

# Call for Technical Abstracts

## Submission Guide

**Call for Abstracts Opens:** December 1, 2017

**Deadline:** 11:59 pm Pacific Time, February 9, 2018

**Notification:** On or before April 30, 2018

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 24-27, 2018. 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.

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# 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 February 9, 2018 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 31, 2018.** 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)

## New Materials | Beyond Silicon:

- Nanotechnologies
- Off the periodic table - hybrid crystalline compounds
- Silver nanowire transparent electrodes
- Perovskite solar cells and modules versus silicon
- Tandem solar cells and modules

## Silicon Photovoltaics:

- Overcoming theoretical boundaries
- 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:

- Black carbon nanotubes/photon recycling
- Improving light management
- New module designs (half cells, double glass, bifacial)
- Advanced measurement techniques
- III-V multijunction solar cells
- Organic and perovskite photovoltaic devices

## Manufacturing & PV Systems:

- Balance of system components
- Simulation tools & 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

# Suggested Topics for Energy Storage:

## Battery Chemistry:

- New and next-generation battery types
- Air based batteries
- Lead-based batteries
- Liquid metal batteries
- Salt water battery
- Zinc batteries
- Aluminium-ion batteries
- Li-ion batteries
- Redox-Flow (long duration storage)
- Electrochemical capacitors

## Improving Efficiency of Lithium-Ion Batteries in Safety, Cycles and Charging Time:

- Asphalt anodes
- Prevention of dendrites
- Simulation & reliability prediction
- Safety, aging & abuse tests – standards and validation methods
- Protective functions & shutdown systems
- Field experiences
- Electronics for non-invasive brain stimulation for energy storage

## Battery Design, Engineering & Progressive Battery Manufacturing:

- Stable tri-anion
- 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
- Automatization (copper-free production lines)

# Suggested Topics for Smart Energy Technologies

## Energy Independence (Smart Cities and Communities)

- Homes Energy Management Systems (HEMS)
- Standardization of energy (consumption)
- Smart electric grids
- Data protection & security
- Internet of Things (IoT)

## Smart PV Plants (PV + Storage + Smart Tech)

- Smart software solutions for distributed energy storage
- Unmanned O&M
- Virtual power plants

## Electric Vehicles, ICT and Charging Infrastructure

## Artificial Intelligence

## Machine Learning

## Solar forecasting

## Load forecasting

## DER Scheduling and Dispatching

# 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 6, 7, and 8 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 31, 2018 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 31, 2018.

## ***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.