

CV Professor Bo Sundman

My home page is <http://www.met.kth.se/~bosse>

I am professor emeritus at the Computational Thermodynamics (CT) division in the Materials Science and Engineering (MSE) department of the Royal Institute of Technology (KTH). I graduated as a master in physics engineering at KTH in 1974, got a PhD in physical metallurgy in 1981, become lecturer at KTH in 1986, assistant professor in 1994 and professor in 2000. After 2006 I have been fully or partially on leave to work in France and other countries. From 2006 to 2009 I was at CIRIMAT at Paul Sabatier University in Toulouse and from 2009 at INSTN, CEA Saclay and together with Dr Constantin Meis arranged a annual summer school on the use of thermodynamic calculations. I retired from KTH in 2012 and since then I have worked part time as professor emeritus at INSTN, CEA Saclay and as distinguished visiting professor at the Central South University in Changsha, China.

The activities at the division of CT at KTH are devoted to the development of modelling of thermodynamic properties from atomistic properties, development of software and databases for thermodynamical calculations and the application of thermodynamics in process simulation. The Thermo-Calc (TC) software system was developed at the division and it is now owned by a non-profit foundation. The software depend on databases for different materials and these are developed in cooperation with Scientific Group Thermodata Europe (SGTE) and the Thermo-Calc Software AB (TCSAB) which is marketing the TC software. Most users of CT are producers of steels, aluminium and super alloys and recently users of other materials like ceramics, electronic materials, superconductors, nuclear materials etc have started to use CT. There is also a great interest to use CT in process simulation, microstructure evolution, corrosion, energy conversion etc.

As thermodynamics is an integral part of many fields of science I have contacts with a large group of users of the Thermo-Calc software and since I retired in 2012 I have been engaged in the development of a new free thermodynamic software called Open Calphad which is available at the web page <http://openalphad.org>. This work is described in 3 recent papers listed among my publications and there are several users both from universities and from industry.

I have published more than 170 papers and have more than 10000 citations (in 2018). I received the Calphad "Triangle" Award 2002, the Hume-Rothery Award 2005 from IOM3 in UK, a Humboldt senior researcher award from Germany in 2012 and the NIMS Award in Japan 2017. Together with Dr Leo Lukas and Dr Suzana G Fries I have written a book "Computational Thermodynamics, the Calphad Method" published by Cambridge University press in 2007.