

Savela Jarkko Markus
Väinö auerin katu 3 E 15
00560 HELSINKI

22.01.2019

014471379

Date of enrolment

23.09.1990

01.08.2014

PRIMARY STUDY RIGHT

Degree objective	Master of Science (science)
Decree	Government Decree (794/2004) on University Degrees
Degree programme	Degree Programme in Mathematics
Major	Mathematics

Valid:	01.08.2014 - 31.07.2022	Date of commencement	23.06.2016
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DEGREES AND UPGRADING OF QUALIFICATIONS

		Cr	Date
00345	Bachelor of Science	182,00	22.06.2016

COMPLETED CREDITS

Course		Cr	Grade	Language	Date
H516	Department of Mathematics and Statistics				
00345	Bachelor of Science	182,00	Pass		22.06.2016
55035	Chemistry, Basic Studies (Minor)	30,00	5	Finnish	19.09.2013
Transferred	Korvattu suorituksilla: Laaja kemia 1 (4 op, 5/5) 17.10.2012; Laaja kemia 2 (4 op, 5/5) 21.12.2012; Laaja kemia 3 (4 op, 5/5) 5.3.2013; Laboratorioturvallisuus ja -työtavat (2 op, 4/5) 8.4.2013; Kemian perustyöt (6 op, 5/5) 26.6.2013; Orgaanisen kemian työt 1 (5 op, 5/5) 19.9.2013; Orgaaninen kemia (5 op, 5/5) 24.5.2013, Tampereen teknillinen yliopisto				
57500	Mathematics, Basic Studies	25,00	5		18.12.2015
57016	Analysis I	10,00	5	Finnish	10.12.2012
Transferred	Tampereen teknillinen yliopisto				
57017	Analysis II	10,00	5	Finnish	12.12.2013
Transferred	Tampereen teknillinen yliopisto				
57033	Introduction to university mathematics	5,00	4	Finnish	18.12.2015
57513	Mathematics, Intermediate Studies	76,00	5		06.06.2016
50036	Maturity Test in Finnish BSc	0,00	Pass	Finnish	16.05.2016
57014	Algebra I	10,00	5	Finnish	17.10.2013
Transferred	Tampereenteknillinen yliopisto				
57018	Mathematics, Essay	2,00	Pass	Finnish	07.03.2016
57020	Topology I	10,00	5	Finnish	10.05.2015
57043	Linear Algebra and Matrices I	5,00	5	Finnish	02.12.2013
Transferred	Tampereen teknillinen yliopisto				
57045	Introduction to Probability	5,00	5	Finnish	12.12.2013
Transferred	Tampereen teknillinen yliopisto				
57047	Linear Algebra and Matrices II	5,00	5	Finnish	13.12.2015
57079	Applications in matrices	5,00	5	English	14.12.2014

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Course		Cr	Grade	Language	Date
57081	Mathematics Studies Completed Elsewhere (Major Subject)	2,00	4	Finnish	12.12.2013
Transferred	Tampereen teknillinen yliopisto				
57101	Measure and Integral	6,00	5	Finnish	08.03.2015
57121	Vector analysis I	5,00	4	Finnish	18.10.2015
57122	Vector analysis II	5,00	5	Finnish	13.12.2015
57274	Logic I	10,00	5	Finnish	10.05.2015
57595	Bachelor's Thesis	6,00	5	Finnish	06.06.2016
57550	Other studies in Bachelor's degree	23,00	Pass		06.06.2016
55014	Introduction to Environmental Chemistry	3,00	4	Finnish	16.12.2014
55059	Solution Chemistry	3,00	5	Finnish	16.12.2014
57590	ICT Driving Licence	3,00	Pass	Finnish	29.02.2016
57591	Practical training in Bachelor's Degree	3,00	Pass	Finnish	17.03.2016
	Tutkimusapulainen ja harjoitusassistentti Aalto-yliopiston perustieteiden korkeakoulussa Matematiikan ja systeemianalyysin laitoksella 1.6.2015-29.2.2016				
57593	Finnish or Swedish	3,00	Pass	Finnish	17.05.2016
57598	Personal study plan for bachelors's degree	1,00	Pass	Finnish	06.06.2016
992911	Oral Skills in the Second Official Language, Swedish	2,00	G	Swedish	03.03.2016
992912	Written Skills in the Second Official Language, Swedish	1,00	G	Swedish	04.03.2016
99501	English Academic & Professional Skills Exemption Test (CEFR B2)*	4,00	Pass	English	11.04.2016
584112	Computer Science, Basic Studies (minor)	28,00	5		16.12.2015
581251	Software Design (C++)	5,00	5	Finnish	20.12.2013
Transferred	Tampereen teknillinen yliopisto				
581325	Introduction to Programming	5,00	Pass	Finnish	20.10.2015
582103	Advanced Course in Programming	5,00	Pass	Finnish	14.12.2015
582104	Methods for Software Engineering	5,00	5	Finnish	16.12.2015
580071	Optional courses in Computer Science	4,00	5	Finnish	17.10.2012
Transferred	Tampereen teknillinen yliopisto: Tietotekniikan perusteet				
580072	Optional Intermediate Studies in Computer Science	4,00	5	Finnish	23.05.2013
Transferred	Tampereen teknillinen yliopisto: Ohjelmointi I				

