

# Abhishek Bichhawat

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## Education

- 2013–2018 **Ph.D. Computer Science**, *Universität des Saarlandes and IMPRS-CS*, Germany.  
**Thesis:** Practical Dynamic Information Flow Control. **Advisors:** Christian Hammer & Deepak Garg
- 2009–2011 **M.Tech. Computer Science and Engineering**, *IIT Roorkee*, India.  
First Class with Distinction - CGPA – 9.61
- 2005–2009 **B.E. Computer Science and Engineering**, *Anna University, Chennai*, India.  
First Class with Distinction - CGPA – 8.5

## Professional Experience

- Jan. 2018 – **Postdoctoral Fellow**, CARNEGIE MELLON UNIVERSITY, USA.  
Present Mechanized protocol verification; analyzing security of IoT systems; enforcing privacy policies in enterprise systems; gradual information flow types.
- Jan. 2013 – **Research Assistant**, UNIVERSITÄT DES SAARLANDES, Germany.  
Sep. 2017 Research on enforcing information flow control in web browsers.
- Jun. 2017 – **Research Intern**, MICROSOFT RESEARCH INDIA, Bangalore, India.  
Aug. 2017 Worked with Assem Rastogi on continuing the initial research on building a verified browser security engine.
- Sep. 2016 – **Research Intern**, INRIA, Paris, France.  
Dec. 2016 Worked with Karthikeyan Bhargavan on building a formally verified browser security engine in FStar.
- Feb. 2014 – **Research Intern**, MICROSOFT RESEARCH INDIA, Bangalore, India.  
Apr. 2014 Worked with Kapil Vaswani on building information flow secure C#.
- Aug. 2011 – **Member of Technical Staff**, ORACLE INDIA PVT. LTD., Bangalore, India.  
Nov. 2012 ASM Team – Database Test Development.
- Apr. 2011 – **Visiting Scholar**, MACQUARIE UNIVERSITY, Sydney, Australia.  
Jun. 2011 Worked with Udaya Tupakula and Vijay Varadharajan on securing virtual machines using IDS with analysis and countermeasures to tackle zero day attacks.
- Jan. 2009 – **Intern**, INFOSYS TECHNOLOGIES LTD., Mysore, India.  
May 2009 Automatic Evaluation of SQL Select Queries.

## Publications

### Peer-reviewed

- CSF 2021 Automating Audit with Policy Inference  
Abhishek Bichhawat, Matt Fredrikson and Jean Yang  
34th IEEE Computer Security Foundations Symposium, 2021
- AsiaCCS 2020 Contextual and Granular Policy Enforcement in Database-backed Applications  
Abhishek Bichhawat, Matt Fredrikson, Jean Yang and Akash Trehan  
15th ACM Asia Conference on Computer and Communications Security, 2020
- ESORICS 2017 WebPol: Fine-grained Information Flow Policies for Web Browsers  
Abhishek Bichhawat, Vineet Rajani, Jinank Jain, Deepak Garg and Christian Hammer  
22nd European Symposium on Research in Computer Security, 2017

- CSF 2015 Information Flow Control for Event Handling and the DOM in Web Browsers  
Vineet Rajani, Abhishek Bichhawat, Deepak Garg and Christian Hammer  
28th IEEE Computer Security Foundations Symposium, 2015
- PLAS 2014 Generalizing Permissive-Upgrade in Dynamic Information Flow Analysis  
Abhishek Bichhawat, Vineet Rajani, Deepak Garg and Christian Hammer  
ACM 9th Workshop on Programming Languages and Analysis for Security, 2014
- POST@ETAPS 2014 Information Flow Control in WebKit's JavaScript Bytecode  
Abhishek Bichhawat, Vineet Rajani, Deepak Garg and Christian Hammer  
3rd International Conference on Principles of Security and Trust, 2014
- ICA3PP 2011 Security Architecture for Virtual Machines  
Udaya Tupakula, Vijay Varadharajan and Abhishek Bichhawat  
11th International Conference on Algorithms and Architectures for Parallel Processing, 2011

## Teaching Experience

- Oct. 2015 – **Teaching Assistant**, SECURE INFORMATION FLOW.  
Feb. 2016 Universität des Saarlandes, Germany
- Apr. 2015 – **Teaching Assistant**, SEMINAR: HOT TOPICS IN LANGUAGE SECURITY.  
Jul. 2015 Universität des Saarlandes, Germany
- Apr. 2014 – **Teaching Assistant**, SECURE INFORMATION FLOW.  
Jul. 2014 Universität des Saarlandes, Germany
- Apr. 2013 – **Teaching Assistant**, SEMINAR: HOT TOPICS IN LANGUAGE SECURITY.  
Jul. 2013 Universität des Saarlandes, Germany

## Service

- Shadow PC and Poster Committee Member**, 41ST IEEE SYMPOSIUM ON SECURITY AND PRIVACY, 2020.
- Artifact Evaluation Committee Member**, 41ST ACM SIGPLAN CONFERENCE ON PROGRAMMING LANGUAGE DESIGN AND IMPLEMENTATION, 2020.
- Reviewer**, JOURNAL OF COMPUTER AND SYSTEM SCIENCES.
- Reviewer**, JOURNAL OF OBJECT TECHNOLOGY.

## Awards

- 2015 RS3 Best Paper Award for the paper "Information Flow Control for Event Handling and the DOM in Web Browsers"
- 2014 Second prize at the ACM SIGSOFT Student Research Competition at ICSE 2014
- 2011 Goyal Cash Prize for highest CGPA in CS from IIT Roorkee
- 2009 – 2011 MHRD Fellowship
- 2009 Best Performer in Training during internship at Infosys Technologies Ltd.