# Uncertainty in Electricity Markets and System Operation

DTU Lyngby, Denmark, 4-8th July 2016

### **Programme description**

Participants of the course will:

- Gain practical experience with stochastic, **Lectures by**: robust and interval optimization and decomposition techniques applied to energy systems.
- See relevant examples of these techniques used in cutting-edge research.
- Sharpen their peer review and feedback skills by reviewing other participants' • work.

Students are expected to have experience • with formulating and implementing optimization problems (e.g. in GAMS, Python or Matlab). Experience with power system operation and/or market clearing will make the sessions easier to follow.

#### **Tutorials by:**

- S. Jalal Kazempour (DTU)
- Hrvoje Pandžić (University of Zagreb)
- Pierre Pinson (DTU)
- Georg Pflug (University of Vienna)

- Miguel Anjos (Polytechnique Montréal)
- José Manuel Arroyo (University of Castilla-La Mancha)
- Anthony Papavasiliou (Université Catholique de Louvain)
- Mohammad Shahidehpour (Illinois Institute of Technology)
- Juan-Miguel Morales (DTU)
- Salvador Pineda (University of Copenhaaen)

#### Registration

Open to all: MSc students, Phd students and industry. Limited number of spaces available. Please register by sending an e-mail to cee-summerschool@elektro.dtu.dk. We will then send confirmation and payment information.

Application deadline: May 15<sup>th</sup>, 2016

#### Credits

We will issue EES-UETP-verified certificates for participation and workload of 2.5 ECTS credits.

#### Fees

**EES-UETP** members: EUR 500 Students: EUR 500 Non-students: EUR 850 Fees cover breakfast, lunch and social events (2x). Accommodation from Sunday 3rd of July to the morning of Sunday 10th of July is available for an additional fee of EUR 100.



**Schedule** 

# **Location and arrival**

## **Organizers**

	8 - 12	13 - 17
Monday - Tuesday	Tutorials and exercises	
Vednesday - Thursday	Lectures	Project work
Friday	Project presentations and peer review	

Lyngby is located 30 min north of Co- S. Jalal Kazempour (DTU) penhagen, and easily accessible by pub- Pierre Pinson (DTU) lic transport from Copenhagen Airport or Athanasios Papakonstantinou (DTU) Copenhagen Central Station.

Tue V. Jensen (DTU) Christos Ordoudis (DTU) Lesia Mitridati (DTU)

For more information, contact us at: cee-summerschool@elektro.dtu.dk or visit http://bit.ly/DTUCEESummerschool





**EES-UETP Electric Energy Systems University Enterprise Training Partnership**