



# ASHRAE HELLENIC CHAPTER

New Student Branch at Technological Education  
Institute of Sterea Ellada

# Technological Education Institute of Sterea Ellada

The **Technological Education Institute of Sterea Ellada** (TEISTE; Greek: Τεχνολογικό Εκπαιδευτικό Ίδρυμα Στερεάς Ελλάδας) is a Greek higher-educational institute, founded in 1983.

It comprises four schools:

- The School of Technological Applications
- The School of Management and Finance.
- The School of Professional Health and Welfare
- The School of Agronomic Technology, Food Technology and Nutrition Technology



# Department of Mechanical Engineering

- ❖ There are two formally declared operational Divisions, namely:

Energy

Construction

- ❖ It also consists of three Directions such as:

Construction

Thermofluids

Environment and Renewable Energy Resources

# Department of Mechanical Engineering

The Department undertakes competitively funded:

- National projects involving collaborations with other Greek Universities
- European projects involving collaborations with other Greek and European Universities

# Energy and Environmental Research Laboratory

Energy and Environmental Research Laboratory was established in 1981 under the title Cooling Provision, Air Conditioning & Alternative Energy Lab.

Director of the Lab is Prof. M. Gr. Vrachopoulos who is specialized in the areas of thermal behavior of buildings and the design of energy systems and applications with emphasis in cooling and air conditioning.

## Areas of expertise:

Renewable Energy Resources (RES) and Energy Conservation in buildings and industry

Heating-Cooling-Air Conditioning & Energy behavior of buildings

Thermal behavior of materials and constructions

Energy and Environmental Technologies

# RESEARCH

**TESSe2b Project - Thermal Energy Storage Systems for Energy Efficient Buildings** is a EC financed H2020 four years project, that develop an integrated solution for residential building energy storage, using solar and geothermal energy, with the purpose of correcting the mismatch that often occurs between the supply and demand of energy in residential buildings.

TESSe2b designs, develops, validates and demonstrates a modular and low cost thermal storage technology based on solar collectors and highly efficient geothermal heat pumps for heating, cooling and domestic hot water (DHW) production.

That is achieved by integrating compact Thermal Energy Storage Tanks with Phase Change Materials (PCM TES) coupled with enhanced Phase Change Materials inside the borehole heat exchangers (BHEs), and an advanced energy management smart self-learning control systems

# About our Student Branch

## Our Goals:

- ❖ Participation in students' competitions
- ❖ Creating an online and an on-site Library for the students
- ❖ Organizing our own seminars
- ❖ Voluntary actions
- ❖ Networking with other international ASHRAE Student Branches
- ❖ Educational trips at research centers/project sites
- ❖ Conducting research projects

# THANK YOU FOR YOUR ATTENTION

## Special thanks

To our Professor :

**Dr. M. Gr. Vrachopoulos**

Our Student Branch Advisor :

**Dr. M. Koukou**

**ASHRAE's HELLENIC CHAPTER**

**And all of you for this opportunity**