ENERGIA SOLARE TEST E RICERCA
LABORATORI DI FISICA TECNICA AMBIENTALE
UNIVERSITÀ DEGLI STUDI DI ROMA 'TOR VERGATA'

Università di Roma Tor Vergata

Giovedì 19 Marzo ore 15:00 Aula Archimede

SDU PVPower Project

Kasper Paasch
Mads Clausen Institute, University of Southern Denmark

Kasper Paasch from the Mads Clausen Institute, University of Southern Denmark, will give a presentation of the Danish PVPower project which has focus on the optimization of the annual energy production of large PV plants. The project is done in close cooperation with the inverter manufacturer Danfoss Solar Inverters A/S in Denmark. Large PV plant will occupy large areas and short term forecast due to the effect of moving clouds seems relevant. Special focus in on the fast dynamics observed due to moving clouds in plants equipped with string inverters compared to the use of central inverters as well as the effect of uneven area topography. A comprehensive measurement setup has been developed and implemented, obtaining data from numerous inverters/panels in 1 sec. intervals. Parts of a 2 MW plant have been modified to compare the difference between the string inverter and the central inverter concept. The ESTER facility is used to test the characteristics of a representative solar panel under higher solar irradiance conditions than available in Denmark.

CV of Kasper Paasch

Kasper M. Paasch obtained his Cand. Polyt. degree (MSc. in engineering) from the University of Aalborg in 1991 and his thesis was in the field of acousto-optic interaction in glass. Before that he was trained 6 years as an electronic engineer in the Danish Air Force (aviation and radar systems). From 1991-2009 he was employed as a R&D-engineer/RF-specialist/project manager at Danfoss A/S, Danfoss Analytical A/S and Danfoss Bionics A/S. The activities included silicon micromechanics (design and prototype development), micro fluidic system technologies, ultrasound sensors (distance and flow sensors), laser technology and applications, high-speed electronics, electronics packaging (EC-project management board member) and high-frequency/microwave electronics for data communication and sensor applications, development of environmental/wastewater and medical sensors. From 2009 on he has been employed as a project manager at the Mads Clausen Institute at the University of Southern Denmark, in charge of managing university-industry cooperation projects as well as managing the small PV/power electronics laboratory. Since 2012 he also has been working on a PhD thesis in the area of the optimization of large PV-plant, in close cooperation with Danfoss Solar Inverters A/S. Since 2012 he has been lecturing power electronics at the BSc and MSc level at the Mads Clausen Institute. He further has experience in managing international projects (EC-projects). He is the author/co-author of 8 scientific papers (4 more are under preparation) and is inventor/co-inventor of 6 patents/applications.