

Teaching Portfolio

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Concurrency

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Teaching Philosophy

Research-Based Teaching forms a core element in my teaching design and practice. In particular, as Barnett suggests [Barnett, R. (2000). Supercomplexity and the curriculum. *Studies in Higher Education*, 25(3), 256-265], one of my goals is to provide students with the tools to not only operate within a given framework, but to question that framework.

Since people learn in different ways and have different sources of motivation, I strive 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, in particular by using peer-feedback and peer instruction interactive teaching methods. I continuously revise the plan of a course on the basis of evaluations of former students and endorse social learning and peer collaboration.

In my class, I try to provide students with a view on the current status of the field and, in particular for graduate courses, I pursue the vision of treating students as partners in research. Often I give introductory sessions by using slides and the blackboard to explain and give examples. I aim at active lectures where I ask the students questions or let students consult each other in pairs on the solution of a problem. In exercise classes, I use both new exercises that students have to tackle in groups in class as well as homework for preparation. I always try to give feedback as early as possible so the students can take it into account while attending the courses and not only at the end of a course.

During the recent years, I had the privilege to follow and advise graduate students for their master thesis and supervise PhD students. At the beginning of a supervision, I usually establish a collaboration framework to state the goals of the supervision, the tasks, and the expectations of both parties. This is a common base to build trust and an approach to detect, reason, and solve possible communications problems and a starting point to leverage on the attitudes and predisposition of the student to reach the common goals. My office hours allows me to interact with students individually. I always foster an open dialogue and the freedom for the students to state and share their opinions.

Experience with teaching

- * Programming Languages (in English) - Lecturer and course responsible, 2022. Bachelor course (10 ECTS), Department of Mathematics and Computer Science, University of Southern Denmark
- * Microservices and Dev(Sec)Ops (in English) - Lecturer and course responsible, 2021. Master course (10 ECTS), Department of Mathematics and Computer Science, University of Southern Denmark
- * Programming Languages (in English) - Lecturer and course responsible, 2021. Bachelor course (10 ECTS), Department of Mathematics and Computer Science, University of Southern Denmark
- * System Architecture and IT Security - Course responsible, 2021. Master course (5 ECTS), Department of Computer Science, Aarhus University
- * Microservices and DevOps (in English) - Lecturer and course responsible, 2020. Master course (10 ECTS), Department of Mathematics and Computer Science, University of Southern Denmark
- * Programming Languages (in English) - Lecturer and course responsible, 2020. Bachelor course (10 ECTS), Department of Mathematics and Computer Science, University of Southern Denmark
- * Microservices and DevOps (in English) - Lecturer and course responsible, 2019. Master course (10 ECTS), Department of Mathematics and Computer Science, University of Southern Denmark
- * Programming Languages (in English) 2019 - Bachelor course, Department of Mathematics and Computer Science, University of Southern Denmark.
- * Microservice Programming (in English) 2018 - Master course, Department of Mathematics and Computer Science, University of Southern Denmark.
- * Programming Languages (in English) 2017 - Bachelor course, Department of Computer Science, University of Oslo.
- * Algorithm and Data Structures (in Italian) 2015 - Bachelor course, Department of Computer Science, University of Bologna.
- * Information Technology Skills (in Italian) 2015 - Bachelor course, Department of Modern Languages, Literatures, and Cultures, University of Bologna.
- * Computer Studies and Human Sciences (in Italian) 2015 - Bachelor course, Department of Modern Languages, Literatures, and Cultures, University of Bologna.
- * Algorithm and Data Structures (in Italian) 2014 - Bachelor course, Department of Computer Science, University of

Bologna.

* Algorithm and Data Structures (in Italian) 2012 - Bachelor course, Department of Computer Science, University of Bologna.

* Algorithm and Data Structures (in Italian) 2011 - Bachelor course, Department of Computer Science, University of Bologna.

Supervision

* Matteo Trentin, Master student, University of Bologna. 2021. Thesis title: Topology-based Scheduling in Serverless Computing Platforms.

* Johan Ringmann Fagerberg, Bachelor student, University of Southern Denmark. 2021. Thesis title: Differential Privacy and Low-Population Histogram Estimation.

* Javier Gonzalez Garcia, Master student, University of Southern Denmark. 2021. Thesis title: Exploring size bounds for Sorting Networks.

* Cecilie Egede Schulz, Master student, University of Southern Denmark. 2020. Thesis title: Scheduling Photographers in the Real Estate Market.

* Filip Siroky, Master student, University of Southern Denmark. 2020. Thesis title: Performance and Virtualization Tradeoffs.

* Johannes Lauritsen, Master student, University of Southern Denmark. 2020. Thesis title: Blood donor appointment scheduling.

* Mikkel Liljegren Mathiesen, Master student, University of Southern Denmark. 2020. Thesis title: Blood donor appointment scheduling.

* Giuseppe De Palma, Master student, University of Bologna. 2020. Thesis title: Serverless Computing Platforms with Customizable Load Balancers.

* Andrea Fenati, Bachelor student, University of Bologna. 2020. Thesis title: Data Locality in Serverless Computing.

* Talevi Iacopo, Master student, University of Bologna. 2019 - Thesis title: Optimal and Automated Microservice Deployment.

* Brian Alberg, Master student, University of Southern Denmark. 2019 - Thesis title: Modeling Timetabling Problems in Constraint Programming.

* Tong Liu, PhD student, University of Bologna. 2019 - Thesis title: Innovative Applications of Constraint Programming.

* Christopher Bauge, Master student, University of Oslo. 2017 - Thesis title: Visualization for the ABS Modelling Language.

* Magnus Hestvik, Master student, University of Oslo. 2017 - Thesis title: Using Metaheuristic Algorithms to Reconfigure Context-aware Software.

* Tong Liu, Master student, University of Bologna. 2015 - Thesis title: Groupme: city data and multi-preference activity allocation.

* Cristian Paolucci, Master student, University of Bologna. 2015 - Thesis title: Deployment automatico di applicazioni specificate in linguaggio ABS.

* Luca Mandrioli, Master student, University of Bologna. 2011 - Thesis title: Learning for scheduling a portfolio of constraint solvers.

Formal educational training

* Lecturer Training Programme. University of Southern Denmark. 2019 - Individually planned in-service teacher training programme for university teachers (10 ECTS).

* Use student response system in your course. University of Southern Denmark. 2019 - Online course (0.5 ECTS).

* Design and updating courses. University of Southern Denmark. 2019 - Online course (0.5 ECTS).

* Oral examination in higher education in Denmark. University of Southern Denmark. 2019 - Online course (0.5 ECTS).

* Setting up your course in Blackboard. University of Southern Denmark. 2019 - Online course (0.5 ECTS).

Administrative tasks related to education

* Organizer of the Danish Cybersecurity Challenge & Training sessions. 2022

* Organizer of the Danish Cybersecurity Challenge & Training sessions. 2021

* Contribution in planning and design of a new master's program in Computer Science for Teachers (Informatikundervisning in Danish) provided by Aarhus University. 2020

* Organizer of the Cybersecurity Summer School. 2020

* Organizer of the Cybersecurity Days seminar. 2020

* Organizer of the Cybersecurity Summer School. 2019

* Organizer of the Integrated Formal Methods PhD Symposium. 2019

* Organizer of the 20th Bertinoro International Spring School (BISS). 2014

* Organizer of the 19th Bertinoro International Spring School (BISS). 2013

* Organizer of the 18th Bertinoro International Spring School (BISS). 2012