performance verification
 - Analysis of power plant underperformance
 - O&M analytics including prognostics
 - Application of machine learning and artificial intelligence in preconstruction and operational phases
- **Digitalization, interoperability, and standardization**
 - Software and data interoperability
 - Digitalization of PV systems and asset portfolios
 - Lack of standardization in monitoring, reporting, and data exchange
- **Regional grid integration issues**



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- Modeling PV performance in island and grids with limited hosting capacity
- Grid integration challenges specific to Europe and MENA
- Interaction of performance models with curtailment and dispatch strategies
- System-level modeling of high-penetration PV scenarios

Technical abstracts (max 300 words + 1 figure) should include **title, author list, organization name**, and a **brief technical description** of the contribution here: <https://forms.gle/PXvRCFh2RF1tx3Gw7> . Note that all presentations must be technically focused (no sales pitches).

Abstracts are due: **June 15, 2025**