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## Formal educational training

|      |  |
|------|--|
| 2013 | Course on holding "MUS" with PhD students<br>Konference om prøveformer, feedback og læring |
| 2012 | Course "Interactive lecturing"<br>Workshop "The oral exam in practice"                     |
| 2010 | "Facultas docendi" by TU Darmstadt   |

## Administrative tasks related to education

|              |   |
|--------------|---|
| 2019-2022    | State approved censor in mathematics, physics and social science for "civil engineers"    |
| 2019-2022    | State approved censor in mathematics, physics and social science for "diplom engineers"   |
| 2015-present | Member of the Study Board for Economy at the Faculty of Business and Social Sciences      |
| 2015-present | Education responsible for the master degree in Mathematics-economy                        |
| 2015-2017    | Semesteransvarlig for Matematik   |
| 2014-2018    | Censor ved Ingeniøruddannelsernes censorkorps - Matematik, Fysik og Samfundsfag-retningen |
| 2013-present | Member of IMADA's teaching committee  |
| 2013-2014    | Medlem af tænketank omkring mat.øk uddannelsen  |
| 2013-2017    | Semesteransvarlig for Anvendt Matematik   |
| 2012-2014    | Member of IMADA's PhD committee   |
| 2011-present | Responsible for hiring TA's in math   |

## Teaching experience

At the University of Southern Denmark

|              |  |
|--------------|--|
| Autumn 2022  | Stochastic differential equations I (10 ECTS)<br>Mathematical applications (5/2 ECTS)<br>Molecular Data Science (5/4 ECTS)   |
| Spring 2022: | Computational option pricing, part I (5 ECTS)<br>Computational option pricing, part II (5 ECTS)<br>Applications of mathematics in life sciences (5/2 ECTS)   |
| Autumn 2021  | Stochastic differential equations I (10 ECTS)<br>Mathematical applications (5/2 ECTS)  |
| Spring 2021  | Computational option pricing, part I (5 ECTS)<br>Computational option pricing, part II (5 ECTS)<br>Applications of mathematics in life sciences (5/2 ECTS)   |
| Autumn 2020  | Stochastic differential equations I (10 ECTS)  |
| Spring 2020  | Computational option pricing, part I (5 ECTS)<br>Computational option pricing, part II (5 ECTS)<br>Applications of mathematics in life sciences (5/2 ECTS)<br>Mathematical methods in Chemistry and Nanoscience (5/2 ECTS) |
| Autumn 2019  | Stochastic differential equations I (10 ECTS)  |
| Spring 2019  | Differential equations (5 ECTS)<br>Applications of mathematics in life sciences (5/2 ECTS)<br>Mathematical methods in Chemistry and Nanoscience (5/2 ECTS)   |

|             |   |
|-------------|---|
| Autumn 2018 | Partial differential equations: Theory, numerics, and computation (10 ECTS)   |
| Spring 2018 | Computational option pricing (10 ECTS)<br>Applications of mathematics in life sciences (5/2 ECTS)<br>Mathematical methods in Chemistry and Nanoscience (5/2 ECTS) |
| Autumn 2017 | Stochastic differential equations I (10 ECTS)   |
| Spring 2017 | Computational option pricing (10 ECTS)<br>Applications of mathematics in life sciences (5/2 ECTS)   |
| Autumn 2016 | Stochastic differential equations I (10 ECTS)<br>Differential equations II (5 ECTS)<br>Mathematical methods in Chemistry and Nanoscience (5/2 ECTS)               |
| Spring 2016 | Mathematical and numerical analysis (10 ECTS)<br>First year project Numerical solution of stochastic differential equations (10 ECTS)                             |
| Autumn 2015 | Ordinary differential equations: Theory, Modelling and Simulation (5 ECTS)  |
| Spring 2015 | Computational option pricing (10 ECTS)  |
| Autumn 2014 | Partial differential equations and numerics (10 ECTS)<br>Mathematical methods in Chemistry and Nanoscience (5/2 ECTS)   |
| Spring 2014 | First year project Numerical solution of stochastic differential equations (10 ECTS)<br>Differential equations, computing and modelling (10 ECTS)                 |
| Autumn 2013 | Mathematical and numerical analysis (10 ECTS)<br>Mathematical methods in Chemistry and Nanoscience (5/2 ECTS)   |
| Spring 2013 | First year project Numerical solution of stochastic differential equations (10 ECTS)<br>Differential equations, computing and modelling (10 ECTS)                 |
| Autumn 2012 | Mathematical and numerical analysis (10 ECTS)   |
| Spring 2012 | Convex analysis (5 ECTS)<br>Differential equations (5 ECTS)   |
| Autumn 2011 | Calculus I (5 ECTS)   |

#### At the University of Mannheim

|             |   |
|-------------|---|
| Spring 2011 | Functional Analysis (4+2)<br>Seminar Geometric numerical integration (2 seminar hours per week) |
|-------------|---|

#### At the University of Darmstadt

|            |   |
|------------|---|
| WS 2008/09 | Finite elements (block course equivalent to (2+1))  |
| SS 2008    | Numerical solution of ordinary differential equations (2+2), with assistant   |
| WS 2007/08 | Advanced seminar for degree candidates: Iterative solution of linear systems of equations (2 seminar hours per week)<br>LaTeX for secretaries (12 teaching hours) |
| SS 2007    | Stochastic differential equations: Numerical solution and modelling (50% of (3+1))  |
| WS 2006/07 | Numerical solution of reaction-diffusion equations (block course equivalent to (2+0))   |
| WS 2004/05 | Modelling with partial differential equations (2+2)   |

(WS=winter semester, SS=summer semester)

Here, (x+y) means that the corresponding course consisted of x teaching hours per week and y supervised exercise hours per week during the semester, which typically consists of 13 to 15 weeks with teaching.

## Methods, materials and tools

Usually I mix lectures with activating elements such as plenum discussions, pair discussions and group work. In some courses, my teaching sessions are based on the "flipped classroom"- principle. In courses directed to students from biochemistry, molecular biology and chemistry, there is considerable focus on relevant examples from the respective sciences.

For most of the courses I teach, I prepare accompanying lecture notes.