

# CURRICULUM VITAE – Niels Bjørn Bugge Grathwohl

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## BORN

Copenhagen, November 1<sup>st</sup> 1986.

## EDUCATION

2012 → 2015 PhD student in computer science at the University of Copenhagen (DIKU).

2013 Visiting PhD student at Cornell University, NY, USA.

2011 M.Sc. in computer science from the University of Copenhagen (DIKU).

2009 B.Sc. in computer science from the University of Copenhagen (DIKU).

2005 Graduated from Frederiksberg Gymnasium (Frederiksberg High School).  
Received the school's award for *outstanding performance in the sciences*.

## WORK

2015 → present Software specialist/researcher at the Alexandra Institute.

2015 → present One-year postdoc position at the University of Copenhagen (DIKU).

2007 → 2013 Developer at the danish bank Danske Bank Group (consultancy-style work at the end). Worked in a team consisting of mainframe-performance specialist. Participated in the design and development of internal tools used by the bank's programmers to ensure performance standards of new and existing code.

2012 → 2013 Co-founder of a "Groupon-style" company targeted at urban consumers who prioritize organic food and services (now defunct).

2011 Co-founder of small company developing iOS-apps (now defunct).

2006 → 2007 Software developer at Complet A/S. Development of the webshop of the company in PHP, JavaScript, and SQL.

2005 → 2006 Freelance developer associated with Hosted Technologies. Mainly development of webshops in PHP, JavaScript, etc.

2003 → 2005 The technical webmaster at my high school, Frederiksberg Gymnasium. Basic development in PHP and SQL.

2000 → 2002 Assistant swimming coach, Hermes Gymnastics Association.

## PUBLICATIONS

- Bjørn Bugge Grathwohl, Fritz Henglein, Ulrik Terp Rasmussen, Kristoffer Aalund Søholm, and Sebastian Paaske Tørholm. Kleenex: Compiling Nondeterministic Transducers to Deterministic Streaming Transducers. In *Proceedings of the 43rd Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, POPL '16, p. 284–297, 2016.
- Niels Bjørn Bugge Grathwohl. Parsing with Regular Expressions & Extensions to Kleene Algebra *PhD thesis*, Department of Computer Science, University of Copenhagen (DIKU), 2015.
- Niels Bjørn Bugge Grathwohl, Fritz Henglein, and Ulrik Terp Rasmussen. Optimally Streaming Greedy Regular Expression Parsing. In G. Ciobanu and D. Méry, editors, *Theoretical Aspects of Computing – ICTAC 2014*, volume 8687 of *Lecture Notes in Computer Science*, pages 224–240. Springer International Publishing, September 2014.

- Niels Bjørn Bugge Grathwohl, Dexter Kozen, and Konstantinos Mamouras. KAT + B! In *Proceedings of the Joint Meeting of the Twenty-Third EACSL Annual Conference on Computer Science Logic (CSL) and the Twenty-Ninth Annual ACM/IEEE Symposium on Logic in Computer Science (LICS)*, CSL-LICS '14, pages 44:1–44:10, New York, NY, USA, 2014. ACM.
- Niels Bjørn Bugge Grathwohl, Fritz Henglein, and Ulrik Terp Rasmussen. A Crash Course in Regular Expressions as Types. *Introductory lecture notes used in various courses and student projects during 2014 and 2015*, <http://www.diku.dk/kmc/publications/>.
- Niels Bjørn Bugge Grathwohl, Fritz Henglein, and Dexter Kozen. Infinitary Axiomatization of the Equational Theory of Context-Free Languages. In D. Baelde and A. Carayol, editors, *Proc. 9th Workshop Fixed Points in Computer Science (FICS 2013)*, volume 126 of *Electronic Proceedings in Theoretical Computer Science*, pages 44–55, Torino, Italy, September 2013.
- Niels Bjørn Bugge Grathwohl, Fritz Henglein, Lasse Nielsen, and Ulrik Terp Rasmussen. Two-Pass Greedy Regular Expression Parsing. In S. Konstantinidis, editor, *Proceedings 18th International Conference on Implementation and Application of Automata (CIAA)*, volume 7982 of *Lecture Notes in Computer Science*, pages 60–71. Springer, July 2013.
- Niels Bjørn Bugge Grathwohl, Jeroen Ketema, Jens Duelund Pallesen, and Jakob Grue Simonsen. Anagopos: A Reduction Graph Visualizer for Term Rewriting and Lambda Calculus. In M. Schmidt-Schauß, editor, *Proceedings of the 22nd International Conference on Rewriting Techniques and Applications (RTA 2011)*, Novi Sad, Serbia, May 30 – June 1, volume 10 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 61–70. Schloss Dagstuhl, 2011.
- Niels Bjørn Bugge Grathwohl. The Biological Plausibility of the Blob Model. Master's thesis, University of Copenhagen, October 2011. Master's Thesis, <http://www.diku.dk/~bugge/pubs/entries/grathwohl2011a.html>.

## TEACHING

- Fall 2015 Teacher in *Logic in Computer Science*. Same responsibilities as in the Fall 2014.
- Fall 2014 Teacher in *Logic in Computer Science*. Responsible for one third of the lectures and, with a colleague, the classroom teaching, the exam set design, and the grading.
- Fall 2014 Teacher's assistant in *Philosophy of Computer Science*. Responsible for grading the homework related to the part of the course about computer science as a formal science by giving students detailed feedback on their discussions about computability-related topics.
- 2014–2015 Co-supervisor of numerous Bachelor's theses and one Master's thesis.
- Fall 2012 Teacher's assistant in *Linear Algebra*. Responsible for the classroom teaching for 30 of the course's students.