

STEFFEN MAASS

Room 3124
Klaus Advanced Computing Building
266 Ferst Dr NW, Atlanta GA 30332-0765

*School of Computer Science
Georgia Tech*

(404) 491-7237
steffen.maass@gatech.edu
<https://steffen-maass.github.io>

Education

Georgia Institute of Technology	Ph.D. in Computer Science Atlanta, GA Advisor: Dr. Taesoo Kim Field of research: Systems	01/2015 – 05/2019 (<i>expected</i>) GPA: 4.0 / 4.0
Georgia Institute of Technology	M.Sc. in Computer Science Atlanta, GA Specialization: Networking	08/2013 – 12/2014 GPA: 4.0 / 4.0
University of Stuttgart	M.Sc. in Computer Science Stuttgart, Germany Specializations: <i>Database Systems</i> and <i>Distributed Systems</i> Thesis: Distributed Graph Processing and Partitioning for Spatiotemporal Queries in the Context of Camera Networks	10/2012 – 08/2015 GPA: 1.1 / 1.0 (<i>excellent with distinction</i>)
University of Stuttgart	B.Sc. in Computer Science Stuttgart, Germany Thesis: Efficient Strategies for Task Distribution for Public Sensing	10/2009 – 09/2012 GPA: 1.5 / 1.0 (<i>excellent</i>)

Research Interests

Distributed Systems, Operating Systems, and Graph Processing.

Current Research

I am working on a profiler for distributed systems which allows developers to easily identify code for which optimizations have a high potential of improving the application's performance [Poster @ NSDI'17].

I am furthermore interested in big-data and especially graph-analytics workloads, for static and temporally evolving datasets [EuroSys'17].

Publications

1. **SOLROS: A Data-Centric Operating System Architecture for Heterogeneous Computing (to appear)**
Changwoo Min, Woon-Hak Kang, Mohan Kumar, Sanidhya Kashyap, **Steffen Maass**, Heeseung Jo, and Taesoo Kim.
In *Proceedings of the Thirteenth ACM European Conference on Computer Systems (EuroSys'18)*,
Porto, Portugal, April, 2018.
Acceptance rate: 16.4%

2. **LATR: Lazy Translation Coherence (to appear)**
Mohan Kumar*, **Steffen Maass***, Sanidhya Kashyap, Ján Veselý, Zi Yan, Taesoo Kim, Abhishek Bhattacharjee, and Tushar Krishna.
In *Proceedings of the 23rd ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS'18)*,
Williamsburg, VA, USA, March, 2018.
* marks joint first authors.
Acceptance rate: 17.5%
3. **Mosaic: Processing a Trillion-Edge Graph on a Single Machine.**
Steffen Maass, Changwoo Min, Sanidhya Kashyap, Woonhak Kang, Mohan Kumar, and Taesoo Kim.
In *Proceedings of the Twelfth ACM European Conference on Computer Systems (EuroSys'17)*,
Belgrade, Serbia, April, 2017.
Best Student Paper Award
Acceptance rate: 20.5%
4. **Understanding Manycore Scalability of File Systems**
Changwoo Min, Sanidhya Kashyap, **Steffen Maass**, Woonhak Kang, and Taesoo Kim.
In *Proceedings of the USENIX Annual Technical Conference (ATC'16)*,
Denver, CO, June, 2016.
Acceptance rate: 19.0%

Posters

1. **Mosaic: Processing a Trillion-Edge Graph on a Single Machine.**
Steffen Maass, Changwoo Min, Sanidhya Kashyap, Woonhak Kang, Mohan Kumar, and Taesoo Kim.
In *the Workshop on Optimization & Big Data (OBD'18)*,
KAUST, Saudi Arabia, Feb, 2018.
Best Contribution Award
2. **DistCoz: Tell Me What to Optimize in My Distributed Application**
Steffen Maass, Mohan Kumar, and Taesoo Kim.
In *the 14th USENIX Symposium on Networked Systems Design and Implementation (NSDI'17) Poster*
Boston, MA, April, 2017.
3. **Network Function Fault Isolation in a Single Address Space**
Mohan Kumar, **Steffen Maass**, and Taesoo Kim.
In *the 14th USENIX Symposium on Networked Systems Design and Implementation (NSDI'17) Poster*
Boston, MA, April, 2017.

Awards

OBD'18	Best Contribution Award	02/2018
Eurosys'17	Best Student Paper Award	04/2017
DAAD	Stipend(\$15K) and tuition waiver awarded by the German Academic Exchange Service (DAAD) for studying at the Georgia Institute of Technology.	08/2013 – 08/2014

Travel Grants

1. **14th USENIX Symposium on Networked Systems Design and Implementation** 03/2017
Boston, MA

Invited Talks and Presentations

Intel ISTC	Mosaic: Processing a Trillion-Edge Graph on a Single Machine	Atlanta, 06/2017
EuroSys'17	Mosaic: Processing a Trillion-Edge Graph on a Single Machine	Belgrade, 04/2017

Work Experience

Ph.D. Software Engineering Intern	Google, Mountain View, CA Intern in the Platforms team, working on performance diagnosis of Google's next-gen SDN platform.	05/2016 – 08/2016
Ph.D. Software Engineering Intern	Google, New York, NY Working on the control plane of the load-balancing platform of Google's front-end serving infrastructure.	05/2015 – 08/2015
Graduate Research Assistant	Georgia Tech, Atlanta, GA Research in the <i>Embedded Pervasive Lab</i> under Dr. Kishore Ramachandran and <i>Systems Software & Security Lab</i> under Dr. Taesoo Kim.	since 08/2013
Software Developer	maas IT consulting, Kirchheim unter Teck, Germany Development of customized web applications.	2008 – 2014

Teaching Experience

Graduate Teaching Assistant	Georgia Tech, Atlanta, GA Graduate Teaching Assistant for <i>Computability & Algorithms</i> and <i>Advanced Operating Systems</i> .	2014 – 2015
Teaching Assistant	University of Stuttgart, Germany Teaching Assistant for <i>Distributed Systems</i> & a hands-on class on processor architecture and design.	2011 – 2013