

CHALMERS



CHALMERS TEKNISKA HÖGSKOLA
CHALMERS UNIVERSITY OF TECHNOLOGY · GOTHENBURG · SWEDEN

Arash Rouhani-Kalleh

HAR AVLAGT

TEKNOLOGIE MASTEREXAMEN

MASTERPROGRAM: COMPUTER SCIENCE – ALGORITHMS, LANGUAGE AND LOGIC
HUVUDOMRÅDE: DATATEKNIK

HAS BEEN AWARDED THE DEGREE OF
MASTER OF SCIENCE (120 credits)

MASTER'S PROGRAMME: COMPUTER SCIENCE – ALGORITHMS, LANGUAGE AND LOGIC
MAJOR SUBJECT: COMPUTER SCIENCE AND ENGINEERING

Göteborg 30 juni 2014

På rektors vägnar
On behalf of the President

Christer Marklund
Examenshandläggare
Officer of Degree

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TECHNOLOGY GOTHENBURG

Amad Lindgren 2015-09-29
Officer of Degree



Arash Rouhani-Kalleh

901117-1213

Kurser Courses	Hp* Credits	Betyg Grades	Datum Date
Masterexamensarbete vid Data- och informationsteknik <i>Master's thesis in Computer science and engineering</i>	30.0	Godkänd <i>Passed</i>	24 apr 2014
Programming language technology <i>Programming language technology</i>	7.5	Fyra <i>Four</i>	10 jan 2011
Algorithms <i>Algorithms</i>	7.5	Fem <i>Five</i>	5 nov 2012
Logic in computer science <i>Logic in computer science</i>	7.5	Fem <i>Five</i>	22 okt 2013
Diskret optimering <i>Discrete optimization</i>	7.5	Fem <i>Five</i>	4 apr 2011
Algoritmer, fortsättningskurs <i>Algorithms, advanced course</i>	7.5	Fem <i>Five</i>	12 dec 2011
Compiler construction <i>Compiler construction</i>	7.5	Fyra <i>Four</i>	25 maj 2012
Advanced functional programming <i>Advanced functional programming</i>	7.5	Fem <i>Five</i>	10 mar 2010
Programming paradigms <i>Programming paradigms</i>	7.5	Fem <i>Five</i>	15 dec 2010
Statistisk bildbehandling <i>Statistical image analysis</i>	7.5	Fyra <i>Four</i>	25 maj 2011

Kurs(er) från Georgia Institute of Technology,
USA, 22.5 Hp ingår i examen
*Course(s) from Georgia Institute of Technology,
USA, 22.5 credits are included in the degree*

Robot intelli: Planning
Robot intelli: Planning

Computational complexity
Computational complexity

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Kurs(er) från Georgia Institute of Technology,
Course(s) from Georgia Institute of Technology,

Spectral algorithms
Spectral algorithms

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Examen är på avancerad nivå och omfattar 120 Hp
The degree is within the second cycle and comprises
120 credits

Examensfordringarna var avklarade 2014-04-24
The degree requirements were satisfied on April 24, 2014


Signatur



CHALMERS

DIPLOMA SUPPLEMENT

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve 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): Rouhani-Kalleh
- 1.2 Given name(s): Arash
- 1.3 Date of birth (day/month/year): 17 November 1990
- 1.4 Student identification number or code (if available): 901117-1213

2. Information identifying the qualification

- 2.1 Name of qualification and (if applicable) title conferred (in original language): Teknologie masterexamen
- 2.2 Main field(s) of study for the qualification: See Degree Certificate/Official Transcript
- 2.3 Name and status of awarding institution (in original language): Chalmers tekniska högskola (private)
- 2.4 Name and status of institution (if different from 2.3) administering studies (in original language): Not applicable.
- 2.5 Language(s) of instruction/examination: English

3. Information on the level of the qualification

- 3.1 Level of qualification: Second cycle. For more information on higher education in Sweden, please see point 8, appendix 2.
- 3.2 Official length of programme: 120 credits (120 ECTS). The scope of the education is to be indicated in credits, with full time studies for a normal 40-week academic year corresponding to 60 credits.
- 3.3 Access requirement(s): Eligible for admission to studies within the advanced cycle is a person who holds a Degree of Bachelor in Science/Engineering /Architecture from an internationally recognized university. The degree must fulfill the requirements for eligibility to programmes within the advanced cycle according to the regulations in the Swedish Higher Education Ordinance. Applicants enrolled in a Master programme with no intermediate Degree of Bachelor must have completed at least four years out of a five year or longer Master programme.

4. Information on the contents and results gained

- 4.1 Mode of study: Full-time equivalent.

