



Martin Bjerrum Henriksen

HAS ON 29 JUNE 2017 PASSED THE EXAMINATIONS REQUIRED FOR THE

Master's Degree Programme in Computer Science

AT AARHUS UNIVERSITY
AND HAS THUS BEEN AWARDED THE DEGREE

Master of Science (MSc) in Computer Science

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candidatus scientiarum

Aarhus, 22 August 2017

Niels Chr. Nielsen
dean of Aarhus University Faculty of Science and Technology





Pursuant to the Ministerial Order no. 1328 of 1 February 2017 on Bachelor and Master's (Candidatus/Candidata) Programmes at Universities (the University Programme Order (Uddannelsesbekendtgørelsen)), the Master's degree is a research-based full time programme of study which qualifies graduates for professional careers by providing them with expertise and methodological competences in one or more subject areas.

The Master's Degree Programme in Computer Science is rated at: **120 ECTS**

Entrance qualification to the degree programme was:
Bachelor's Degree Programme in Computer Science; Bachelor of Science (BSc) in Computer Science

Martin Bjerrum Henriksen

has obtained the following results:

	<u>7-point scale</u>	<u>ECTS scale</u>	<u>Passed</u>
Central Subject in Computer Science			
Compulsory Courses			
Combinatorial Search 5 ECTS	10	B	Passed
Elective Courses			
Data Science in Bioinformatics: Visualization and Analysis 5 ECTS Credit transferred from Aarhus University, Denmark	10	B	Passed
Statistical Methods in Bioinformatics 10 ECTS Credit transferred from Aarhus University, Denmark	02	E	Passed
Algorithm Engineering 5 ECTS	10	B	Passed
Algorithmic Gems 5 ECTS	10	B	Passed
Algorithms in Bioinformatics - Trees and Structures 5 ECTS	12	A	Passed
Algorithms in Bioinformatics - Sequences 5 ECTS	10	B	Passed
Embedded Systems - Embodied Agents, Digital Control in a Physical World 10 ECTS	7	C	Passed
Introduction to Digital Audio 10 ECTS	10	B	Passed
Machine Learning 10 ECTS	7	C	Passed
Machine Learning in Bioinformatics 5 ECTS	4	D	Passed
Project in Bioinformatics 1 5 ECTS	7	C	Passed
String Algorithms 5 ECTS	12	A	Passed





Master's Thesis
Thesis in Computer Science
30 ECTS

10 B Passed

Algorithms for Exact and Approximated Protein Structure Prediction in the 3D HP Model.

Supplementary Subject in Mathematics and Statistics
Convex Functions
5 ECTS

4 D Passed

The validity of this document is confirmed

Aarhus, 22 August 2017

Bjørk Brink Dalgaard
Administrative Officer



Skills Profile for the Programme

The aim of the Master's degree programme is to develop the academic and personal skills the student acquired during the previous Bachelor's degree programme, so that the Master:

- obtains qualifications for employment in private and public sector companies and organisations - both in Denmark and abroad - where a high level of expertise in Computer Science is required.
- acquires the necessary prerequisites for further studies, including a PhD degree programme.

Compared with Bachelors, Masters have expanded on their academic knowledge, analytical skills and independence to the extent that the Master is able to independently apply scientific theory and methodology within the field of Computer Science. By completing the degree programme, the Master obtains skills in the following overall competence goals:

- The Master has general knowledge of Computer Science and detailed knowledge of key disciplines, methodologies, theories and concepts within Computer Science.
- The Master can independently plan, manage and implement projects and apply the results in scientifically relevant decision processes.
- The Master can assess the applicability and appropriateness of theoretical, experimental and practical methodologies for the analysis and solution of scientific questions and issues.
- The Master can structure his/her own competence development independently and critically.
- The Master is able to systematically and critically familiarise himself/herself with new subject areas.
- The Master can relay and communicate academic questions and issues to both a scientific and a general audience.
- The Master can collaborate constructively on a scientific basis to solve subject-related issues.
- The Master has an understanding of and insight into the connection between Computer Science and the other scientific subject areas, and has qualified knowledge regarding the interaction between Computer Science and society at large.



