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Teaching experience

Lecturer
⊗ 2021-today: Atomic Physics (FY541) (NAT BSc /FYS-TEK MSc, autumn semester), University of Southern Denmark.
⊗ 2019-today: Electromagnetism and Optics (FT504) (FYS-TEK & NAT BSc, spring semester), University of Southern Denmark.
⊗ 2018-2019: Advanced Physical Optics (T470017101) (FYS-TEK MSc, spring semester), University of Southern Denmark: deputy lecturer.
⊗ 2017-2018: Nano-Optics (TK-NAOP-U1) (FYS-TEK MSc, autumn semester), University of Southern Denmark: deputy lecturer.

Teaching assistant
⊗ 2016-2017: Solid State Physics and Nanoscale Material Physics (10303) (BSc, autumn semester/spring semester), Technical University of Denmark.
⊗ 2007-2009: Physics I (Mechanics) Laboratory Experiments (10Y014) (BSc, autumn semester), Faculty of Physics, National and Kapodistrian University of Athens.
⊗ 2007-2009: Physics II (Molecular Mechanics - Thermodynamics) Laboratory Experiments (10Y024) (BSc, spring semester), Faculty of Physics, National and Kapodistrian University of Athens.

Student supervisor
⊗ 2020-today: Co-supervision (with Prof. N. Asger Mortensen) of PhD student P. Elli Stamatopoulou
⊗ 2020-today: Co-supervision (with Prof. Asger Mortensen) of PhD student Fedor Shuklin.
⊗ 2019-2020: Co-supervisor of master (main supervisor: Prof. V. Yannopapas, NTUA) thesis entitled ``Electromagnetic excitation of Mie-excitons and their control with static external fields'' by P. Elli Stamatopoulou (National Technical University of Athens, Erasmus visiting student at SDU).
⊗ 2018: Co-supervisor (with Prof. Asger Mortensen) of master thesis entitled ``Generalized nonlocal optical response of surface-enhanced Raman spectroscopy geometries'' by Kasper Haxholm Filtenborg (University of Southern Denmark).
⊗ 2016-2017: Co-supervisor (with Prof. Asger Mortensen) of bachelor thesis entitled ``Nonlocal dynamics in plasmonic nanostructures'' by Mark Kamper Svendsen (Technical University of Denmark).
⊗ 2015: Daily supervisor of PhD student Lucie Štolcová (Czech Technical University in Prague, Czech Republic) during a 1-month visit at the Center for Materials Science.
⊗ 2015: Daily supervisor of PhD student Laura Sánchez-García (Universidad Autónoma de Madrid, Spain) during a 1-month visit at the Center for Materials Science.

Views on teaching

Teaching and research are the two fundamental tasks of any university, and are of equal importance. Teaching in the classroom, and preparation for it, occupies a significant amount of the time of academic personnel, and rightly so: lecturers and supervisors have the responsibility and duty to educate a large number of students, probably with different backgrounds and needs, and provide them the necessary supplies to either follow a successful career outside the university or form the next generation of researchers in science. This is done through interaction with the students either in the classroom, or on a more personal level during supervision.

Lectures in front of a broad audience should aim for three goals: transfer knowledge to the students, develop their independent thinking, and cultivate scientific ethics and culture. In natural sciences, this requires a combination of lecturing, demonstrations, and self-action from the students. Lectures must be designed to provide most of the information that a student should have acquired when successfully attending a specific class. But to make this information truly their own, and transform it into knowledge, they need to get involved in problem solving, conduct experiments whenever possible, or at least see demonstrations of the discussed phenomena (in real life or through multimedia, depending always on the subject), and repeat or prove themselves parts of the derivations that the lecturer feels have educational value and should be left to the students as exercises. At the same time, the lecturer should encourage, at every opportunity, thinking outside the box: exploring what the consequences would be if what he/she teaches were not true, and allowing students to cultivate their intuition. Discussions among students can be triggered both through traditional Q/A sessions and through multimedia and real-time polls. Finally, the students should realise that in science there is no absolute authority, everyone can be wrong sometimes, but the important thing is to see and acknowledge their mistakes without arrogance. This can be done for instance through deliberate mistakes during lecturing (and subsequent discussion of them), although a balance should naturally be maintained. All these strategies must always take into account that each student has a different

background, processing and working rate, and different effort is needed to achieve the same level of understanding in each case.

On the other hand, when supervising student projects, one gets the opportunity to directly interact with a single student, with their own abilities and limitations. Supervision of each project must therefore be designed to deal particularly with these, but also with the student's own goals and future plans. It is very important to know, already before starting a thesis project, what the student aims to do after graduating: the needs of science and industry are different, and the personal interaction achieved during the thesis can be successful in providing the knowledge and supplies required to follow either way. Nevertheless, this approach should be restricted to bachelor and master projects: a PhD is a long-time investment that prepares the student to become a proper scientist, whether he/she uses this preparation afterwards or not. This means that the supervisor mustwork together with the student on every aspect, from research (in the lab or, in my case, on analytical and computational methods) to scientific writing, dissemination, ethics, and the capability to identify interesting problems in their scientific field or realise when it is time to shift to a different one.

University education should enhance each student's individual talents, and help them deal with aspects in which they are not that efficient. A university graduate should be a smart person with an advanced level of thinking. Graduates must not only have all the information they need to know on their field, but also be able to apply it in practice, both in standard and in extraordinary situations, and deal, or even foresee difficulties in their careers and lives in general. And this is a responsibility that lies to a large extent with the lecturer/supervisor.

Teaching capabilities

Based on my education, teaching experience, and research interests, I can teach any course focused on classical electrodynamics, classical and quantum optics, solid state physics, atomic physics and quantum mechanics, at the bachelor or master's level. In addition, I can also take over introductory university physics for bachelor students, mathematical methods for physicists, and basic programming and computational methods.

In all these cases, face to face classroom teaching is always the preferred option. Depending on the number of students, the presence of a teaching assistant might prove useful. Teaching material combines textbook reading, self-prepared notes, presentation (summarising the main points) and blackboard.

In terms of supervising, I have already co-supervised bachelor, master's and PhD students.