Press release

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Excellence award goes to non-equilibrium thermodynamics investigation of transport properties

Prof. Øivind Wilhelmsen was granted the 2017 Excellence Award by the Working Party on Thermodynamics and Transport Properties in recognition of his thesis research on the heat and mass transport at the interface of nano-droplets.

His thesis work entitled "Equilibrium and Non-equilibrium thermodynamics of planar and curved interfaces" was conducted under the supervision of Prof. Signe Kjelstrup at the Norwegian University of Science and Technology (NTNU). It was defended on November 27, 2015. The judges congratulated Prof Wilhelmsen on the impressive number of papers in the body of the thesis, 13 in total, all of which were lauded as 'highly original'. They noted that Wilhelmsen was the first to carry out the particular equilibrium and transport studies for curved interfaces, the first to predict droplet stability in confinement, and the first to give heat and mass resistivities for water droplets.

Prof. Signe Kjelstrup wrote: "The work represents an extension of the theory of non-equilibrium thermodynamics to include heterogeneous systems. It is also of importance for applications, for instance in the modelling of phase transitions of water under various conditions in nature and industry. One may speculate that this can improve climate modelling, but the applications are difficult to oversee at the moment, because the method will add to the understanding and description of phase transitions in general."

Recommending Øivind Wilhelmsen for the Award, Prof. Miguel Rubi stated: "Dr. Wilhelmsen has energy, enthusiasm, and talent to take on new directions of research and to make valuable contributions to them. He has a methodical mind, an optimistic attitude, and is unusually skilled at numerical and analytical methods. He takes an extraordinary scientific care about his work, which goes far beyond what he has actually published." Prof. Dick Bedeaux wrote: "His work on this problem literally opens new windows in the understanding of nano thermodynamics, a field of the utmost importance."

Prof. Øivind Wilhelmsen has been visiting researcher at the Eidgenössische Technische Hochschule (ETH) in Zurich, Switzerland and the University of Barcelona (UB) in Spain. Since 2010, he has been working as a research scientist at SINTEF Energy Research. On the basis of his total production he was named adjunct professor in thermodynamics and renewable energy technology at Norwegian University of Science and Technology in May 2016. His H-factor – a measure of the productivity and citation impact of a scholar - is as high as 11 and his work received around 500 citations.

Comprising a certificate and cash prize of 1,500 Euros, the award was presented on 21 May 2017 during the 29th European Symposium on Applied Thermodynamics (ESAT) that was held in Bucharest, Romania, from 18 – 21 May 2017.

Ends

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29th European Symposium on Applied Thermodynamics (ESAT) (https://www.esat2017.ro/)

Notes to media:

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