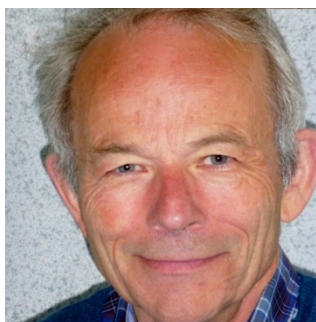# Press release

Presse-Information ● Information de presse

DTU's Michelsen selected for
Distinguished Lecture in thermodynamics

Professor Michael L. Michelsen, of the Technical University of Denmark (DTU), has been selected to deliver the latest European Federation of Chemical Engineering (EFCE) *Distinguished Lecture*.

The Federation's *Working Party* on *Thermodynamic and Transport Properties* nominated Professor Michelsen in recognition of his outstanding work in the field of thermodynamics.

In a career spanning 40 years, Michelsen's work has been influential in the energy and chemical industries, especially oil and gas exploration.

The award comprises of a certificate and €1,500 cash prize.

Michelsen's innovative development of algorithms for the efficient and fast computation of phase equilibrium for non-ideal mixtures made the vital connection between thermodynamic calculations and numerical analysis.

His algorithms have found practical applications throughout industry and academia worldwide; his exceptional mathematical vision has enabled the translation of numerical models into reliable design tools for companies including Exxon-Mobil and Shell.

The effective modelling of phase equilibrium between two or more phases is fundamental to the design of separation processes. This calculation is essential for the optimal exploitation of oil and gas reservoirs.

Separation and Phase Equilibrium Calculations (SPECS)[1], a software programme developed at DTU, which allows the user to model complex mixtures such as crude oil, was cited as an example of Michelsen's contribution to thermodynamic modelling.

DTU's Georgios M. Kontogeorgis, a professor in applied thermodynamics, backed the nomination and he explained the importance of his colleague's work: "The outstanding impact of his research can be clearly seen in the widespread use of his methods and commercial software for the petrochemical industry."

The author of over 130 scientific journal papers and co-author of three books, Michelsen has earned the reputation as a pioneer in his field.

His research has broad application in other areas of chemical engineering including reaction engineering, transport phenomena, biochemical engineering and material science.

On learning of his forthcoming recognition, Michelsen said: "It is of course a great honour to receive the nomination for this award. The nomination was quite surprising as my work is not mainstream thermodynamics. I think what may have contributed to my recognition would be the PhD course I developed, along with my colleague professor Jørgen Mollerup at DTU, on models and computational methods. We have been successfully running this course for over 20 years, with substantial international, industrial and academic participation."

Ends

Related links
EFCE media centre (http://www.efce.info/Media+Centre.html)
European Symposium on Applied Thermodynamics conference
(http://www.esat2014.org)

Notes to media:

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About chemical engineers

Chemical, biochemical and process engineering is the application of science, maths and economics to the process of turning raw materials into everyday products. Professional chemical engineers design, construct and manage process operations all over the world. Oil and gas, pharmaceuticals, food and drink, synthetic fibres and clean drinking water are just some of the products where chemical engineering plays a central role.

About EFCE

Founded in 1953, The European Federation of Chemical Engineering (EFCE) is a non-profit-making association, whose object is to promote co-operation in Europe between non-profit-making professional scientific and technical societies in 30 countries for the general advancement of chemical engineering and as a means of furthering the development of chemical engineering. See www.efce.org

Reference

[1] SPECS program: http://www.cere.dtu.dk/Expertise/Software/Specs