



# 7<sup>th</sup> Energy Rating and Module Performance Modeling Workshop

**SUPSI, PVLab  
Canobbio (Lugano), Switzerland  
30<sup>th</sup> and 31<sup>st</sup> March, 2017**

## Introduction

The PVLab of the University of Applied Sciences and Arts of Southern Switzerland (SUPSI), the Physikalisch-Technische Bundesanstalt (PTB) and Sandia National Laboratories are co-organizing the 7th PV Performance Modeling Collaborative (PVMC) Workshop to be held at SUPSI close to the lake of Lugano in Switzerland the 30<sup>th</sup> -31<sup>st</sup> March 2017. The two-day workshop brings together experts from the European Metrology Research Project “Photoclass” and from the IEA PVPS Task 13 working group to discuss and share new and important technical results and issues related to the modeling and energy rating of PV modules. Invited talks will be given from international experts in the field.

## Day 1 (8:45-17:30)

### Session 1. Energy rating

- New energy rating standard (IEC61853 part 1-4)
- Future name plate and datasheet specification (EN50380)
- Energy rating calculation (insides into IEC61853 part 3)
- Possible metrics/labeling for Energy Rating

### Session 2. PV module modeling

- Overview on existing PV module models
- Developers of PV performance software applications will present overviews and technical updates of their models with a look to the new IEC61853 standard.

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### Session 3. Meteorological input parameters

- Reference data sets for IEC61853 part 4
- Spectral data availability and uncertainties
- Irradiance data requirements and measurement uncertainties

### Session 4. Validation and sensitivity studies

- PV module model validation studies
- Propagation of measurement uncertainties
- Results of a blind PV modelling exercise
- Prediction accuracies of different modeling approaches

**Day 2 (9:00-12:30)**

### Session 5. Energy Rating measurements and uncertainties

- Overview on IEC 61853 part 1 and 2
- Presentation of different test facilities and measurement uncertainties
- Round robin results

### Session 6. Energy rating for new technologies or features

- Characterization and modeling of innovative technologies (e.g. bifacial, BIPV, smart modules, ...)
- Lifetime prediction
- Modeling of shadow losses

**A poster area will be available for workshop participants who would like to present their work. A short abstract will be requested with the registration.**

### Registration

The participation at the workshop is free of charge due to support of the EMRP project PhotoClass ([www.photoclass.ptb.de](http://www.photoclass.ptb.de)).

A conference dinner (optional) will be organized on March 30th, 2017. The fee for the conference dinner is 81 CHF/person.

<http://www.form-dacd.app.supsi.ch/form/view.php?id=30639>

**Open for registration: 01 Feb – 28 Feb 2017**

### How to arrive

SUPSI - Dipartimento ambiente costruzioni e design  
Campus Trevano , 6952, Canobbio, Switzerland



From the City Centre or from the Lugano-Railway Station (bus-stop “**Stazione FFS**”) to **SUPSI**, take **bus TPL line 4** to the bus-stop “**Centro Studi**”.

Please note that parking at SUPSI is very limited and is only available by previous reservation. We suggest you therefore to reach SUPSI by public transport!

### Contact information

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