

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 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*

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.*

PROFESSIONAL EXPERIENCE

Jacobs University Bremen, Germany Dec 2012—Present
Research Associate

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

Jacobs University Bremen, Germany Feb 2011—Aug 2012
Student & Teaching Assistant

- *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 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)*

PUBLICATIONS	<p>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.</p> <p>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</p> <p>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</p> <p>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</p> <p>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.</p> <p>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</p>
INTERNET DRAFTS	<p>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</p> <p>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</p>
TECHNICAL ARTICLES	<p>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</p>
PHD PROPOSAL	<p>Understanding the Impact of Network Infrastructure Changes using Large-Scale Measurement Platforms, PhD Proposal, September 2013.</p>
MASTERS THESIS	<p>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</p>
INVITED TALKS	<p>Measuring TCP Connection Establishment Times of Dual-Stacked Web Services, <i>Network Management Research Group (NMRG) Workshop on Large-Scale Network Measurements at CNSM 2013</i>, Zürich, October 2013.</p> <p>NFQL: A Tool for Querying Network Flow Records, <i>Network Management Research Group (NMRG) Workshop on NetFlow/IPFIX at IETF 87</i>, Berlin, July 2013. http://www.ietf.org/proceedings/87/slides/slides-87-nmrg-0.pdf</p> <p>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</p> <p>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</p>

PROJECT MEETINGS	<p>Beyond Happy Eyeballs, <i>4th Leone Plenary, a Collaborative Research Project within the 7th Framework Programme of the European Commission</i>, Bremen, October 2013.</p> <p>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.</p> <p>Happy Eyeballs, <i>2nd Leone Plenary, a Collaborative Research Project within the 7th Framework Programme of the European Commission</i>, Rome, February 2013.</p>
SEMINARS	<p>Global Measurement Framework (13472), <i>A 3-day invitation-only Dagstuhl seminar on Initiating a Coherent Global Measurement Framework for the Internet</i>, LZI Schloss Dagstuhl, Wadern, November 2013. http://www.dagstuhl.de/13472</p>
TUTORIALS	<p>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</p>
OPEN SOURCE	<p>Author</p> <ul style="list-style-type: none"> — NFQL, <i>An efficient C implementation of a stream-based flow query language</i> <p>Contributor</p> <ul style="list-style-type: none"> — ncclient, <i>A Python library for NETCONF clients.</i> — libnetconf, <i>A NETCONF library in C intended for building NETCONF clients and servers.</i> — mtr, <i>A network diagnostic tool.</i> — petascope, <i>A reference implementation of the OGC WCS standard suite.</i>
ACTIVITIES	<p>Course Lectures</p> <ul style="list-style-type: none"> — Internet Protocol (IP), <i>Computer Networks</i>, September, 2013 — Sockets API, <i>Computer Networks</i>, September, 2013 — Semaphore Patterns & Memory Management, <i>Operating Systems</i>, February, 2013 — NFQL & ncclient, <i>Advanced Networking</i>, October, 2012 <p>Reviewer</p> <ul style="list-style-type: none"> — 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. <p>Project Supervision</p> <ul style="list-style-type: none"> — Last-mile Latency Measurements using RIPE atlas, <i>Masters Project</i> — IPFIX support for NFQL, <i>Masters Project</i> — A Front-End Parser Implementation for NFQL, <i>Bachelors Thesis</i> — NETCONF over TLS implementation, <i>Bachelors Project</i> <p>Memberships</p> <ul style="list-style-type: none"> — IEEE Student Membership — IEEE Communications Society Membership — Internet Society Membership — SIGCOMM Membership — IFIP TC6 Working Group 6.6 Membership