Course	Cr	Grade	Language	Date
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Unincorporated studies

H516 Department of Mathematics and Statistics

57003	History of Mathematics	3,00	5	Finnish	23.04.2018
57592	Practical training in Master's Degree	3,00	Pass	English	21.11.2018
57599	Personal study plan for masters's degree	1,00	Pass	Finnish	16.11.2018

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Course		Cr	Grade	Language	Date
H523	Department of Computer Science				
582742	Satisfiability, Boolean Modeling and Computation	5,00	5	English	09.03.2016
H528	Department of Physics				
530252	Studies completed in other universities	7,00	Pass	English	14.12.2012
Transferred	Fys-1241 Fundamental University Physics i / Mechanics, TTY				
530252	Studies completed in other universities	7,00	Pass	English	18.12.2013
Transferred	Fys-1260 Fundamental University Physics III / Atomic Physics, TTY				
500-K005	Bachelor's Programme in Computer Science				
TKT20005	Models of Computation	8,00	5	Finnish	21.12.2017
TKT21014	Introduction to Functional Programming	5,00	5	English	13.05.2018
TKT21019	Introduction to Lambda Calculus	2,00	Pass	English	04.06.2018
TKT21999	Optional Intermediate Studies Wide-hackathon	2,00	Pass	English	28.10.2018
500-M001	Master's Programme in Mathematics and Statistics				
MAST31003	Topology II	10,00	5	Finnish	14.12.2017
MAST31005	Algebra II	10,00	4	English	31.08.2018
MAST31031	Introduction to category theory I	5,00	5	English	27.08.2018
MAST31201	Mathematical logic	10,00	5	English	29.05.2018
MAST31206	Dependence logic	10,00	5	English	14.12.2017
MAST31213	Complexity theory	10,00	5	English	13.12.2017
MAST31214	Computability theory	10,00	5	English	03.05.2018
500-M010	Master's Programme in Data Science				
DATA11002	Introduction to Machine Learning	5,00	5	English	19.12.2017
DATA15001	Introduction to Artificial Intelligence	5,00	5	English	25.10.2017

Total number of credits	300,00
Total number of transferred credits out of all credits	99,00

The language of completed studies has been registered at the University of Helsinki as of 1 August 2011.

Studies have been completed in the following languages

Finnish	192,00 cr
Swedish	3,00 cr
English	105,00 cr

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Credits (Cr) correspond to the ECTS (European Credit Transfer System) credits (1 Cr = 1 ECTS Cr).
Credit units (Cu) are the credits (study weeks) of the old Finnish system.

GRADES USED AT THE UNIVERSITY OF HELSINKI

Completed studies and Bachelor's and Master's theses:

5 (excellent), 4 (very good), 3 (good), 2 (satisfactory), 1 (passable)

Old Master's theses, doctoral dissertations and Licentiate theses:

L (Laudatur), ECLA (Eximia cum laude approbatur), MCLA (Magna cum laude approbatur), CL (Cum laude approbatur), NSLA (Non sine laude approbatur), LUB (Lubenter approbatur), A (Approbatur)

Doctoral dissertations and Licentiate theses:

Pass, PasD (Pass with distinction)

Written and oral proficiency in the second national language of Finland:

G (good), SAT (satisfactory)

Practical training, skills courses and degrees:

Pass

The grading scale at the University of Helsinki is not a proportionate scale and does not therefore fully correspond to the ECTS grading scale.

I am interested in the ACT2019 Summer school because of several reasons. First of all I would like to deepen my understanding of category theory and its applications. My background is mostly in more theoretical mathematics, but I also enjoy applying what I have learned. The idea of finding applications for one of the most abstract branches of mathematics appeals to me especially.

Secondly I want to network and connect with other researchers and students interested in category theory and finding new and exciting applications for it. I am expecting to finish my master's degree this Spring, and I am still considering what to do after my graduation. I would be very interested in hearing about any PhD positions related to category theory and its applications.

Thirdly, I have never attended a Summer school before and I believe the experience itself would be worth going for me. I expect I would learn a great deal, meet interesting people and make new friends as well as discover new topics to learn more about.

I am aiming for a career in research, and my main interest lies in the intersection of mathematics and computer science. I am very interested in theoretical computer science, computability and formal methods. I also appreciate the power and elegance of mathematical formalism and trust that categorical formulations of different structures can yield new insights and discoveries about the structures. Therefore, deepening my understanding of category theory and networking with like-minded people would surely advance my career and research goals.

I am a student of mathematics and computer science at the University of Helsinki. I am currently in my last year of my master's degree majoring in mathematics; and minoring in computer science. I expect to graduate in Spring 2019. I chose the mathematical logic specialization in my master's degree. I have spent plenty of time studying various subjects related to theoretical computer science, such as complexity, computability, formal methods and lambda calculus. I have also spent time studying abstract mathematics such as algebra, topology and category theory.

