Bjarni Jens Kristinsson

Curriculum Vitae

"It is quality rather than quantity that matters."
-Lucius Annaeus Seneca, *Moral Letters to Lucilius*

Education

2017 – *curr.* **M.Sc. in Computer Science**, *Reykjavik University*, Iceland.
Spent the year 2017-18 at *Vrije Universiteit Amsterdam* in the Netherlands taking courses on distributed systems, concurrency algorithms, coding theory and cryptography. RU courses on topics such as machine learning, deep neural networks and combinatorics. Doing thesis work on computer proofs and conjectures about combinatorial objects and enumerations.

2012 – 2015 **B.Sc. in Mathematics**, *University of Iceland*, Reykjavik, *8,55* (out of 10).
Specialization in Computer Science. Elective courses in subjects such as algorithms, probability theory, combinatorics and graph theory. President of the student union Stigull during the school year 2013-14. Wrote a thesis named *Occurrence graphs of patterns in permutations* (available from `http://hdl.handle.net/1946/22017`).

2007 – 2011 **Stúdentspróf**, *Reykjavik Junior College*, Reykjavik, *7,89* (out of 10).
Physics department. Received an acknowledgement for excellent results in Mathematics at graduation. Voted class councillor in final year.

Bachelor thesis

title Occurrence graphs of patterns in permutations

supervisor Henning Ulfarsson, postdoctoral researcher at Reykjavik University

abstract This paper is based on a generalization of the idea behind the proof of the *Simultaneous Shading Lemma* by Claesson et al. (2014). We define the *occurrence graph* $G_p(\pi)$ of a pattern p in a permutation π as the graph with the occurrences of p in π as vertices and edges between the vertices if the occurrences differ by exactly one element. We study the general properties of the occurrence graphs and some interesting extreme cases. The main theorem in this paper is that every *hereditary property* of graphs produces a *permutation class*.

url `http://hdl.handle.net/1946/22017`

url `https://arxiv.org/abs/1607.03018` *(preprint)*

Development tools

Víðimelur 48 – 107 Reykjavík – Iceland
+354 698 1423 • *bjarni.jens@gmail.com* • *bjk.is* • *bjk17*
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Languages	Python, Java
DevOps	Linux, Docker, Ansible, LXD, Jenkins, Travis, Vagrant, Bash, git
Other	Keras, TensorFlow, NumPy, R, Octave/MatLab, SQL, LaTeX

Work experience

2015 – 2018 **Software Developer**, *WuXi NextCODE*, Reykjavik, Iceland.
Joined the company at an early stage when it was expanding very fast. Started off in DevOps like assignments of maintaining, executing and further developing deployment (Chef, Ansible) and infrastructure (AWS CloudFormation, Terraform) code. Handed it over to a newly created Backend Group and joined the Data Group. Developed Python code to import and process genomic data in our system and integrating 3rd party platforms with ours. Built, tested and deployed components in CI/CD loops using tools such as Jenkins, Docker and Ansible. Returned for the summer of 2018 to create a benchmarking suite for the company's core software which runs in a CI loop to detect performance regression.

Summer 2015 **Software Developer**, *Handpoint*, Kopavogur, Iceland.
Implementing protocols with partners and developing card reader software. Didn't like it and quit.

Summer 2014 **Software Developer**, *Invector*, Reykjavik, Iceland.
Developing a web app for clients using Invector's statistical model to estimate prices of real estates worldwide. Working primarily on designing the database, the user system and other backend programming.

Summer 2013 **Software Developer**, *Reykjavik Energy*, Reykjavik, Iceland.
Brought in to program an interactive educational game about Reykjavik Energy's CarbFix project. Worked with three Master's students who designed the game and wrote the educational material. Coded the game in raw JavaScript using images and graphics drawn and provided by them.

Summer 2013 **Web programming**, *Reconesse*, Reykjavik.
Together with two other university students we developed an interactive educational game about interesting female role models in women's right history for their website. The project received a grant from Rannís' Icelandic Student Innovation Fund.

Teaching

Fall 2018 **Assistant Teacher**, *Reykjavik University*, Reykjavik.
Teaching assistant in a Calculus and Statistics course. Grading homework in a Discrete Mathematics course.

Fall 2013 **Assistant Teacher**, *University of Iceland*, Reykjavik.
Teaching assistant in a Linear Algebra course.

2012 – 2014 **More teaching**, *Various employers*, Reykjavik.
I have taught a computer science class for the Youth University (summer 2013), revision courses in mathematics for Nobel tutoring Ltd. (2012 – 2013) as well as I have had many students for private tutoring in mathematics (2012 – 2014).

Interests

tech Recent hands-on hobby projects include autonomous Raspberry Pis hosting websites and recording timelapses. Set up `blog.bjk.is` to document some of it. Manage my own VPS hosting websites and experimenting with various webservices.

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math I am deeply intrigued by the concept of infinity and I take joy in intuitive proofs by contradiction. During junior college I participated in multiple mathematic competitions and twice I was selected to compete with the national team in Baltic Way.

chess For many years I studied chess and I achieved a peak ELO rating of 2062. In 2007 I became national champion U20 and in 2009 I played in the World Youth Chess Championship held in Antalya, Turkey. Twice I became Nordic champion and three times national champion with my junior college chess team. I have tought chess in various elementary schools and organized my own summer chess workshops.

sports I like to lift weights, play football and bike to keep me in shape and in good health. I also bike to commute. In the summer of 2012 my friend and I went on a 2 month biking tour through Europe, visiting six countries and bicycling over 1600 km.

Languages

Icelandic	native language	
Swedish	fluent	*I lived in Sweden for ten years*
English	full professional proficiency	
French	beginner level	

References

Available upon request.