

Luk Burchard

<https://lbb.sh/>

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EXPERIENCE

- **LBL — Lawrence Berkeley National Laboratory** Berkeley, CA, USA
Dr. Xiaoye Sherry Li, Scalable Solvers Group *Aug. 2022 – Nov. 2022*
- **Simula Research Laboratory** Oslo, Norway
Ph.D. Student *Mar. 2021 – Current*
 - **Thesis:** Repurposing Domain-specific Hardware Accelerators for Sparse and Irregular High-Performance General-Purpose Computation
- **Simula Research Laboratory** Oslo, Norway
Research Intern *Jul. 2020 – Aug. 2020*
 - **Topic:** Exploration of parallel graph algorithms on a MIMD architecture using Graphcore IPU
- **Google** Seattle, United States
Engineering Intern *Apr 2018 - Aug 2018*
 - **Created Krew — The Kubectl Plugin Manager:** Designed and created, Krew the default Kubernetes-kubectl plugin 5100 stars on GitHub, over 200 plugins. The project was adopted by the Linux Foundation.
<https://github.com/kubernetes-sigs/krew>.
- **Kubermatic GmbH** Hamburg, Germany
Software Engineer *Oct 2016 - Apr 2018*
 - **Kubernetes:** contributions & private extensions, consulting, CKA - Certified Kubernetes Administrator
 - **Presenting/Teaching:** Workshops/talks on conferences to teach GKE/Kubernetes, i.e Google Launchpad, Google Events for startups, Containerdays, TechTalks

EDUCATION

- **Technical University of Berlin (4.0 GPA, ECTS A)** Berlin, Germany
Master in Computer Science *Oct. 2019 – Mar. 2021*
- **Technical University of Berlin (5 Semester BSc)** Berlin, Germany
Bachelor of Computer Science *Oct. 2016 – Oct. 2019*
- **Gymnasium Oberalster** Hamburg, Germany
Abitur with focus on Physics and Computer Science *Aug. 2013 – May. 2016*

PUBLICATIONS

- **2021 IEEE 28th International Conference on High Performance Computing:** iPUG for Multiple Graphcore IPU: Optimizing Performance and Scalability of Parallel Breadth-First Search
- **ISC High Performance 2021:** iPUG: Accelerating Breadth-First Graph Traversals Using Manycore Graphcore IPU

ADDITIONAL TALKS

- **SciCADE22 International Conference on Scientific Computation and Differential Equations, Island:** Accelerating Cardiac Electrophysiology Simulations using novel Hardware Architecture, Mini Symposium

EXTRACURRICULAR

- **Leading the Developer Student Club (DSC)** Berlin, Germany
Founding the club and organizing events (workshops/talks) with 100+ people *Aug. 2019*
- **TechTalks and Courses for Students** Berlin, Germany
Teach students programming *Bachelor*

PROJECTS

- **Krew:** Created Krew the default package manager for kubectl plugins, 5k+ Stars on GitHub.
- **Fubectl:** Created Kubernetes-kubectl ergonomics, 550+ Stars on GitHub.