

# Welcome and Introduction to the Workshop

7<sup>th</sup> PVPMC Workshop on  
Energy Rating and Module  
Performance Modeling  
Lugano, Switzerland  
March 30-31, 2017

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# Background

- Welcome to the 7<sup>th</sup> PVPMC Workshop!
- Aim is to bring together international experts on PV performance modeling and monitoring to discuss new trends and present research results to the community.
  - Focus on technical issues. Information transfer between researchers and industry
  - Support discussion, networking, and partnerships
  - Identify gaps and opportunities for improving models (and technology)



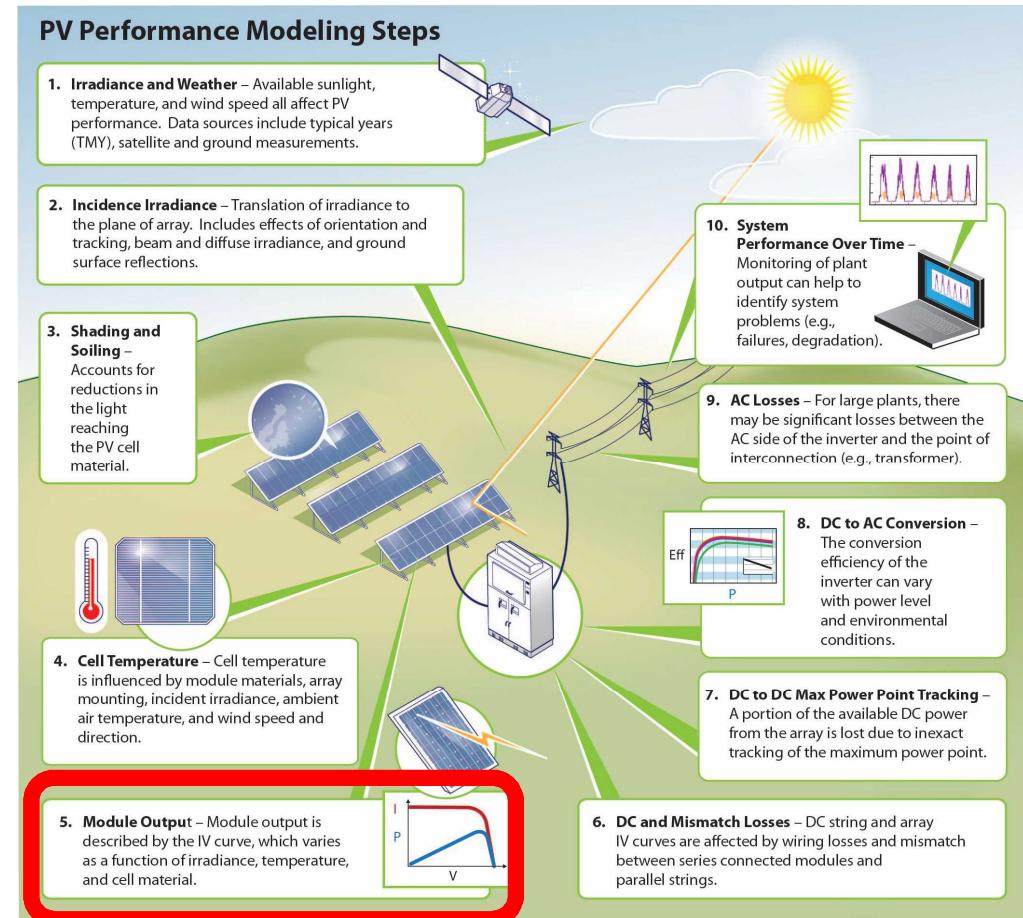
## Previous and Future Workshops

2010	Albuquerque, NM
2013	Santa Clara, CA
2014	Santa Clara, CA
2015	Cologne, Germany
2016	Santa Clara, CA
2016	Freiburg, Germany
2017	Lugano, Switzerland
2017 (9-10 May)	Albuquerque, NM

# PV Performance Modeling Landscape

PV performance is modeled by following the flow of energy from the sun to the meter.

- Each step in the journey is represented with a model.
- This workshop is focused on PV **Module** Performance and Modeling
  - Module IV curve as a function of:
    - Irradiance
    - Temperature
    - and other factors....



Stein, J. S. and B. H. King (2013). Modeling for PV plant optimization. *Photovoltaics International, Solar Media Ltd. 19th: 101-109.*

# Topics for this workshop



## Day 1

- Energy Rating
  - IEC 61853 parts 1-4
- PV Module Modeling
  - Model updates and comparisons
- Poster Presentations
- Energy Rating survey results
- Conference Dinner

## Day 2

- Cell and Module Calibration Methods and Uncertainties
  - Measurement method uncertainties
- Energy prediction of new technologies or features
  - BIPV
  - MLPE / shading
  - Bifacial

# Protocols

## ■ Speakers

- Time limits will be enforced!
- Ensure presentations are uploaded well before your scheduled session.
- We would like to be able to post/share presentation materials after the workshop. If there are restrictions, please notify organizers.

## ■ Audience

- Silence cell phones
- Return from breaks on time
- Ask questions
- Participate in discussion sessions
- Meet colleagues and network during breaks



# Thank You and Enjoy the Workshop!



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