

Workshop »Human-Centered Energy Management«

7th to 11th of July 2014
at Lakeside Science & Technology Park

Introduction

An inter-faculty research field "Energy Management and Energy Technologies", staffed by academics from a wide range of disciplines, has recently been established at the Alpen-Adria University Klagenfurt (AAU Klagenfurt). Research efforts focus on energy management and energy innovation, networked and decentral energy systems. Together with the Faculty of Technical Sciences (TeWi), the Faculty for Management and Economics (WiWi) and the Faculty of Interdisciplinary Studies (IFF), this new research area will be further developed in cooperation with external partners such as the Lakeside Park.

The Lakeside Park is a platform for cooperation between enterprises and university institutions in the information and communication technology (ICT) sectors. A place of interdisciplinary research and development, training, production and services. The focus of the Lakeside Park is on selected topics of information and communication technology and complementary technologies such as energy systems. In the Interreg IV projects "Smart Energy" and "Efficient, Effective, Smart" the Lakeside Park establishes inter-regional contacts to strengthen collaborative research and development. Therefore, the Lakeside Park and the AAU introduce this novel interdisciplinary workshop with focus on "Human Centered Energy Management".

Human-Centered Energy Management

To ensure an efficient production, supply and consumption of energy, it is necessary to introduce novel technologies. Energy monitoring units, new smart control and managing techniques shall improve energy efficiency in the smallest entities of the common power grid – the Smart Building with its inhabitants and its neighborhood. In that respect the individual human being plays a crucial role for energy management tasks. On the one hand it is necessary to improve the energy efficiency of the customer's home to reduce energy consumption and costs. On the other hand also the decrease of environmental pollution by optimal utilization of energy resources is a major task of future energy systems.

The proposed workshop "Human Centered Energy Management" takes up these tasks and tries to identify problems and solutions for human centered energy management tasks in an interdisciplinary manner.

Format and Objectives

The aim of the workshop is to give regional experts, such as local professors and young researchers of the AAU, the opportunity to discuss and elaborate ideas with world-wide experts and to introduce and to discuss further ideas in an interdisciplinary setup. Therefore, participants with academic backgrounds and an interest on novel smart energy management systems as well as companies and research institutes are welcome to present and to discuss their research tasks and ideas.

The workshop will have a dedicated "industry day" providing the companies a platform to introduce their problems and to elaborate possible solutions and ideas with experts in the field of energy systems from different disciplines.

The general format of the workshop lasts one week with key-speaker inputs and group work with discussions and presentations.

Therefore, the event provides an excellent platform for scientific exchange, networking, establishment of international collaboration and the initiation of joint research projects.

Addressed Topics

- ICT solutions and approaches for smart home management and systems for integrated energy management.
- Integration of smart and legacy appliances, renewable energy sources and storage systems in buildings to improve energy efficiency and awareness of inhabitants.
- Identification, modeling and simulation of energy systems and human behavior
- Energy data analysis and feedback approaches and behavior influencing information systems
- Economics and law aspects of human centered energy managements systems in respect to smart homes, smart metering and energy data analysis as well as for renewable energy production and storage systems.
- Market and business models for ICT-based energy services designed to improve the recent power grid and homes.

Preliminary Agenda

- Monday, 07.07.2014, 09:30 to 17:00
 - Registration
 - Keynote
 - Group-work on focused topics
 - Group-work presentation and discussion
- Tuesday, 08.07.2014, 09:00 to 17:00 "Industry Day"
 - Keynote
 - Presentations of Companies
 - Group-work on Company topics
 - Group-work presentation and discussion
- Wednesday, 09.07.2014, 09:00 to 13:00, from 15:00 social event
 - Keynote
 - Group-work on focused topics
 - Group-work presentation and discussion
 - Social Event "Schau-Kraftwerk Forstsee"
 - Guided Tour
 - Keynote
 - Dinner
- Thursday, 10.07.2014, 09:00 to 17:00
 - Keynote
 - Group-work on focused topics
 - Group-work presentation and discussion
- Friday, 11.07.2014, 09:00 to 13:00
 - Keynote
 - Future collaboration panel
 - Round-up