Short-term Training for technical staff and scientists

Application of digital technologies for solar-based installations in buildings

Location: Spain – UAL

Date: September 21-22, 2022

Target group: Scientists, engineers and technical staff interested in the applications of solar energy in buildings

Objective: Providing theoretical and practical skills for the optimization of the design and operation of solar installations in buildings using specific digital technologies.

Trainers: Scientists from UAL

The training will include online visits, procedures, standards and best practices theoretical and experimental 'hands-on' experience and cover the following topics:

- Definition of buildings and solar installations as cyber-physical systems: models and digital twins.
- Development and implementation of specific control techniques applied to process and systems in building and solar installations.
- Industrial communications for cyber-physical systems and the Internet of Things
- Design of SCADA (Supervisory Control And Data Acquisition System) in the cloud for solar buildings.

NOTE: This short-term training course will be developed totally online.

Agenda

First day (September 21, 2022)

09:00 – 09:30	**Welcome and presentation. Introduction to CIESOL building**	**TBD**	**30 min**
09:30 – 09:45	**Introduction to the activities of the Modeling and Automatic Control Unit**	**TBD**	**15 min**
09:45 – 11:00	Definition of buildings and solar installations as cyber-physical systems: models and digital twins.	**TBD**	**75 min**
11:00 – 11:30	**--- Coffee break and Networking---**		**30 min**
11:30 – 13:00	Definition of buildings and solar installations as cyber-physical systems: models and digital twins.	**TBD**	**90 min**
13:00 – 14:30	**--- Lunch break ---**		**90 min**
14:30 – 16:00	Industrial communications for cyber-physical systems and the Internet of Things	**TBD**	**90 min**

Agenda
Second day (September 22, 2022)

09:00 – 09:15	**Welcome and presentation**	**TBD**	**15 min**
09:15 – 11:00	Development and implementation of specific control techniques applied to process and systems in building and solar installations	**TBD**	**105 min**
11:00 – 11:30	**--- Coffee break and Networking---**		**30 min**
11:30 – 13:00	Development and implementation of specific control techniques applied to process and systems in building and solar installations	**TBD**	**90 min**
13:00 – 14:30	**--- Lunch break ---**		**90 min**
14:30 – 16:00	Design of SCADA (Supervisory Control And Data Acquisition System) in the cloud for solar buildings.	**TBD**	**90 min**
16:00	**End of meeting**		

MEETING PLACE & ACCOMMODATION

Training place	**Online training**
Contacts for the Training	**Dra. María del Mar Castilla Nieto (mcn910@ual.es)**