Master program in Computational Science

University of Oslo

Board Meeting December 13, 2018

Agenda December 13, 2018, 10am-12pm

1. Welcome and approval of minutes from previous meeting

2. Present status, students enlisted and review, summary and experiences from the fall semester

3. Routines for the program, administrative issues, regulations, selection of internal and external examiners etc.

4. Development of a mentoring plan for each student.

5. AOB

Present status, students enlisted and review, summary & experiences from the fall semester

What has been done:

1. Biweekly seminars for all CS students (six in total), gaming evenings and social gatherings with food and refreshments. Last event November 23, Anne Solberg talked about Machine Learning at UiO

2. Meeting all students with program chair once per semester in order to get input on status, procedures etc.

3. Individual mentoring if wanted/needed (10 students used this option) with program chair

4. Close contact via compulsory courses (most students, 29, follow FYS-STK4155)

5. 36 students enlisted, two new after semester start and two who have left (one maternity leave). Thus we have **36** active students with three whose status is unknown to program chair

6. First week not optimal at all departments

For students who struggle, ForVei is an excellent counseling unit at MN-Fak.

Present status, students enlisted and review, summary & experiences from the fall semester

Students AMRA.

1. Jon Audun Baar

2. Mikael Ravndal (Machine Learning at Radium hospitalet)

3. Christian Sveen

4. Aksel Gravir

Students MECH.

1. Ana Costa

2. Morten Hemmingsen

3. Soran Mohmmmed

4. Martin Gimse

Present status, students enlisted and review, summary & experiences from the fall semester

Students IMBC.

1. Henrik Gjestang

2. Espen Næss

3. Mona Heggen

4. Ingrid Utseth (ML)

5. Betina Wester

6. Lucas Charpentier (ML)

7. Bjørn Grønntun

Present status, students enlisted and review, summary & experiences from the fall semester

Students BIOINF.

1. Polina Dobrowskaya (ML at skatteetaten)
2. Aleksander Lunevski Husa (ML probably)
3. Li Lingyuan (wants to shift to part time student)

Students GEOSCIENCE.

1. Marcus Silverberg
2. Henry Haugsten Hansen
3. Hanna Svennevik (thesis at Met Inst, machine learning)
4. Mina Tangen

Present status, students enlisted and review, summary & experiences from the fall semester

Students PHYSICS.

1. Jan Fredrik Kismuhl (ML and neuroscience)
2. Halvard Sutterud (Lattice QCD)
3. Heine Aabø (quantum computing)
4. Stian Dysthe (quantum computing)
5. Marius Holm (ML and mechanics)
6. Gunnar Lahjell (ML and poltical science)
7. Per Harald Barkost (ML on education, CCSE)
8. Stian Isachsen (ML and data analysis)
9. Thomas Sjåstad (ML and molecular dynamics)
10. Tobias Olesen (ML)
11. Markus Asprusten (ML and neuroscience)
12. Eirik Thorsrud (ML and molecular dynamics)
13. Geir Tore Ulvik (ML on subatomic experiments)
14. Audun T Reitan (ML and neuroscience)

Routines for the program, administrative issues, regulations, selection of internal and external examiners etc

1. See the attached documents from MN-fak, we will go through these first.

2. We all agreed to preserve a local autonomy, students from each study option are enlisted at the department where the study option belongs.

Our program is however a multidisciplinary one, with learning outcomes and thesis topics which may not be familiar to faculty at a given department. Furthermore, since this is a cross-department program, we need to make sure that students in this program feel they are treated equally, or as far as this is possible. This applies to

Routines for the program, administrative issues, regulations, selection of internal and external examiners etc

We need thus to strike a balance between the **autonomy** of the given department and study option and the needs and learning outcomes of our program. And the wishes of our students.

Furthermore, we will encounter (five this year) situations where students may opt for external advisors and thesis topics which do not fall into the thematics of a given study option. We need to discuss these issues as well and make sure that our rules are flexible enough to allow for such cases.

Internal examiners and advisors

Proposal to be added to MN-fak rules.

1. Internal examiners do not need to come from the same department where the study option resides and where the student is enlisted. Internal examiners come from a pool of CS competent scientists with knowledge of the central fields covered by the program

2. Strive as far as possible to allow for thesis topics which may not match (partly or fully) the scientific profile of a given study option.

Internal examiners, criteria for discussion

Internal examiners are chosen by the program board to follow the following disciplinary topics (in addition to the specific study options) as well as having competences in software development. An internal examiner

1. Machine learning and possibly AI (all study options)

2. Statistics and data analysis (all study options)

3. Differential equations (partial and ordinary, applies to all study options)

4. Software development (all study options)

5. Computational quantum mechanics (physics, chemistry, and materials science)

6. Computational statistical mechanics (physics, chemistry and material science)

7. Computational Life Science (most study options)

8. Computational Geoscience

9. Bioinformatics

10. Stochastic simulations (most study options)

Too many? Missing topics? too generic or too specific?

A minimalistic Mentoring program

1. Program chair discusses with all students from a given study options at least once per semester the first year. This is done groupwise with the possibility to have one-to-one meetings. If possible, representatives from the pertinent study options could participate.

2. In addition to the contact person for every study option, the student gets a mentor for the first year of study. The mentor can be a faculty member, a post-doc or a PhD student.

When the student has embarked on her/his Master thesis topic, MSc thesis supervisor becomes the mentor.

Role of mentor.

1. Organize at least once per semester (first year of study) a meeting with the student

Students should be able to choose from a list of possible mentors according to scientific interests. We should develop a training program for mentors in collaboration with MN-fak.

AOB

1. Recruitment

2. Gender issues