

# Teaching philosophy, courses and thesis projects

Morten Hjorth-Jensen<sup>1,2</sup>

<sup>1</sup>Department of Physics, University of Oslo, Norway

<sup>2</sup>Department of Physics and Astronomy and National Superconducting Cyclotron Laboratory, Michigan State University, USA

## Courses, study programs and educational initiatives

I am strongly involved in teaching at all levels. I have been heading the bachelor program Physics, Astronomy and Meteorology ( FAM ) in the period 2002-2011. I am also strongly involved in the project Computing in Science Education. Furthermore, with European and American colleagues, we have established the recent successful Nuclear Talent initiative.

Please feel free to come by and discuss. I teach now the following courses at the University of Oslo and Michigan State University:

- FYS3150/4150 Computational Physics I, Fall semester, senior undergraduate level (Oslo)
- FYS4411 Computational Physics II: Quantum mechanical systems, M.S and PhD level, Spring semester (Oslo)
- FYS-KJM4480 Quantum mechanics for many-particle systems, M.S. and PhD level, Fall semester (Oslo)
- PHYS981 Nuclear Structure, M.S. and PhD level, Spring semester (MSU)
- PHY480/905 Computational Physics (MSU), Spring semester

More text to come

## Commitment to education:

More text to come

1. University of Oslo award for excellence in teaching, 2000
2. University of Oslo award for excellence in teaching for the **Computing in Science Education** project, 2011

3. NOKUT (Norwegian entity of quality assessment in higher education) award for excellence in teaching for the **Computing in Science Education** project, 2012
4. University of Oslo award for excellence in teaching for developing the Computational Physics group, 2015
5. Favorite graduate teacher at Michigan State University, 2016
6. Since 1999 I have established an activity in computational physics at the Department of Physics at the University of Oslo. I have also started from scratch and developed several courses on computational physics and many-body physics. This activity was recognized with the Excellence in Teaching award from the University of Oslo in 2015. During the last fifteen years I have guided 48 Master of Science of students (28 have continued with PhD studies) and twelve PhD students. I currently supervise twelve Master of Science students at the University of Oslo. I supervise four PhD students at Michigan State University.
7. With colleagues at the University of Oslo, I have been strongly involved in the development of a totally new teaching philosophy which merges computation with the traditional science and mathematics curriculum. This project is called [Computing in Science Education](#) and has received considerable support from the University of Oslo and the Norwegian Ministry of research and education. It received the University of Oslo award for excellence in teaching in 2011 and the NOKUT award in 2012.
8. With colleagues from the USA and other European countries, we have started the Nuclear Talent initiative: "<http://www.nucleartalent.org>", where we aim at providing an advanced and comprehensive training to graduate students and young researchers in low-energy nuclear theory. The network aims at developing a broad curriculum that will provide the platform for a cutting-edge theory for understanding nuclei and nuclear reactions. Within 2016 the initiative has run and developing eleven courses. I chaired the steering committee from its beginning in 2010 till 2015.
9. [Initiated and led the Nuclear Talent initiative from 2010 till 2015, now member of the Steering committee](#)
10. Project leader for High-performance computing courses at UiO, 2000-2003
11. Board member of the Bachelor program Mathematics, Information theory and Technology at the University of Oslo, 2002-2008
12. Leader of the Bachelor program Physics, Astronomy and Meteorology at the University of Oslo, 2002-2011

## Thesis projects

To be added