

Invitation to inaugural lecture

Brian Elmegaard has recently been appointed Professor at DTU Mechanical Engineering. Therefore I would like to invite you to celebrate the appointment with an inaugural lecture by Brian Elmegaard on

***Design of heat pump systems for the future district heating
and industrial energy systems***

The lecture takes place on **November 16th 2018 at 15.00**

DTU Lyngby Campus

Anker Engелunds Vej 1

Building 101A, meeting room 1

The lecture is followed by a reception.

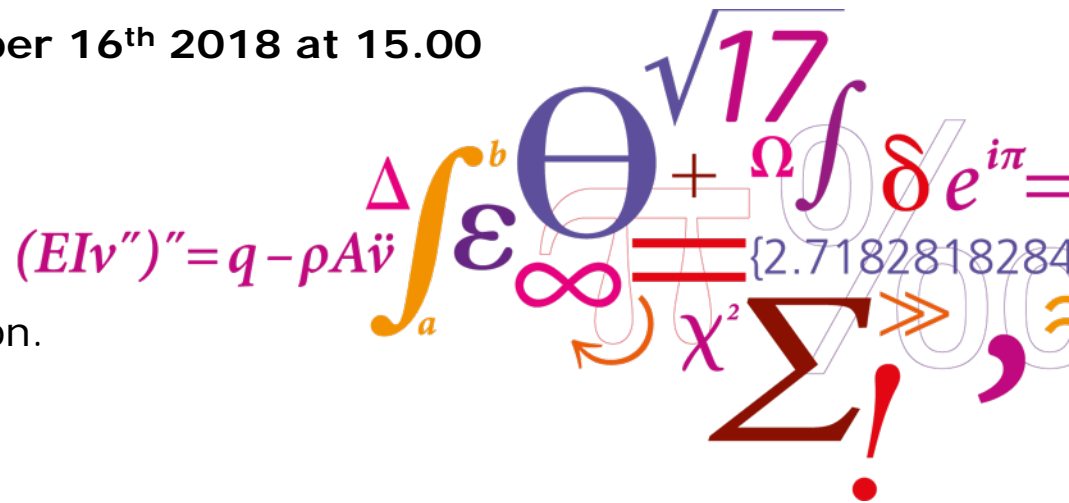
Best regards

Hans Nørgaard Hansen

Head of Department

DTU Mechanical Engineering

Department of Mechanical Engineering



Inaugural lecture by Brian Elmegaard

Abstract

Design of heat pump systems for the future district heating and industrial energy systems

Heat pumps will be an important part of the future energy system, because the technology enables efficient use of electricity from sustainable sources, as wind turbines and photovoltaics, for heating purposes. This will require heat pump technology to cover a broad spectrum of capacity and temperature levels, ranging from heating in domestic applications for space heating, to large-scale installations in district heating, industrial energy systems, and energy storage at high temperatures. The technological level and the integration potential differ for the various applications, which leads to research in several fields related to the optimal application of heat pumps in the future energy systems.

The lecture will cover aspects of the current research and future trends in the field, e.g.

- design of heat pump systems for high temperature applications and high efficiency
- optimization of heat pump systems based on advanced methods, like pinch analysis and thermo-economics
- integration of heat pumps in the energy systems in combination with low-temperature sources and other components to provide the demand of the consumers