Diploma Supplement

This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

1 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family name(s)

Henriksen

1.2 Given name(s)

Martin Bjerrum

1.3 Date of birth

18 November 1991

1.4 Student identification number or code

Matriculation number: 20105951 / Civil registration number: 181191-2871

2 INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of qualification and (if applicable) title conferred

Master of Science (MSc) in Computer Science

2.2 Main field(s) of study for the qualification

The degree programme involves a high degree of student choice within the field of computer science and is designed individually under the guidance of an advisor, with the aim of providing students with advanced knowledge in computer science.

2.3 Name and status of awarding institution

Aarhus Universitet (Aarhus University) is an independent institution under the public-sector administration and supervised by the Ministry of Higher Education and Science and regulated according to the University Act no. 261 of 18 March 2015.

2.4 Name and status of institution (if different from 2.3) administering studies

Not applicable / as above

2.5 Language(s) of instruction/examination

Teaching/examination at Aarhus University takes place in Danish and English, although other languages may be used when appropriate.





3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

3.1 Level of qualification

Master's degree at NQF/EQF Level 7 referring to Second Cycle in the Bologna QF

3.2 Official length of programme

120 ECTS

3.3 Access requirements

Admission to the Master of Science requires a completed Bachelor of Science. Applicants with other qualifications may be admitted after an assessment of their qualifications.

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study

Full-time.

4.2 Programme requirements

The degree programme builds on knowledge acquired by the students in a Bachelor's degree programme in computer science. The degree programme may be combined with another subject area. The degree programme requires that students write a thesis corresponding to up to 1 year of study. The programme ends with a combined examination, in which the thesis comprises the most important component.

4.3 Programme details (e.g. modules or units studied) and the individual grades/marks/credits obtained

Please refer to the enclosed transcript of records

4.4 Grading scheme and, if available, grade distribution guidance

<http://ufm.dk/en/education-and-institutions/the-danish-education-system/grading-system>

4.5 Overall classification of the qualification

Not applicable for Danish qualifications

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study

The candidatus(a) degree qualifies students for a professional career and scientific work e.g. for a doctorate or the PhD (ph.d.) degree.

5.2 Professional status

Not applicable





6 ADDITIONAL INFORMATION

6.1 Additional information

Aarhus University offers unique, alternative opportunities for research and education cutting across many different subjects, for the benefit of both students and researchers, as well as the authorities and the business community. These interdisciplinary combinations provide exceptional opportunities. Aarhus University combines quality in its services with diversity - a diversity that also makes sure that the university is in wide-reaching contact with all the important sectors of society.

Aarhus University has an international focus and makes targeted efforts to attract researchers and students from abroad.

Research and education

Academic values form the basis for all activities at Aarhus University. Via curious research, critical analysis and ongoing debate, researchers and students endeavour to find new ways to gain insight, understanding and education for the benefit of society as a whole. The university consists of four main academic areas. Combined, they cover the entire research spectrum - basic research, applied research, strategic research and research-based advice to the authorities. In all degree programmes, research and education are closely connected, and the research-based instruction - including teaching that spans the main academic areas - ensures the depth of the degree programmes.

A visionary university

The mission of Aarhus University is to ensure and develop knowledge, welfare and culture through research and research-based education, knowledge dissemination and external advice. The vision of Aarhus University is to belong to the elite of universities and to contribute to the development of national and global welfare via outstanding research and world-class degree programmes. The values of Aarhus University are based on the ethical challenges regarding freedom and independence that are described in the Magna Charta of European Universities. Staff and students at Aarhus University work enquiringly and critically, in open and dynamic interaction with the surrounding world.

6.2 Further information sources

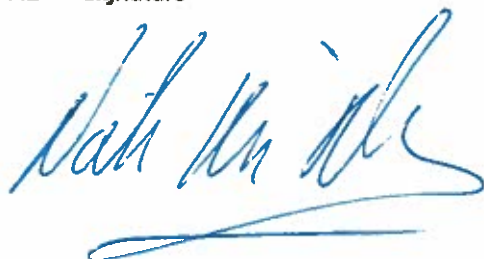
For further information on this degree programme, please refer to <http://studieguide.au.dk/en> and the Aarhus University web site <http://www.au.dk/en>.



7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date
22 August 2017

7.2 Signature



Niels Chr. Nielsen

7.3 Capacity
Dean of Aarhus University Faculty of Science and Technology

7.4 Official stamp or seal



8 INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

Please see the attached description of The Danish Higher Education System of April 2016

