

Call for Technical Abstracts

Submission Guide

Call for Abstracts Opens: March 5, 2019

Deadline: 11:59 pm Pacific Time, April 25, 2019

Notification: On or before May 24, 2019

On behalf of the Solar Energy Industries Association and the Smart Electric Power Alliance we are pleased to announce that we are currently accepting abstracts for presentation at The Technical Symposium September 23-26, 2019. All abstracts presented for oral or poster presentation will be published in the *Proceedings of The Technical Symposium at Solar Power International* and receive an appropriate citation and *CrossRef DOI number*. Abstracts should represent technical, academic or scientific research and development in the following categories: Solar Energy (Photovoltaics), Energy Storage or Smart Energy Technologies. Additional information on submission topics can be found on page 5-7 of this guide.

All abstracts must be submitted via the online submission module. Submission instructions can be found on the next page.

Presentation Submission Policies

- The presenting author must accept full responsibility for the submission and presentation of the abstract, and retain full copyright of his/her presentation, and/or full paper. By submitting a presentation, presenting authors consent and authorize SPI to publish biographical and presentation information in any conference publications, including *The Proceedings of The Technical Symposium at Solar Power International*.
- Once your presentation abstract has been submitted, you may continue to revise it through the submission deadline on April 25, 2019 at 11:59 pm Pacific Time.
- SPI reserves the right to reject any presentations for failure to comply with submission policies. Due to the large number of presentations received for this conference, SPI is unable to provide feedback on presentations not accepted for presentation.

Submitter Responsibilities:

- Notify SPI organizers of any changes, additions, or corrections immediately. Accepted presenters who are not able to attend must notify staff immediately. Replacement presenters may be suggested. However, staff reserves the right to modify or cancel content based on changes.
- **Presenters must register for SPI by August 30, 2019.** Speakers may register for any pass; we offer speakers a deeply discounted full conference pass.
- **Submit abstracts through SPI's Online Submission Module. Instructions can be found on the next page of this guide.**

Step-by-Step Submission Guide

STEP 1: Log in or Create an Account

If you have submitted a presentation for SPI in the past three years, please use your previous credentials. If you've forgotten, the system will send you a reminder via the forgot your password tool. If you are new, please create an account and then follow the instructions to set up a login and change your password.

STEP 2: Start a New Abstract

- Enter in an abstract title (150 character maximum)
Do not use all uppercase letters
- Select submission type: Technical Abstract is your only option

STEP 3: Presenter Profile

Please enter the abstract presenter's contact and professional information. This information will be used by SPI as it is entered.

It is imperative that the email address you enter is correct, as all correspondence regarding submissions will be sent to this email address through the online submission module.

Step-by-Step Submission Guide

STEP 4: Submit the Content of Your Abstract (450 Word Limit)

- Text must be single-spaced and in upper and lowercase letters.
- Abstracts should follow the following format:
→ Aim/Objective: text → Methods: text → Results: text → Conclusion: text
- Avoid reference to institution names, locations, or funding sources in the abstract.
- All abstracts must be submitted in English only.
- Please carefully check all text for errors before submission as the quality of your abstract in this regard may significantly affect the outcome of the reviewers' evaluation and scoring of your abstract. No edits will be allowed in submitted abstracts for typing, spelling, or grammatical errors after February 9th.

STEP 5: Presentation Details

Submission Category (select one): Solar Energy (Photovoltaics), Energy Storage or Smart Energy Technologies. Please see the next page for 'suggested topics' for each category.

Keywords: List not more than four keywords describing your research.

Previous Submission: Identify if this abstract has been submitted for presentation/publication at another conference.

