



SUMMER SCHOOL 2018

Outcome of the 7th Summer School on "Dynamic methods for whole building energy assessment" organised by the INIVE-DYNASTEE and PSA-CIEMAT in collaboration with CIESOL (Joint Centre University of Almeria-CIEMAT dedicated to research in Solar Energy and its applications), in Almería, Spain. The focus has been more on pragmatic application of developed dynamic calculation techniques to support the analysis of building energy data that is of high importance and can give potentially high value information to utilities and end-users. The focus this time has been on increased complexity and variability, and several approaches have been applied to benchmark data.

Eighteen participants from all over Europe participated in the week-long Summer School. Six lecturers presented in 12 sessions the theory while roughly half of the available time was devoted to practical work on the data made available by the DYNASTEE network. All participants were asked to hand-in before the start some homework, making it possible for the lecturers to adjust their presentations. Most of the problems encountered have been on the dynamic contents of the in-situ measured data and how to convert that in mathematical models. It is known that wind and solar radiation are the most prominent sources of variability when it concerns the assessment of building thermal characteristics. The students were asked to use LORD, CTSM-R and other software to study high quality data produced from a small test-box at PSA that simulated a miniature version of a one-zone building. The presentations by six lecturers dealt with physical processes and sources of uncertainty in measured data as well theoretical background on statistical techniques and how to apply them with CTSM-R to real data. All lecturers were available for instant advice during exercise time. The software used during the week has been divers, ranging from EXCEL, Matlab, R-environment, to CTSM-R and LORD. Software, data and presentations were made available on a USB-stick.

In the middle of the week a visit to the *Plataforma Solar de Almeria* took place followed by a cultural intermezzo to the famous *Alcazaba de Almeria* that appears in many well-known movies. The evening was concluded with a social dinner near the beach.

A follow-up Summer School has been discussed which may take place in June 2019 again in Spain. Follow our organisational progress on the DYNASTEE web-site, www.dynastee.info

