Vaibhav Bajpai

| CONTACT INFORMATION | Computer Networks and Distributed Systems Jacobs University Bremen | v.bajpai@jacobs-university.de http://www.vaibhavbajpai.com |

EDUCATION

Jacobs University Bremen, Germany　　　　　　　　　　　　　**Sep 2012—Present**
Doctor of Philosophy, Computer Science

— *Dissertation title: Understanding the Impact of Network Infrastructure Changes using Large-Scale Measurement Platforms*
— *Dissertation work under the guidance of Prof. Dr. Jürgen Schönwälder*

Jacobs University Bremen, Germany　　　　　　　　　　　　**Sep 2010—Aug 2012**
Master of Science, Computer Science

— *Masters Thesis: A complete system integration of the network flow query language, under the guidance of Prof. Dr. Jürgen Schönwälder*
— *Graduated with a 1.0 grade on the masters thesis, 1.64 overall GPA*
— *Merit-based tuition scholarship and stipend for the entire duration*

PROFESSIONAL EXPERIENCE

Jacobs University Bremen, Germany　　　　　　　　　　　　**Dec 2012—Present**
Research Associate

— *Leone FP7 EU Project: From Global Measurements to Local Management*
— *Flamingo FP7 EU Project: Management of the Future Internet*

Jacobs University Bremen, Germany　　　　　　　　　　　　**Feb 2011— Present**
Student & Teaching Assistant

— *Computer Networks, Fall 2014*
— *Internet Measurement and Management Lab, Spring 2014*
— *Computer Networks, Fall 2013*
— *Implementation of the Network Flow Query Language (NFQL), Summer 2012*
— *Software Engineering Lab, Spring 2012*
— *Networks and Protocols & Algorithms and Data Structures, Fall 2011*
— *Machine Vision Project, Spring 2011*

PUBLICATIONS

Vaibhav Bajpai, Jürgen Schönwälder: A Report on the 1st NMRG Workshop on Large Scale Network Measurements, *Journal of Network and Systems Management (JNSM 2014)*, September 2014. http://dx.doi.org/10.1007/s10922-014-9328-2

Vaibhav Bajpai, Radek Krejčí: Managing SamKnows Probes using NETCONF, *14th IEEE/IFIP Network Operations and Management Symposium (NOMS 2014)*, Krakow, May 2014. http://dx.doi.org/10.1109/NOMS.2014.6838279

Vaibhav Bajpai, Jürgen Schönwälder: NETCONF Interoperability Lab, *14th IEEE/IFIP Network Operations and Management Symposium (NOMS 2014)*, Krakow, May 2014. http://dx.doi.org/10.1109/NOMS.2014.6838278

Vaibhav Bajpai, Jürgen Schönwälder: Measuring TCP Connection Establishment Times of Dual-Stacked Web Services, *9th International Conference on Network and Service Management (CNSM)*, Zürich, October 2013. http://dx.doi.org/10.1109/CNSM.2013.6727822

Vaibhav Bajpai, Jürgen Schönwälder: Understanding the Impact of Network Infrastructure Changes using Large-Scale Measurement Platforms, *7th International Conference on Autonomous Infrastructure, Management and Security (AIMS)*, Barcelona, June 2013. http://dx.doi.org/10.1007/978-3-642-38998-6_5

Vaibhav Bajpai, Johannes Schauer, Jürgen Schönwälder: NFQL: A Tool for Querying Network Flow Records, *13th IEEE International Symposium on Integrated Network Management (IM)*, Ghent, May 2013. http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6573045

Vaibhav Bajpai, Vitali Bashko, Catalin David, Siarhei Kuryla, Vladislav Perelman, Johannes Schauer, Nikolay Melnikov, Anuj Sehgal, Jürgen Schönwälder: Design and Prototype Implementation of the WattsApp Telemetry Platform, *IEEE International Conference on Internet of Things (iThings)*, Besançon, November 2012. http://dx.doi.org/10.1109/GreenCom.2012.21

Vaibhav Bajpai and Vladislav Perelman: A Cross-Platform Open Source 3D Object Reconstruction System using a Laser Line Projector, *3rd IEEE Germany Student Conference (GSC)*, Passau, November 2012.

