# Steffen Maass

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## Education

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

## 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 Poster 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

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|---|---|---|
| **OBD'18** | Best Poster 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 Institue of Technology. | 08/2013 − 08/2014 |

## Travel Grants

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

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# Invited Talks and Presentations

| Intel ISTC | Mosaic: Processing a Trillion-Edge Graph on a Single Machine | Atlanta, 06/2017 |
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| 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 | 05/2016 – 08/2016 |
| --- | --- | --- |
| | Intern in the Platforms team, working on performance diagnosis of Google's next-gen SDN platform. | |
| Ph.D. Software Engineering Intern | Google, New York, NY | 05/2015 – 08/2015 |
| | Working on the control plane of the load-balancing platform of Google's front-end serving infrastructure. | |
| Graduate Research Assistant | Georgia Tech, Atlanta, GA | since 08/2013 |
| | Research in the *Embedded Pervasive Lab* under Dr. Kishore Ramachandran and *Systems Software & Security Lab* under Dr. Taesoo Kim. | |
| Software Developer | maaß IT consulting, Kirchheim unter Teck, Germany | 2008 – 2014 |
| | Development of customized web applications. | |

# Teaching Experience

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