

CURRICULUM VITÆ

PERSONAL INFORMATION

Name	Markus Andreas Daniel Blumenstock
Birth	March 1990
Nationality	German
Civil status	Married, one child

EMPLOYMENT

11/2014 – today	Research assistant with teaching responsibilities Algorithmics Group, Institute of Computer Science Johannes Gutenberg University Mainz
03/2018 – 10/2018	Parental leave

EDUCATION

01/2015 – 01/2020	Doctoral candidate , University of Mainz Thesis title: <i>Pseudoforest Partitions and the Approximation of Connected Subgraphs of High Density</i> Advisor: Professor Ernst Althaus Graded and defended <i>summa cum laude</i> (graduation imminent)
10/2012 – 09/2014	Master of Science (grade 1.3), University of Mainz Computer science, focus on mathematics Thesis title: <i>Graph Clustering and Jaccard Similarity Estimation in Offline and Streaming Settings</i> Advisor: Professor Stefan Kramer
10/2009 – 09/2012	Bachelor of Science (grade 1.6), University of Mainz Computer science, minor in mathematics Thesis title: <i>Application-Oriented Scheduling with Eligibility Restrictions and Precedence Constraints</i> Advisor: Professor Elmar Schömer
08/2000 – 06/2009	Abitur (secondary school qualifications, grade 1.4) Graf-Stauffenberg-Gymnasium in Flörsheim am Main

RESEARCH VISITS AND INTERNSHIPS

09/2017 – 12/2017	Visiting graduate student Department of Combinatorics & Optimization University of Waterloo, Canada Supervisor: Professor Jochen Könemann
03/2012 – 09/2012	Academic visitor Department of Computer Science The University of Waikato, Hamilton, New Zealand Supervisor: Professor Bernhard Pfahringer
08/2011 – 10/2011	Internship at Raytheon Professional Services GmbH Rüsselsheim, Germany

SCIENTIFIC SERVICE

2018/2019	Member of an appointment committee for a professorship
2016, 2017	Judge for the <i>German Collegiate Programming Contest</i>
2015, 2016	Coach for a team at the <i>ICPC Northwestern Europe Regional Contest</i>
2015	Review for <i>Mathematical Programming Computation</i>

PRIZES AND SCHOLARSHIPS

09/2017 – 12/2017	Scholarship of the German Academic Exchange Service
2015	<i>Book Prize</i> for the master thesis Verein der Freunde für Informatik in Mainz e. V.
2012	<i>Faculty Prize for Excellent Theses</i> for the bachelor thesis Faculty for Physics, Mathematics and Computer Science University of Mainz

PUBLICATIONS

- 01/2020 M. Blumenstock and F. Fischer. A Constructive Arboricity Approximation Scheme. Accepted to the *46th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2020)*. To appear.
Extended preprint: <https://arxiv.org/abs/1811.06803>
- 12/2019 M. Blumenstock. Pseudoforest Partitions and the Approximation of Connected Subgraphs of High Density. *PhD thesis*, Johannes Gutenberg University Mainz. To appear.
A preliminary version is available at https://www.algorithmics.informatik.uni-mainz.de/files/2019/11/Blumenstock_Diss_elektr.pdf
- 01/2016 M. Blumenstock. Fast Algorithms for Pseudoarboricity. In *Proceedings of the Eighteenth Workshop on Algorithm Engineering and Experiments (ALENEX 2016) in Arlington, Virginia, USA, January 2016*, pp. 113–126. Society for Industrial and Applied Mathematics, 2016.
<https://doi.org/10.1137/1.9781611974317.10>
- 12/2014 E. Althaus, M. Blumenstock, A. Disterhoft, A. Hildebrandt, and M. Krupp. Algorithms for the Maximum Weight Connected k -Induced Subgraph Problem. In *8th International Conference on Combinatorial Optimization and Applications (COCOA 2014), Wailea, Hawaii, USA, December 2014*. Lecture Notes in Computer Science, Vol. 8881, pp. 268–282. Springer, 2014.

TEACHING

- 2019 winter term Formal Languages and Computability, lecture + head TA
Complexity Theory, head TA
- 2019 summer term Algorithms and Complexity, seminar
- 2018 winter term The Modern Algorithmic Toolbox, seminar
Data Structures and Efficient Algorithms, lab course
- 2017 winter term Advanced Algorithms, lab course
- 2017 summer term Advanced Complexity Theory, substitute lecturer
- 2016 winter term Data Structures and Efficient Algorithms, head TA
Data Structures and Efficient Algorithms, lab course

2016 summer term	Formal Languages and Computability, head TA Approaching Programming Contests, lab course
2015 winter term	Game Theory, head TA Advanced Algorithms, lab course
2015 summer term	Approaching Programming Contests, lab course
2014 winter term	Game theory, head TA
2013 winter term	Data Structures and Efficient Algorithms, student TA
2013 summer term	Computability and Complexity, student TA
2012 winter term	Formal Languages and Automata Theory, student TA
2012 summer term	Computability and Complexity, student TA
2011 winter term	Data Structures and Efficient Algorithms, student TA

LANGUAGES

German, native

English, proficient

Cambridge Certificate in Advanced English, grade A

Brazilian Portuguese, basics

Latin, Latinum (high-school certificate)

Ancient Greek, Graecum (high-school certificate)

VOLUNTARY WORK

03/2009 – 12/2014	Emergency management in the Main-Taunus district Volunteer Fire Brigade Eddersheim (until 06/2011: in lieu of mandatory military service)
09/2010 – 06/2017	Youth Work (age 6-10 years) Volunteer Fire Brigade Eddersheim

Mainz, January 7, 2020