

Marcel Dischinger

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Research Interests

My research interests span the areas of networking and distributed systems. In particular, I am interested in the measurement, analysis, and design of Internet-scale networked systems. My recent work focuses on making the Internet more transparent to users and researchers. Therefore, I am building novel measurement tools, e.g., to detect whether an ISP blocks BitTorrent traffic and to study Internet edge networks, such as DSL, cable, and cellular broadband networks. In a related project, I work on building new testbed infrastructures to help researchers evaluate their designs in heterogeneous network environments.

Education

- Oct. 2005 – present* **Ph.D. Program** in Computer Science. Expected summer 2010.
Max Planck Institute for Software Systems, Saarbrücken, Germany.
Research topics: Characterizing Internet edge network deployments through large-scale measurements, building more representative Internet testbeds, and investigating new network architectures for bulk content distribution.
- Oct. 2000 – Oct. 2005* **Dipl.-Inform.** in Computer Science (equivalent to a M.Sc.)
University of Karlsruhe, Germany
Thesis title: “Mobility Enhancements to an Approach for Structured Overlay Routing in Wireless Mobile Ad Hoc Networks”

Research Experience

- Oct. 2005 – present* **PhD Student.** Advisor: Krishna Gummadi
Max Planck Institute for Software Systems, Networked Systems Group
Topics: Networking and distributed systems
- Jun. 2009 – Aug. 2009* **Research Intern.** Advisor: Navendu Jain
Microsoft Research, Cloud Computing Futures Group
Topics: Distributed systems and data center computing
- Apr. 2005 – Oct. 2005* **Graduate Student.** Advisor: Curt Cramer
University of Karlsruhe – System Architecture Group
Topics: Mobile ad hoc networks, routing, structured overlays
- Feb. 2004 – May 2004* **Research Intern.** Advisor: Jon Crowcroft
Cambridge University (UK) – Computer Laboratory
Topics: Peer-to-peer, distributed hash tables, overlay multicast

Apr. 2002 – Feb. 2005 **Research Assistant.** Advisor: Uwe Walter
University of Karlsruhe – Institute of Telematics
Topics: Quality of service architectures, network management

Teaching Experience

Summer 2007 **Teaching Assistant.** Data Networks course,
Saarland University and Max Planck Institute for Software Systems

*Summer 2004,
Summer 2003, and
Summer 2002* **Teaching Assistant.** Networking course,
University of Karlsruhe – Institute of Telematics

Winter 2001/2002 **Teaching Assistant.** Informatics I course,
University of Karlsruhe – Institute for Process Control and Robotics

Conference Publications

Marcel Dischinger, Massimiliano Marcon, Saikat Guha, Krishna P. Gummadi, Ratul Mahajan, and Stefan Saroiu. “Glasnost: Enabling End Users to Detect Traffic Differentiation”. *Proceedings of the USENIX Symposium on Networked Systems Design and Implementation (NSDI'10)*, San Jose, CA, USA, April 2010.

Marcel Dischinger, Alan Mislove, Andreas Haeberlen, and Krishna P. Gummadi. “Detecting BitTorrent Blocking”. *Proceedings of the 8th ACM SIGCOMM Internet Measurement Conference (IMC'08)*, Vouliagmeni, Greece, October 2008.

Marcel Dischinger, Andreas Haeberlen, Ivan Beschastnikh, Krishna P. Gummadi, and Stefan Saroiu. “SatelliteLab: Adding Heterogeneity to Planetary-Scale Network Testbeds”. *Proceedings of the ACM SIGCOMM Conference (SIGCOMM'08)*, Seattle, WA, USA, August 2008.

Marcel Dischinger, Andreas Haeberlen, Krishna P. Gummadi, and Stefan Saroiu. “Characterizing Residential Broadband Networks”. *Proceedings of the 7th ACM SIGCOMM Internet Measurement Conference (IMC'07)*, San Diego, CA, USA, October 2007.

