

## Workshops

(All workshops will be held in English)

Friday, February 26th

### Workshop for Students

13:45 - 17:00 Hands-on workshop with TRNSYS  
Software will be provided for the workshop

Students will be able to choose their level of expertise.

### Advanced Workshop

Register at [hotline@transsolar.com](mailto:hotline@transsolar.com)

13:45 - 15:15 **Short introduction to daylight simulations**  
**Presentation of daylight simulation approach in TRNSYS 18**

#### Thermal and daylight simulation of a standard office building:

- Setting up geometry and daylight sensor
- Integration of daylight model in TRNSYS
- Setting up controls for artificial lighting considering daylight results

15:15 - 15:30 Break

15:30 - 17:00 **Short introduction to complex fenestration calculation**

#### Simulation of a standard office building with the complex fenestration model:

- Creating a BSDF glazing system in LBNL WINDOW 7.3
- Exporting and preparing window data for TRNSYS
- Integration of complex window in TRNBuild



**TRNSYS EXPERIENCE**  
SEMINAR 2016



## Conference and Workshops

On 25th and 26th of February 2016  
At the University of Kaiserslautern

Language: English

### Free Workshop for Students

on Feb 26th (Computer Pool, 13:45 - 17:00)

#### An Introduction to Building Simulation

Prof. Dr.-Ing. Philippe André, Samuel Hennaut, Fabien Claude,  
University of Liège

(full – students can be placed on wait list)

### NEW: Advanced Workshop

on Feb 26th (Computer Pool, 13:45 - 17:00)

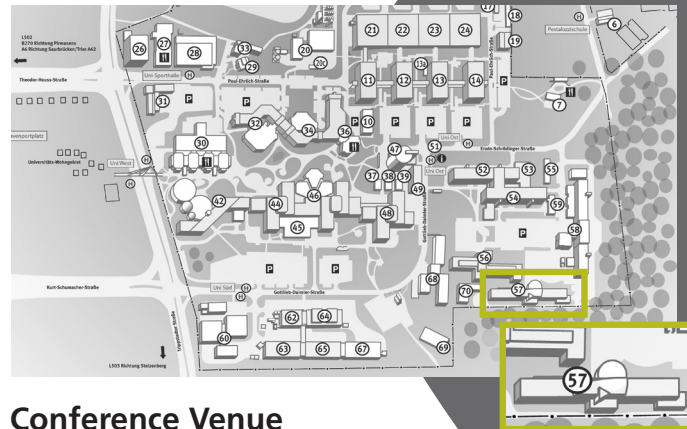
#### Introduction to Daylight Simulation and the Modelling of Complex Fenestration Systems

Dipl.-Ing. Jochen Lam, Transsolar

A work station with TRNSYS will be provided to participants  
(Minimum number: 6 Maximum number: 12)

Fees: 295,00 € plus VAT

Register at: [hotline@transsolar.com](mailto:hotline@transsolar.com)



## Conference Venue

Technische Universität Kaiserslautern  
Rotunde, Building 57  
Erwin-Schrödinger-Straße  
67663 Kaiserslautern  
Germany



# TRNSYS EXPERIENCE

SEMINAR 2016

The 2016 TRNSYS Experience Seminar is the second edition after a first successful event at Nancy in May 2015. This year, the seminar will take place at the University of Kaiserslautern on February 25-26, 2016.

The TRNSYS Experience Seminar focuses on case studies and the exchange between research and practice. The seminar provides an excellent opportunity to learn about the current state of research, the latest developments in the field of simulation software and the use of TRNSYS for engineering and consulting services.

