

Vaibhav Bajpai

CONTACT INFORMATION

Computer Networks and Distributed Systems
School of Engineering & Sciences
Jacobs University Bremen, Germany

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EDUCATION

Jacobs University Bremen, Germany
Doctor of Philosophy, Computer Science

Sep 2012—Present

- *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
Master of Science, Computer Science

Sep 2010—Aug 2012

- *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*

Uttar Pradesh Technical University, India
Bachelor of Technology, Computer Science and Engineering

Aug 2005—Jun 2009

- *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
Central Board of Secondary Education

Mar 2003—Mar 2005

- *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.*

PROFESSIONAL EXPERIENCE

Jacobs University Bremen, Germany
Research Associate

Dec 2012—Present

- *Leone FP7 EU Project: From Global Measurements to Local Management*

Jacobs University Bremen, Germany
Student & Teaching Assistant

Feb 2011—Aug 2012

- *Implementation of the Network Flow Query Language (NFQL)*
- *Software Engineering Lab, Spring 2012*
- *Networks and Protocols & Algorithms and Data Structures, Fall 2011*
- *Machine Vision Project, Spring 2011*

Infosys Technologies Ltd, Bangalore, India
Systems Engineer

Jul 2009—Jun 2010

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

PUBLICATIONS	Vaibhav Bajpai, Jürgen Schönwälder: Measuring TCP Connection Establishment Times of Dual-Stacked Web Services, <i>9th International Conference on Network and Service Management (CNSM)</i> , Zürich, October 2013.
	Vaibhav Bajpai, Jürgen Schönwälder: Understanding the Impact of Network Infrastructure Changes using Large-Scale Measurement Platforms, <i>7th International Conference on Autonomous Infrastructure, Management and Security (AIMS)</i> , 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, <i>13th IEEE International Symposium on Integrated Network Management (IM)</i> , 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, <i>IEEE International Conference on Internet of Things (iThings)</i> , 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, <i>3rd IEEE Germany Student Conference (GSC)</i> , Passau, November 2012.
	Vaibhav Bajpai, Nikolay Melnikov, Anuj Sehgal, Jürgen Schönwälder: Flow-based Identification of Failures Caused by IPv6 Transition Mechanisms, <i>6th Conference on Autonomous Infrastructure, Management and Security (AIMS)</i> 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, July 2013. http://tools.ietf.org/html/draft-bagnulo-lmap-http-00
	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, <i>RIPE Labs Article</i> , June 2013. https://labs.ripe.net/Members/vaibhav_bajpai/evaluating-the-effectiveness-of-happy-eyeballs
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
INVITED TALKS	Measuring the Effects of Happy Eyeballs, <i>v6ops Working Group Meeting at IETF 87</i> , Berlin, July 2013. http://www.ietf.org/proceedings/87/slides/slides-87-v6ops-8.pdf
	Happy Eyeballs and Friends, <i>3rd Leone Plenary, a Collaborative Research Project within the 7th Framework Programme of the European Commission</i> , Helsinki, June 2013.
	Measuring the Effectiveness of Happy Eyeballs, <i>IPv6 Working Group Meeting at RIPE 66</i> , Dublin, May 2013. https://ripe66.ripe.net/archives/video/1208
	Happy Eyeballs, <i>2nd Leone Plenary, a Collaborative Research Project within the 7th Framework Programme of the European Commission</i> , Rome, February 2013.
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, <i>7th IFIP International Autonomous Infrastructure, Management and Security Conference on Dependable Networks and Services (AIMS)</i> , Barcelona, June 2013. http://cnds.eecs.jacobs-university.de/tutorials

OPEN SOURCE

Author

- **NFQL**, *An efficient C implementation of a stream-based flow query language*

Contributor

- **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.*
- **petascope**, *A reference implementation of the OGC WCS standard suite.*

ACTIVITIES

Course Lectures

- Sockets API, *Computer Networks*, September, 2013
- **Semaphore Patterns** & **Memory Management**, *Operating Systems*, February, 2013
- **NFQL** & **ncclient**, *Advanced Networking*, October, 2012

Reviewer

- IEEE/IFIP Network Operations and Management Symposium (NOMS), 2014.
- International Conference on Autonomous Infrastructure, Management and Security (AIMS), 2013.
- IFIP/IEEE International Symposium on Integrated Network Management (IM), 2013.

Project Supervision

- IPFIX support for NFQL, *Masters Project*
- A Front-End Parser Implementation for NFQL, *Bachelors Thesis*
- NETCONF over TLS implementation, *Bachelors Project*

Memberships

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