Vaibhav Bajpai, Nikolay Melnikov, Anuj Sehgal, Jürgen Schönwälder: Flow-based Identification of Failures Caused by IPv6 Transition Mechanisms, *6th Conference on Autonomous Infrastructure, Management and Security (AIMS)* Luxembourg, June 2012. http://dx.doi.org/10.1007/978-3-642-30633-4_19

INTERNET DRAFTS	Marcelo Bagnulo, Trevor Burbridge, Sam Crawford, Jürgen Schönwälder and Vaibhav Bajpai, Large MeAsurement Platform Protocol: `draft-bagnulo-lmap-http`, Internet Draft, September 2014. http://tools.ietf.org/html/draft-bagnulo-lmap-http-03

Jürgen Schönwälder and Vaibhav Bajpai, A YANG Data Model for LMAP Measurement Agents, Internet Draft, September 2014. http://tools.ietf.org/html/draft-schoenw-lmap-yang-01

Vaibhav Bajpai and Jürgen Schönwälder, Measuring the Effects of Happy Eyeballs: `draft-bajpai-happy`. Internet Draft, July 2013. http://tools.ietf.org/html/draft-bajpai-happy-01

TECHNICAL ARTICLES Evaluating the Effectiveness of Happy Eyeballs, *RIPE Labs Article*, June 2013. https://labs.ripe.net/Members/vaibhav_bajpai/evaluating-the-effectiveness-of-happy-eyeballs

PAST PROFESSIONAL
EXPERIENCES AND
EDUCATION

Infosys Technologies Ltd, Bangalore, India   **Jul 2009—Jun 2010**

Systems Engineer

— *Certified, Infosys Mainframe Foundation Developer,* PR — 101
— *Felicitated as the top entry-level candidate after industrial training* (*GPA* 5/5)

Uttar Pradesh Technical University, India   **Aug 2005—Jun 2009**

Bachelor of Technology, Computer Science and Engineering

— *Bachelors Project: Dexter, A social experience on top of google search results, under the guidance of Prof. Sanjeev Pippal*
— *Graduated as the top student of the class* (80.84%)
— *Merit position* 9th *amongst all freshmen encompassing* 600 *affiliated colleges*

Kendriya Vidyalaya Aliganj, India   **Mar 2003—Mar 2005**

Central Board of Secondary Education

— *Graduated as the top student of the class* (3rd *in city) in XII* (93.4%)
— *Merit certificate for* 100% *marks in Computer Science in XII*
— *Graduated as the top student of the class in X* (86.0%)
— *Merit certificate for* 100% *marks in Science in X (felicitated by the State Govt)*
— *All-India merit position* 35th *in Junior Mathematics Olympiad,* 2002.

PHD PROPOSAL Understanding the Impact of Network Infrastructure Changes using Large-Scale Measurement Platforms, PhD Proposal, September 2013.

MASTERS THESIS F($v2$): A Complete System Integration of the Network Flow Query Language, Masters Thesis, August 2012 http://cnds.eecs.jacobs-university.de/archive/msc-2012-vbajpai.pdf