## Organization

**Professor Dr.-Ing. Sabine Hoffmann**  
University of Kaiserslautern (GERMANY)

**Professor Dr.-Ing. Philippe Andre**  
Université de Liège (BELGIUM)

**Professor Dr.-Ing. Riad Benelmir**  
Université de Lorraine (FRANCE)

**Ass.-Prof. Dr.-Ing. Frank Scholzen**  
Université du Luxembourg (LUXEMBOURG)

**Dr.-Ing. Julien Carton**  
ICSEED – Research and Consultancy (FRANCE)

## Registration

Please use our website to register online:  
<http://trnsysexperience.eu/registration>

## Conference Fees

Standard fees: 270 €  
Students of the University of the Greater Region: Free

## Conference Program

### Thursday, February 25th

#### 10:00 – 11:00 OPENING SESSION

Chair: Sabine Hoffmann

##### Welcoming speech

**Prof. Dr.-Ing. Norbert Wehn**  
Vice-president of University of Kaiserslautern

##### Keynote talk by Marion Hiller (Transsolar)

11:00 – 11:30 Coffee break

#### 11:30 – 13:00 FIRST SESSION

Chair: Philippe André

- 1-1. Simulation versus Reality: a case study on a net zero energy office building  
*Ewen Raballand (ETAMINE)*
- 1-2. Simulation of a complex HVAC system including a Micro CHP plant  
*Vincent Cousin (University of Liège)*
- 1-3. Optimisation of a solar combisystem including a thermochemical storage  
*Samuel Hennaut (University of Liège)*

13:00 – 14:00 Lunch break

#### 14:00 – 15:30 SECOND SESSION

Chair: Sabine Hoffmann

- 2-1. TRNSYS Toolbox for Rhino / Grasshopper  
*N.N. (Transsolar)*
- 2-2. New Feature: Daylight Simulation Integration in TRNSYS  
*Jochen Lam (Transsolar)*
- 2-3. TRNSYS Building and System Simulations for Hardware-in-the-loop test benches  
*Arno Dentel, Julian Buderus (Technische Hochschule Nürnberg)*

15:30 – 16:00 Coffee break

#### 16:00 – 17:30 THIRD SESSION

Chair: Frank Scholzen

- 3-1. Modeling of public swimming pools  
*Vincent Coste (AMOES)*
- 3-2. Thermal simulation in very extreme conditions with application to a space vessel  
*Philippe André (University of Liège)*
- 3-3. Heat losses in the distribution network of multi-family houses  
*Jens Glembin (Institut für Solarenergieforschung, Emmertal)*

### Friday, February 26th

#### 09:00 – 10:30 FOURTH SESSION

Chair: Riad Benelmir

- 4-1. Investigation of different strategies of refurbishment and comparison of their energy savings  
*Klara Bauer, Angèle Tersluisen (University of Kaiserslautern)*
- 4-2. Case study of a wooden-house: impact of mineral wool vs wood fiber insulation on energy & thermal comfort  
*Julien Carton (ICSEED – Research and Consultancy), Frank Scholzen (University of Luxembourg)*
- 4-3. Simulation and Validation of PCM-chilled Ceilings  
*Modar Yasin, Felix Klinker, Helmut Weigl (ZAE Bayern)*

10:30 – 11:00 Coffee break

#### 11:00 – 12:30 FIFTH SESSION

Chair: Frank Scholzen

- 5-1. Emulation of different energy systems using TRNSYS in connection to a real scale laboratory  
*Elisabeth Davin (University of Liège)*
- 5-2. Simulation of a solid absorber in combination with a heatpump  
*Kamyar Nasrollahi, Tilmann Gauer, Matthias Pahn (University of Kaiserslautern)*
- 5-3. PV HEAT - Simulation and experimental validation of a photovoltaic domestic hot water system  
*Mathias Kimmling, Sabine Hoffmann (University of Kaiserslautern)*
- 5-4. Simulation of a solar assisted tri-generation system for non-residential buildings  
*D'Antoni Matteo (EURAC Bolzano)*

#### 12:30 – 12:45 CLOSING SESSION

P. André, R. Benelmir, S. Hoffmann, F. Scholzen