Suggested Topics for Solar Energy (photovoltaics)

Advanced and New Materials for Photovoltaic Cells and Modules:

- Nanotechnologies
- Silver nanowire transparent electrodes
- Perovskite solar cells and modules versus silicon
- Tandem solar cells and modules

Silicon Photovoltaics:

- Material characterization and treatment
- Silicon crystallization
- Metallization
- From ingots to wafers
- Production innovations
- Solar-grade silicon properties and specifications
- Testing and performance
- Heterojunction solar cells
- LID in PERC
- Mono versus multi crystalline silicon

Increasing Module Performance:

- Improving light management
- New module designs (half cells, double glass, bifacial)
- Advanced measurement techniques
- III-V multijunction solar cells
- Organic and perovskite photovoltaic devices
- Smart Inverters, IEE 1547

Manufacturing, Installation, Codes, and Standards in PV Systems:

- Automatization
- Balance of system components
- Simulation tools and system failure analysis
- Thin-film photovoltaics
- Micro-inverters
- Module recycling
- Cleaning solutions for solar plants – anti-soiling catalysts
- Development and integration of quality control methods
- Improvement of inverter lifetime
- Mitigation of degradation mechanisms
- Resilience
- Installation

Suggested Topics for Energy Storage:

Battery Chemistry:

- New and next-generation battery types
- Lead-based batteries
- Liquid metal batteries
- Li-ion batteries

Improvement of Volumetric Energy Density of Electrochemical Capacitors:

- Asymmetric supercapacitors
- Charge storage mechanisms
- Cell performance
- Cycling stability

New EC Capacitor Products:

- Anode and cathode-active materials
- Cell-balancing and fuel gague methods

Battery Design, Engineering, and Progressive Battery Manufacturing:

- Measuring capacity fade and capacity loss mechanisms
- Environmentally clean production of battery materials
- Recycling
- Advances and remaining challenges in electrolytes
- Challenges of cell stacking
- On-site hydrogen electrolysis
- Hybrid and electric vehicle technologies
- Off-grid and grid-connected microgrid systems

Codes, Standards, and Battery Safety:

- Stimulation and reliability prediction
- Safety, aging, and abuse tests – standards and validation methods
- Protective functions and shutdown systems
- Field eXperiences

Suggested Topics for Smart Energy Technologies

Smart Systems for Energy Security, Data Protection, and Security

Virtual Power Plants

Standardization of Energy (Consumption)

Data Delivery

Distributed Energy Resource Management Systems (DERMS)

Innovative Technical Solutions for the Energy Transition

Smart and Efficient Buildings and Cities

Home Energy Management Systems (HEMS: IEC, Zigbee, Zwave)

Smart Metering

E-Mobility, ICT, and Charging Infrastructure/Standards

Smart Electric Grids

Smart Software Solutions for Distributed Energy Storage

Transactive Energy

Review Process

Abstract Review Process:

- All submitted abstracts will be peer reviewed by at least three reviewers.
- In evaluating each abstract, reviewers will be unaware of authors or institutions involved with the work described in the abstract. Abstracts will be suitably anonymized before being sent out to reviewers.
- The reviewers will assign accepted abstracts either to podium (oral) or poster presentation.

Evaluation questions include:

- The proposed abstract provides relevant, timely, rigorous, and applicable content.
- The quality of the content meets or exceeds the work product of a post-graduate level in the specific discipline.
- The submission adheres to the submission guide requirements.
- The abstract presents new or unique information in the specific discipline.
- I would recommend this presentation as an attendee interested in the subject matter.

Note: While we are pleased when a speaker chooses to be a sponsor or exhibitor, a speaking slot is never guaranteed for exhibitors or sponsors. All accepted presentations are based on overall merit and/or slot availability.

Frequently Asked Questions

How long is each oral presentation slot?

15-20 minutes

Are there preferred topics for submission?

Yes, you can find them on page 5, 6, and 7 of this submission guide.

Are there any fees for submitting an abstract or speaking at SPI?

There are no additional costs for submitting an abstract. Accepted presenters must register for the conference by August 30, 2019 and will receive a significantly discounted Full Conference pass.

Am I required to register for SPI to be included in The Proceedings...?

Yes, all presenting authors must be registered for the conference to be included in *The Proceedings...* The deadline for presenting author registration is August 30, 2019.

May I submit an abstract that has been accepted and presented at another conference?

If your abstract has been submitted for another conference and has been accepted for presentation, then it should not be submitted for presentation. If the abstract was rejected or has been amended with new information since a previous presentation, it may be submitted.