TALKS	Large MeAsurement Platform Protocol, *LMAP Working Group Meeting at IETF 91*, Honolulu, November 2014. http://www.ietf.org/proceedings/91/slides/slides-91-lmap-8.pdf
	Measurement Research within the Python3 Ecosystem, *MAT Working Group Meeting at RIPE 69*, London, November 2014. https://ripe69.ripe.net/archives/video/10125
	Lessons Learned From Using the RIPE Atlas Platform for Measurement Research, *MAT Working Group Meeting at RIPE 68*, Warsaw, May 2014. https://ripe68.ripe.net/archives/video/240
	Measuring TCP Connection Establishment Times of Dual-Stacked Web Services, *Internet Research Task Force (IRTF) Network Management Research Group (NMRG) Workshop on Large-Scale Network Measurements at CNSM 2013*, Zürich, October 2013. http://www.ietf.org/proceedings/interim/2013/10/14/nmrg/slides/slides-interim-2013-nmrg-1-10.pdf
	NFQL: A Tool for Querying Network Flow Records, *Internet Research Task Force (IRTF) Network Management Research Group (NMRG) Workshop on NetFlow/IPFIX at Internet Engineering Task Force (IETF) 87*, Berlin, July 2013. http://www.ietf.org/proceedings/87/slides/slides-87-nmrg-0.pdf
	Measuring the Effects of Happy Eyeballs, *v6ops Working Group Meeting at Internet Engineering Task Force (IETF) 87*, Berlin, July 2013. http://www.ietf.org/proceedings/87/slides/slides-87-v6ops-8.pdf
	Measuring the Effectiveness of Happy Eyeballs, *IPv6 Working Group Meeting at RIPE 66*, Dublin, May 2013. https://ripe66.ripe.net/archives/video/1208
SEMINARS	Global Measurement Framework (13472), *A 3-day invitation-only Dagstuhl seminar on Initiating a Coherent Global Measurement Framework for the Internet*, LZI Schloss Dagstuhl, Wadern, November 2013. http://www.dagstuhl.de/13472
TUTORIALS	Large-Scale Measurement Platforms, *7th IFIP International Autonomous Infrastructure, Management and Security Conference on Dependable Networks and Services (AIMS)*, Barcelona, June 2013. http://cnds.eecs.jacobs-university.de/tutorials
OPEN SOURCE	Author — nfql, *A C implementation of the network flow query language* Contributor — happy, *A happy eyeballs [RFC 6555] probing tool.* — ncclient, *A Python library for NETCONF clients.* — libnetconf, *A NETCONF library in C intended for building NETCONF clients and servers.* — mtr, *A network diagnostic tool.* — homebrew-versions, *Versioned formulae for the Homebrew package manager.* — slam6d, *A toolkit with algorithms and methods for processing 3D point clouds.* — petascope, *A reference implementation of the OGC WCS standard suite.*
ACTIVITIES	Course Lectures — Ethernet and Bridges, *Computer Networks, September, 2014* — Memory Management, *Operating Systems, March, 2014* — Large-scale Network Measurements, *Advanced Computer Networks, March, 2014* — Network Address Translators (NAT), *Computer Networks, November, 2013* — Internet Protocol (IP), *Computer Networks, September, 2013* — Sockets API, *Computer Networks, September, 2013* — Semaphore Patterns & Memory Management, *Operating Systems, February, 2013* — NFQL & ncclient, *Advanced Networking, October, 2012*

Reviewer
- — IFIP/IEEE International Symposium on Integrated Network Management (IM): 2013, 2015
- — Springer Journal of Network and Systems Management (JNSM): 2014
- — Conference on Autonomous Infrastructure, Management and Security (AIMS): 2013, 2014.
- — IEEE Communications Magazine: 2014
- — IFIP Networking Conference: 2014
- — IEEE/IFIP Network Operations and Management Symposium (NOMS): 2014

Students
- — Otar Bichiashvili,
  Large-scale TCP throughput performance measurement over IPv4 and IPv6, Bachelors Thesis, 2015
- — Vlad Victor Ungureanu,
  LMAP Protocol Implementation, Bachelors Thesis, 2014 - 2015
- — Steffie Jacob Eravuchira,
  Internet measurements, Masters Thesis, 2013 - 2015
- — Corneliu-Claudiu Prodescu,
  IPFIX support for NFQL, Masters Project, 2013
- — Durim Morina,
  A front-end parser for NFQL, Bachelors Thesis, 2013
- — Mjellma Berisha,
  NETCONF over TLS implementation, Bachelors Project, 2013

Memberships
- — IEEE Student Membership
- — IEEE Communications Society Membership
- — Internet Society Membership
- — SIGCOMM Membership
- — IFIP TC6 Working Group 6.6 Membership