

Call for Abstracts for the 2027 PVPMC Workshop in Sacramento, California (May 11-13, 2027)

Co-organized by Sandia National Laboratories, GroundWork Renewables, and Terabase Energy this **three-day** workshop will examine the technical aspects of PV system performance, including performance modeling, monitoring, and O&M analytics. This year's workshop will cover topics from solar resource assessment, module characterization, PV performance modeling, performance monitoring, failure diagnostics, and prognostics.

Logistical information and the registration link will be forthcoming.

We are soliciting technical presentations from the community. If you have modeling approaches, new data, or other interesting results to share please consider submitting an abstract. The following is a list of possible sessions. Final sessions will depend on topics submitted.

- **Solar resource and performance uncertainty** including uncertainty quantification/propagation, its effect on expected yield, performance assessment, bankability, financing, and insurance risk
- **PV performance modeling** improvements including losses, tracking, benchmarks, and validation
- **Emerging PV performance modeling** including tandem configurations for space and terrestrial applications
- **Degradation analyses** including degradation attribution, separating performance loss rates from module and BOS effects, uncertainty in degradation estimates, and closing the loop from operations to design
- **PV + BESS modeling and analysis** including DC- and AC-coupled configurations, energy and power-flow modeling, expected yield, dispatch and operational strategies, hybrid plant KPIs, and performance assessment
- **Hybrid power plant modeling and performance assessment** including PV+wind and other multi-technology configurations, expected yield modeling, interactions between generation technologies, hybrid plant KPIs, and loss attribution
- **Performance monitoring and O&M analytics** including diagnostics and prognostics, linking field O&M findings with performance models
- **KPIs** and performance assessment including best practices, capacity and performance testing, benchmarking, performance guarantees, and approaches for consistent and auditable assessment of plant performance
- **Power plant underperformance** with an emphasis on distinguishing model bias and actual underperformance, including approaches for quantifying and attributing underperformance

due to soiling, curtailment, equipment faults, availability, and other operational losses, and implications for performance guarantees, asset valuation, and risk

- **Digitalization, interoperability, and data infrastructures** of PV systems and asset portfolios, including success stories from existing software integrations
- **Technical advances in AI/ML** for PV performance and operations, with emphasis on methods, validation, benchmarking, uncertainty, explainability, data requirements, transferability, and real-world applications and field deployments
- **Software or specific tutorials**, PV technical working group meetings. Submit your proposals.

Technical abstracts (Max 300 words + 1 figure in a word or pdf file) should include **title, author list, organization name**, and a **brief technical description** of the contribution here: <https://abstracts.pvpmc-workshops.org/>. A short summary is also required, which will be included in the program. Note that all presentations (including from sponsors) must be technically focused (**no sales pitches**). We are using a new abstract submission system this year, please reach out to admin@contact.pvpmc-workshops.org, if you face any issues.

Abstracts are due: **December 18, 2026**

Student Scholarships and Travel Grants

Students enrolled in an accredited college or university degree program (undergraduate or graduate) may be eligible for free registration and a travel grant that would help to offset travel and lodging costs. To be considered, the student must submit a **technical abstract** for a presentation as well as a **research statement (Max 1-page)** that includes the following information:

- Name and contact information of student
- School name and name and contact information of academic advisor or department administrator.
- Expected degree and graduation date
- Brief statement describing research interests and experience (submit with abstract as separate file)