

Teaching CV

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Teaching experience

My teaching experience spans both academic and industrial environment.

The most recent activities included two courses taught at MCI-SDU in autumn of 2018:

The first is on Reliability of Electronic Systems (RES), that is on the bachelor level, 5th semester.

The second within Physics of Devices and Failures and Reliability, that is on the master level, 9th semester.

The teaching in 2019 includes an autumn ENPHYS course, which is part of the Physics and Mathematics (ee-phym-e1/s19) module of the program Bachelor of Engineering in Electronics.

Other activities included lectures and training on Imaging and Nanofabrication with Focused Ion beams, which have been done for the SDU students at different graduation levels.

Working as industrial physicist at Danfoss A/S Microtechnology group, I had supervised internship students and Turnus engineers in their product development projects and was mentoring an Industrial postdoc project carried out in collaboration with MCI-SDU.

As a Guest Scientist at the Institute of Physics and Astronomy of Aarhus University (1989-1996), I took a part in teaching postgraduate students in the experimental aspects of transmission electron microscopy and had given a lecture course on dislocations and extended defects in solids.

During my work at the Institute of Applied Physics Problems of Belorussian State University (1984-1991), I supervised undergraduate and postgraduate students in their Mr. S. and Ph.D. research projects. These projects were focused on ion-implantation in silicon and modification of material surfaces with high-intensity ion beams. The work in this period also included lecturing people from industry on structural analysis of electronic materials.

Educational practice – Basis and values

My educational practice is based on several major imperatives:

1) Continuing focus on student's motivation through the entire teaching process. Both intrinsic and extrinsic motivation aspects are to be addressed, including fascination with the subject and a sense of its relevance to life and careers, a sense of accomplishment in mastering it, public and parent expectations, and others.

2) Broad student involvement in the teaching process, which is based on new technology aids, such for instance soft- and hardware IT and communication tools including PCs, tablets and smartphones. Utilization of new teaching strategies is also an important aspect that assumes cooperative learning (techniques such as group tasks and discussions, think-pair-share, round robin, etc.), inquiry and inductive teaching. Frequent changes in teaching routings are required to keep the students from getting bored of monotonous daily tasks.

3) Personalized, to a largest possible extent, learning approach for the student groups with different cultural and knowledge background. Tuning the teaching process to the pace of learning.

4) Continuous upgrading of teaching skills via "in-vivo" and on-line resources.

Formal pedagogical training

A basic pedagogy course at the Physics faculty of Belorussian State University.

Other activities

Regular meetings and discussion with colleagues within SDU, focused on daily teaching challenges and general teaching technologies.