I actually organized a category theory study group with another student at my university last Summer because our math department was not offering a course on the subject. Partly because of the study group the department is now offering a self-study course on the topic. During the study group we learned the basic definitions and results related to categories, functors and natural transformations. We also familiarized ourselves with the Yoneda lemma, adjunctions as well as monads to some degree. I am also familiar with the connection of category theory to functional programming since I have seen Bartosz Milewski's lecture videos on youtube.

I am very interested in the theory of computation and the limits of computability. Therefore my first choice would be Hofstra's project. My second choice on the other hand would be Milewski's project since I am extremely interested in functional programming as well. My third choice would be Backens' project because I find the topic of quantum computation interesting although my background might be lacking. The remaining projects in order of decreasing preference are Spivak, Sadrzadeh and Fritz.

I am able to commit to coming to Oxford in July.

Personal information

Name	Jarkko Markus Savela
Address	Väinö Auerin katu 3 E 15, 00560 HELSINKI, FINLAND
Date of birth	23.09.1990
Email(personal)	jarkkosavela@hotmail.com
Email(work)	jarkko.savela@helsinki.fi
Tel.	+358 40 7488390

Education

CURRENT (9.2017 →)	University of Helsinki, Department of mathematics and statistics, Master of Philosophy
22.6.2016	University of Helsinki, Department of mathematics and statistics, Bachelor of Science
05.12.2011	Seinäjoki Upper Secondary School, Matriculation examination
29.05.2010	Vocational Education Centre Sedu, Basic examination in catering, Training programme in institutional catering
03.06.2006	Seinäjoki Lyceum, Comprehensive school

Work Experience

10.2018 onwards	Helsinki Institute for Information Technology, Constraint Reasoning and Optimization group, Research Assistant (Advisor Matti Järvisalo)
06.2016-06.2017	University of Utah, School of Computing, Research Assistant (Advisor Ganesh Gopalakrishnan)
06.2015-02.2016, 04.2016-05.2016	Aalto University, Department of Mathematics and Systems analysis, Development project on computer aided mathematics education, Project Worker/Research Assistant
01.2015-5.2016	Mafyvalmennus (prep school for medical studies), Teacher in Chemistry, Mathematics and Physics
10.2014-01.2015	Viiija OY, Project Worker, Creating study materials
06.2014-08.2014	Restel OY, Ruutana Shell service station Service station employee

02.2012-08.2012	University of Tampere, Institute of biomedical technology, Research assistant
06.2010-12.2010	Fransmanni Seinäjoki, Ala carte waiter
18.02.2010 - 31.03.2010	Asociacion Finlandesa Costa Del Sol Finnish association in Costa Del Sol, Practical training period abroad (in Spain), Cook
Spring 2009 – Winter 2009	Nutrition Centre of Seinäjoki Central Hospital, Kitchen aid, Cook, Temp
Summer 2006	Insinööritoimisto Savela OY Engineering Company Savela OY, Summer job

Skills

Computing	Handy with office programmes and their open source counterparts (e.g. MS Word, Excel and Powerpoint). Elementary skills with Haskell, C++, Isabelle/HOL, Matlab, HTML, Javascript, Chems sketch and Inkscape. Proficient with Java, Scala, Maxima and LaTeX.	
Driving license	B (European standard)	
Languages	Finnish	Native
	English	Excellent
	Swedish	Satisfactory
Hygiene proficiency certificate		
Certificate of proficiency for serving alcohol		

Interests and Hobbies

I am very interested in mathematics, especially in computer proofs and partially or fully automated theorem proving. Programming and other activities on computers are enjoyable pastimes for me. This includes PC games. I also enjoy reading about natural sciences, philosophy and other subjects, and I cook a lot, especially vegetarian and vegan dishes and experiment with different cuisines. I play board games and watch movies with my friends quite regularly.



Applied Category Theory <act2019school@gmail.com>

Recommendation letter for ACT summer school / Jarkko Savela

1 message

Järvisalo, Matti J <matti.jarvisalo@helsinki.fi>

Wed, Jan 30, 2019 at 4:11 AM

To: "act2019school@gmail.com" <act2019school@gmail.com>

To whom it may concern:

I am writing this to recommend accepting Jarkko Savela to attend the summer school in applied category theory adjoint with ACT 2019. Jarkko is currently working as a research assistant in my research group at the University of Helsinki. He is, based on both his academic record and my personal impressions of him, an excellent MSc student with a very suitable background for attending the school, in particular, a combination of mathematics, esp. mathematical logic, and computer science studies. Recently, he also independently organized a study group on category theory at our university. I am confident that Jarkko will benefit from attending the school in terms of further strengthening and widening his academic scope.

Sincerely yours,
Matti Järvisalo
Associate Professor
Department of Computer Science
University of Helsinki
Finland