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# 12<sup>th</sup> SUMMER SCHOOL ON ENGINEERING DESIGN RESEARCH

## June 27<sup>th</sup> – July 3<sup>rd</sup> and August 15<sup>th</sup> –21<sup>st</sup>, 2010

**Deadline for application: March 16<sup>th</sup>, 2010**  
**Latest notification of acceptance: April 1<sup>st</sup>, 2010**

The aims of the Summer School on Engineering Design Research are to make PhD students who are working on topics related to Design Science better qualified and equipped for their research by (i) helping them select a theoretical foundation and develop a research approach, and (ii) encouraging discussion and collaboration.

The objectives are to provide the participants with:

- insight into existing design theories and models to enable them to select a suitable theoretical foundation;
- an overview of design research methods to enable them to develop the most appropriate approach for their own research;
- an interactive environment in which individual research topics are presented to and discussed with other participants and the summer school lecturers;
- the opportunity to get to know and learn from other researchers and develop long-term collaborations.

To achieve the objectives, participants are actively engaged in the summer school: the emphasis is on discussions and exercises based around the research projects of the participants.

### **Prerequisites**

The summer school is suitable for PhD students who have decided on a research topic, have undertaken a literature study, have formulated first aims and objectives and have an initial plan of work. For a three-year PhD, this will normally be at the end of the first year; for a four- or five-year PhD, at the end of the second year.

The maximum number of participants is 22. In case of over-subscription the number of participants of a single university will be limited.

**Participants will have to attend both weeks.**

The course language is English.

### **Programme**

*Preparation for Week 1:*

Participants have to prepare **a short written introduction** to their work consisting of:

- research topic,
- introduction to the problem to be solved,
- objectives,
- main research question(s),
- outline plan,
- expected outcome,
- a picture of yourself.

This introduction (preferably one page A4) is to be uploaded to the page [www.ssedr.org](http://www.ssedr.org) (user-ID "SSEDR" [in capitals], password "\*\*\*\*\*") and/or to be emailed to all participants and lecturers by June 7<sup>th</sup>, 2010. All participants are expected to download and read these introductions prior to the summer school and to bring a copy of all introductions (a binder will be provided by us). A **maximum of 3 slides or transparencies for a presentation of 5-7 minutes** has to be prepared.

### *Outline of Week 1:*

Introduction of participants through presentation of their projects; the nature of design and design research (discussion); design exercise; formulating research questions (group work); analysing a design process (protocol analysis); presentation of findings; research questions / hypotheses (discussion); concepts, models, schools and theories of design and designing; the nature and use of theories (discussion and lecture); identifying areas of relevance and own contribution (group work and presentation); defining research focus (lecture, group exercise, presentation).

### *Preparation for Week 2:*

Participants are requested to prepare a **poster (A2)** containing:

- background/problem statement,
- goal and research questions/hypotheses and their relationships,
- areas of relevance and own contribution,
- research approach,
- expected results,
- a picture of yourself.

The poster has to be published on the website ([www.ssedr.org](http://www.ssedr.org)) **at the latest by July 26<sup>th</sup>, 2010**. The poster and 25 A4-copies have to be brought to the summer school, together with a **maximum of 2 slides or transparencies** to introduce your progress.

### *Outline of Week 2:*

Presentation of posters and selection of best posters; research approaches and methods (discussion); research types and research methodology; planning research (exercises and presentations); descriptive design research (data collection, analysis, interpretation, drawing conclusions); developing knowledge, methods, models, tools (lectures and discussions); visualisation research objects (exercise and presentations); evaluating research results; writing a thesis or other publication.

### *Final report:*

Within one month after the course, the participants are requested to write a short report reflecting on the course and on the effects of the course on their own research.

## **Dates and Venues**

Week 1    Arrival Sunday afternoon, June 27<sup>th</sup>, 2010  
          Departure Saturday morning, July 3<sup>th</sup>, 2010

Location: Kloster Lichtental, near Baden-Baden, Germany (travel details will follow)

Week 2    Arrival Sunday afternoon August 15<sup>th</sup>, 2010  
          Departure Saturday morning August 21<sup>st</sup>, 2010

Location: Near Gothenburg, Sweden (details will follow)

If you are non-European, please check whether you need a visa for Germany or Sweden!

## **Fees**

The total fee including full-board will be 900 Euro. This includes the following for *both* weeks: accommodation from Sunday until Saturday, dinner on the date of arrival, all meals from Monday to Friday, breakfast on Saturday, refreshments during the breaks, hand-outs, and the book "DRM, a Design Research Methodology". Only the costs of travelling and insurance are not included.

The costs for running the summer school are covered by support from the Technical University of Denmark, Université du Luxembourg, Technical University of Ilmenau, and the host university of the second week, Chalmers University of Technology.

## Certificate of participation

All participants will be registered at the Technical University of Denmark, from which they receive an official certificate. The course leads to 5 ECTS points. Whether or not these points are recognised depends on each participant's university and PhD program.

## Course leaders

- Prof. tekn dr Mogens Myrup Andreasen (Technical University of Denmark)
- Prof. Dr.-Ing. Lucienne Blessing (Université du Luxembourg)
- Prof. Dr.-Ing. Christian Weber (Technical University of Ilmenau, Germany)

## Hosts

1<sup>st</sup> week: Prof. Dr. Lucienne Blessing (Université du Luxembourg, Luxembourg)

2<sup>nd</sup> week: Prof. Dr. Johan Malmqvist (Chalmers University of Technology, Gothenburg, Sweden)

## Applying

Send an email to all three course leaders: Mogens M. Andreasen; Lucienne Blessing and Christian Weber (emails see below)

The email should contain:

- a few lines about your research topic;
- the date on which you started your PhD,
- the year when you plan to finish;
- the progress you have made thus far in your research (literature study, research questions, initial model, etc.).

You will be notified by email before April 1<sup>st</sup> about your acceptance. After that we will sent further details about payment, travel, etc.

## Contact

For further information, please contact:

Lucienne Blessing

[lucienne.blessing@uni.lu](mailto:lucienne.blessing@uni.lu)

Mogens Myrup Andreasen

[mmya@man.dtu.dk](mailto:mmya@man.dtu.dk) ; [myrup@youseepost.dk](mailto:myrup@youseepost.dk)

Christian Weber

[christian.weber@tu-ilmenau.de](mailto:christian.weber@tu-ilmenau.de)

See our website [www.ssedr.org](http://www.ssedr.org) for pictures of past events and alumni information.