Lars Prehn

Measuring networks, one packet at a time.

I'm a Ph.D. candidate at the Max Planck Institute for Informatics in Saarbrücken, Germany. I received my bachelor's and master's degree from TU Berlin in April and October 2018, respectively. Advised by Prof. Anja Feldmann, my research explores traffic engineering and network management with a specific focus on interdomain routing.

More information at: www.whoislars.net

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Work Experience

MPI for Informatics, Saarbrücken — *Ph.D. Student*

Nov. 2018–Today

I advanced our understanding of the Internet's routing ecosystem by publishing 5 peer-reviewed papers that took a deeper look at IPv4 address exhaustion, different ingress traffic engineering techniques, and the importance of IXPs.

Google, Zürich — *SWE Intern*

Juni 2022–Aug. 2022

I developed a highly configurable visualization layer that enables network acquisition, construction, and planning teams to quickly gain actionable insights about improvement areas within their optical fleet.

TU Berlin, Berlin — *Tutor and Research Assistant*

Apr. 2016–Oct. 2018

Initially, I weekly tutored 30-40 students on data structures, algorithms, and networking. In the last year, my focus transitioned to a research project in which I analyzed the global deployment of explicit congestion notification signals.

Publications

CCR'22 | Hyper-Specific Prefixes: Gotta Enjoy the Little Things in Interdomain Routing
K. Z. Sediqi, L. Prehn, O. Gasser

PAM'22 | Peering Only? Analyzing the Reachability Benefits of Joining Large IXPs Today
L. Prehn, F. Lichtblau, C. Dietzel, and A. Feldmann

IMC'21 | How biased is our Validation (Data) for AS Relationships?
L. Prehn and A. Feldmann

CoNEXT'20 | When Wells Run Dry: The 2020 IPv4 Address Market
L. Prehn, F. Lichtblau, and A. Feldmann

IMC'20 | AS-Path Prepending: there is no rose without a thorn
P. Marcos, L. Prehn, L. Leal, A. Dainotti, A. Feldmann, and M. Barcellos

Skills

English (C1, 108/120 Toefl IBT), **German**

Python3 (Advanced), **C & Shell** (Intermediate), **Java & Go** (Beginner)

Assertiveness, inclusion, team building & management

Critical & strategic thinking, problem solving, academic writing

Teaching Experience

Hot Topics in Data Networks
Winter 2020/21, Co-organizer

Data Networks
Summer 2020, Co-organizer

Network Protocols and Architectures
Winter 2017/18, Tutor

Algorithms and Data Structures
Summer 2016 & Summer 2017, Tutor

Network Technologies
Winter 2016/17, Lab assistant

Reviewing & Service Experience

IMC'22 | Shadow TPC Chair

SIGCOMM'21 | Student Organizer

SIGCOMM'21 | Artifact Evaluation Commitee Member

CoNEXT'20 | Student Scribe

IMC'19 | Shadow TPC Participant