Andreas Haeberlen, **Marcel Dischinger**, Krishna P. Gummadi, and Stefan Saroiu. “Monarch: A Tool to Emulate Transport Protocol Flows over the Internet at Large”. *Proceedings of the 6th ACM SIGCOMM Internet Measurement Conference (IMC'06)*, Rio de Janeiro, Brazil, October 2006.

Under Submission

Marcel Dischinger, Navendu Jain, and Aman Kansal. “CloudSeer: Integrating Monitoring and Policy Enforcement for Cloud-Hosted Applications”.

Posters

Massimiliano Marcon, **Marcel Dischinger**, Krishna P. Gummadi, and Amin Vahdat. “The Local and Global Effects of Traffic Shaping in the Internet”. *Poster at ACM SIGCOMM'08*, Seattle, WA, USA, August 2008.

Nuno Santos, Alan Mislove, **Marcel Dischinger**, and Krishna P. Gummadi. "Anonymity in the Personalized Web". *Poster at NSDI'08, San Francisco, CA, USA*, April 2008.

Andreas Haeberlen, **Marcel Dischinger**, Ivan Beschastnikh, and Krishna P. Gummadi. "SatelliteLab: Adding Heterogeneity to Planetary-Scale Testbeds". *Poster at SOS'07, Stevenson, WA, USA*, October 2007.

Marcel Dischinger, Andreas Haeberlen, Krishna P. Gummadi, and Stefan Saroiu. "Characterizing Residential Broadband Networks". *Poster at NSDI'07, Boston, MA, USA*, April 2007.

Technical Reports

Massimiliano Marcon, **Marcel Dischinger**, Krishna P. Gummadi, and Amin Vahdat. "The Local and Global Effects of Traffic Shaping in the Internet". *Technical Report MPI-SWS-2009-003, MPI-SWS*, July 2009.

Talks

Invited Talks

- "Glasnost: Enabling End Users to Detect Traffic Differentiation", Deutsche Telekom Laboratories, Berlin, Germany, March 2010
- "Glasnost: Enabling End Users to Detect Traffic Differentiation", Technicolor Paris Research Lab, Paris, France, February 2010
- "Exploring Access Networks", Telefonica Research, Barcelona, Spain, December 2008

Conference Talks

- "Detecting BitTorrent Blocking", IMC 2008
- "Characterizing Residential Broadband Networks", IMC 2007

Press Coverage

Aug. 2009 "Glasnost im Internet", Max Planck Forschung – Das Wissensmagazin der Max-Planck-Gesellschaft. Heft Spezial "Innovation"

Jan. 2009 "Google begins effort to find Internet blockers", Reuters

May 2008 "Study: Cox, Comcast Internet subscribers blocked", Associated Press

Software

Glasnost Measurement tools and services to make access networks more transparent
<http://broadband.mpi-sws.org/transparency/>

SatelliteLab A heterogeneous network testbed design
<http://satellitelab.mpi-sws.org>

Monarch A tool to emulate transport protocol flows over the Internet
<http://monarch.mpi-sws.org>

Honors and Awards

2008	Student travel grant, NSDI'08
2007	Student travel grant, IMC'07 Student travel grant, NSDI'07
2006	Student travel grant, NSDI'06

Service

<i>Conference and Workshop Reviewer</i>	CoNext (2008), HotNets (2007), IPTPS (2008), NSDI (2009, 2007), OSDI (2006), PODC (2009), SIGCOMM (2009, 2008, 2007, 2006).
<i>Journal Reviewer</i>	IEEE/ACM Transactions on Networking (ToN)
<i>Representative</i>	Graduate student admission committee, MPI-SWS (since 2008)

Membership in Professional Societies

ACM, ACM SIGCOMM

Personal Information

<i>Citizenship</i>	German
<i>Languages</i>	German (native); English (fluent)

References

Available upon request.