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<http://www.imada.sdu.dk/~marco/Files/Chiarandini-teach-portfolio.pdf>

## Formal Pedagogical Education

2000	Master degree in Management Engineering with Specialization in Electronics, Università degli Studi di Udine, Italy.
2005	Ph.D. in Computer Science, Darmstadt University of Technology, Germany.
2009	Teacher-Training Programme for Assistant Lecturers at the University of Southern Denmark (Universitets-pædagogikum). Internal advisor: Lene M. Favrholt (associate professor at SDU); external advisor: Bodil Ravn (senior lecturer at Odense Katedralskole).
2006-2013	Participation to about 10 pedagogical workshops organized by Det centrale Uddannelsesudvalg at SDU.

## Education Administrative Tasks

Semester coordinator for Computer Science at IMADA since 2014.  
Coordinator at IMADA for the course First Year Science Project FF501 and person who assigns students to project topics according to preferences since 2010.  
Scheduler of the elective courses at IMADA since 2009.  
Member of the IT for Research and Teaching Committee.

## Experience in Teaching, Supervision and Examinations

My area of competence within Computer Science is applied discrete optimization and artificial intelligence. Since 2005 I have been teaching courses within this area at Bachelor, Master and PhD levels. More precisely, I taught the following 5 ECTS courses:

Heuristics for Discrete Optimization (ca. 20 students; 9 editions)  
Linear and Integer Programming (ca. 35 students; 4 editions)  
Constraint Programming (ca. 20 students; 3 editions)  
Scheduling, Timetabling and Routing (ca. 7 students; 6 editions)  
Artificial Intelligence (ca. 20 students; 2 editions)  
Machine Learning (ca. 7 students; 2 editions)  
Artificial Intelligence in Computer Game Programming (ca. 20 students; 1 edition)  
Computer Architecture (ca. 40 students; 1 edition)

See <http://www.imada.sdu.dk/~marco/teaching.html> for more details.

In addition, I supervised 1 PhD student, 8 Master projects (60 ECTS), 5 Bachelor projects (10 ECTS) and 10 individual study activities (5 or 10 ECTS). Finally, I supervised 1 group in the First Year Science Project and 2 Studieretningsprojekter.

I have been sporadically censor at DTU and I am registered for the period 2014-2018 in the Ingeniøruddannelses-sernes censorkorps for the sections of Mathematics, Physics and Social Sciences.

## Methods, Materials and Tools

### Philosophy

Since we, probably, learn in different ways and need different stimuli to be motivated, I try to ensure a certain degree of variation in the learning activities in the organization of my courses. I am open to experimenting with new tools and methodologies and I, continuously, revise the plan of a course on the basis of evaluations of former students. I endorse social learning and peer collaboration.

### Classes

Introductory sessions are traditional lectures in which I use slides to give structure and the blackboard to explain and give examples. A few times in each session I pause to ask questions or to let students consult in pairs on the solution of a problem. I believe that details are what make these activities succeeding in activating the students or failing. In exercise classes, I always let students be active. I use both new exercises that students have to tackle in groups in class as well as homework for preparation.

### Assignments

Among the tools that I used with success are: problem solving competitions, an online system that I developed to let students upload their programs and compete with each other on the results; PeerWise, an assignment supported by an online system to let students create, share and evaluate assessment questions with each others; programming languages classes with direct hands on the computer; feedback activities through peer reviewing.

The use of obligatory assignments with writing parts has been very useful for understanding the level of the students and for giving feedback.

### Exams

I have held exams in three forms: project based, written and oral. In the oral exams, I have positively experimented with the use of a portfolio of topics from the course that the students must themselves prepare.

#### Supervision

I like to stress the importance of writing. At the beginning of the projects I agree with students to work at the final report throughout the whole process and to use the report as a main way of communicating precisely and formally about the work in progress. In this way, I can give weekly feedback not only on the practical development but also on the style and organization of the writing.

### **Development and University Level Pedagogical Research, Awards**

I contributed with a short article A Web Platform for Problem Solving Competitions to the Assessment, Feedback and Learning Conference, held at SDU in 2013. (B. Wallstedt and R. Troelsen, ed.). The paper can be downloaded from the publication list in my private web page.

### **Reflexions on the Pedagogical Practice, Future Development, Teaching Evaluation**

I intend to continue experimenting with tools to activate and motivate students both in class and at home. I intend to continue revising the design of my courses putting emphasis on the lacks that previous students exhibited and remaining open to suggestions from students. I am interested in the new possibilities that online learning offers and I look forward to integrate video lectures and focus more on feedback activities.