4.2 Programme requirements

Scope


A Degree of Master (120 credits) (120 ECTS) is awarded after the student has completed the courses required to gain 120 credits with a defined specialization determined by each higher education institution itself, of which at least 60 credits are for specialized study in the principal field (main field of study) of the study programme. In addition the prior award of a Degree of Bachelor, Degree of Bachelor of Fine Arts, professional or vocational qualification of at least 180 credits or a corresponding qualification from abroad is required.

The requirement of the prior award of a qualification may be waived for a student admitted to the programme without the basic entry requirement in the form of a qualification. This does not, however, apply if a waiver was granted during admission pursuant to the second paragraph of Section 28 of the Chapter 7 of the Higher Education Ordinance (1993:100) on the grounds that the qualification had not yet been issued.



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Outcomes

Knowledge and understanding

For a Degree of Master (120 credits) the student shall

- demonstrate knowledge and understanding in the main field of study, including both broad knowledge of the field and a considerable degree of specialized knowledge in certain areas of the field as well as insight into current research and development work, and
- demonstrate specialized methodological knowledge in the main field of study.

Competence and skills

For a Degree of Master (120 credits) the student shall

- demonstrate the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information
- demonstrate the ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames and so contribute to the formation of knowledge as well as the ability to evaluate this work
- demonstrate the ability in speech and writing both nationally and internationally to report clearly and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and
- demonstrate the skills required for participation in research and development work or autonomous employment in some other qualified capacity.

Judgement and approach

For a Degree of Master (120 credits) the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work
- demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Independent project (degree project)

A requirement for the award of a Degree of Master (120 credits) is completion by the student of an independent project (degree project) for at least 30 credits (30 ECTS) in the main field of study. The degree project may comprise less than 30 credits, however no less than 15 credits, if the student has already completed an independent project in the second cycle for at least 15 credits in the main field of study or the equivalent from a programme of study outside Sweden.

Miscellaneous

Specific requirements determined by each higher education institution itself within the parameters of the requirements laid down in this qualification descriptor shall also apply for a Degree of Master (120 credits) with a defined specialization.

For a Master of Science (120 credits) to be awarded at Chalmers students must have

- satisfied the course requirements worth at least 90 credits on an advanced level, including a degree project worth at least 30.
- normally presented the written degree project in English
- satisfied the requirements for courses worth at least 45 credits at the advanced level, including a degree project worth at least 30 credits, at Chalmers.

- 4.3 **Programme details (e.g. modules or units studied), and the individual grades/marks/credits obtained (if this information is available on an official transcript this should be used here):** See Degree Certificate/Official Transcript.
- 4.4 **Grading scheme and, if available, grade distribution guidance:** Unless otherwise prescribed in the course syllabus, a grade is to be awarded on completion of a course. The grade is to be determined by a teacher specially appointed by the higher education institution (an examiner).

The grades assigned are defined as Three, Four or Five. A higher figure signifies a better grade. The grade Three is the lowest pass grade. As well as the numbered scale, the scale Passed/Not Passed is used.

The grading system at the school of Architecture: courses are given on a Passed/Not Passed basis.

No overall grade is given for a degree and students are not ranked.

ECTS Grading Table		
Chalmers grading system	Total number awarded in the reference group	Percentage of the total number
3 (Tre)	258 465	40.26 %
4 (Fyra)	243 126	37.86 %
5 (Fem)	140 400	21.87 %
Based on 3674 courses from the academic years 2000 - 2013		



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 Student identification number or code (if available): 901117-1213

4.5 Overall classification of the qualification (in original language): Not applicable for Swedish qualifications.

5. Information on the function of the qualification

5.1 Access to further study: The degree gives eligibility to studies within the third cycle

5.2 Professional status (if applicable): Not applicable

6. Additional information

6.1 Additional information: See Degree Certificate/Official Transcript

6.2 Further information sources:

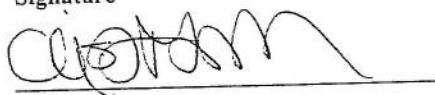
Chalmers tekniska högskola
 SE-412 96 Göteborg
 www.chalmers.se

Universitets och högskolerådet (Swedish Council for Higher Education),
 Nationella ramen för examina (National Qualifications Framework)
 ENIC-NARIC Sweden, Swedish Council for Higher Education
 www.uhr.se

7. Certification of the supplement

7.1 Date: 30 June 2014

7.2 Signature



Christer Marklund

7.3 Capacity: Officer of Degree

7.4 Official stamp or seal



8. Information on the national higher education system

Information on The Swedish Higher Education System of enclosure.

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Anna Lindgren 2015-09-29
 Officer of Degree




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