

## CIGR-AgEng 2016 2nd International CFD Symposium in Agriculture



**SPECIAL PARALLEL CONFERENCE (SPC-01)**  
**Aarhus University, June 26-29, 2016**

### **SPC-01: Second International Symposium CFD Applications in Agriculture**

Computational Fluid Dynamics (CFD) has become a widely used and highly valued engineering tool among the agricultural, environmental and food industries with ever more researchers using the technology to help them study the air quality, design the system and control climates inside greenhouses, livestock houses and feed storage facilities. Over the past decade, too, agricultural engineers have used CFD to help producers optimize the systems that produce renewable energy, and most recently, CFD has also been used to analyse the drift patterns of sprayed pesticides and the dispersion of dust and the noxious gases emitted from agricultural production systems.

The First International Symposium on CFD Applications in Agriculture, held during the CIGR-AgEng 2012 International Conference of Agricultural Engineering, was a success by all accounts, so we are very happy to announce the Second International Symposium CFD Applications in Agriculture, to be held in 2016.

This Second International Symposium will provide a forum for discussing CFD methodology, modelling techniques and validation procedures, as these apply to the agricultural, environmental and food industries. Symposium will also provide an opportunity to share research experiences and to promote networking among those attendees who are currently using CFD to simulate real-life conditions and analyse and evaluate data.

Selected research papers delivered during the Symposium will be recommended for publication in special issues of the *ISHS e-Journal* and in *Computer and Electronics in Agriculture*.

Chair: Guoqiang Zhang

Symposium Co-Chairs: Thomas Bartzanas; Christopher Choi; Murat Kacira; In-Bok Lee

Scientific Committee: Thomas Bartzanas; Bjarne Bjerg; Christopher Choi; Hicham Fatnassi; Murat Kacira; In-Bok Lee; Tomas Norton; Guoqiang Zhang

**Suggested technical topics include, but are not limited to:**

**CLIMATE AEROLICS**

- Controlled environment agricultural systems
- Crop and livestock production, aquaculture systems, and algae production
- Cooling and refrigeration
- Storage systems and facilities

**ENVIRONMENTAL AEROLICS**

- Atmospheric diffusion
- Particles (dust, water droplets, spores)
- Odours, gas emissions, etc.

**ENVIRONMENTAL HYDRAULICS**

- Manure storage and stirring, aerobic/anaerobic digestions
- Wastewater recycling, etc.

**MECHANICAL (COMPONENT) DESIGN AND PERFORMANCE**

- Fans, ventilators, ducts, nozzles, and pumps
- Energy production/exchange systems

**FOOD ENGINEERING AND PROCESSING**

- Drying, heating, cooling, phase changes, etc.