SEMINAR ANNOUNCEMENT

Phase Change Materials and its Applications in Thermal Systems

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ABSTRACT

Today phase change materials (PCMs) are widely in-use in thermal systems, such as heating cooling or power generation systems, to minimize the mismatch between supply and the supply. PCMs have also unique advantage to regulate the temperature fluctuations within systems and reduce the energy consumptions that arise from heating/cooling demands. Many different aspects are currently being studied to understand the dynamic behavior of PCM embedded thermal systems. In this short seminar, Drs. Erek and Ezan will overview numerical and experimental studies that they have conducted in the last ten years in the field of phase change materials and its implementations. The seminar will cover (i) development and characterization of PCMs, (ii) energy/exergy analyses of low-temperature latent heat storage systems, (iii) thermal management applications with PCM such as *buildings*, *Li-Ion batteries*, *photovoltaic panels* and (iv) importance of natural convection in the PCM embedded TES units.

DATE
August 27, 2018 (*Monday*) at 13:30 am
LOCATION
xxxxx

Fuel Cell Research Activities at Dokuz Eylul University

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ABSTRACT

Fuel cells are electrochemical devices that convert the energy in the fuel into electricity with high efficiency and low environmental impact. There are different types of fuel cells, which can be categorized according to their operating temperature level. In this seminar, the experimental and theoretical research activities on the development of Direct Methanol Fuel Cell (DMFC) and High Temperature-Proton Exchange Membrane Fuel Cell (HT-PEMFC) conducted at the Dokuz Eylul University will be discussed. The studies on the development of DMFC include manufacturing and testing of DMFCs based on alternative membranes and catalysts. In addition, several mathematical modeling studies on the flowing electrolyte-DMFC (FE-DMFC), which is a novel fuel cell type in which a flowing electrolyte is pumped to the cell to reduce the methanol crossover, will be summarized. At the end of the seminar, a study on the mathematical modeling of a HT-PEMFC based cogeneration system will be presented.

DATE
August 23, 2018 (*Monday*) at 15:00 pm
LOCATION
xxxxx

All the faculty members, research assistants and students are invited.