Rahul Pandita

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Research Interests

My primary research interests are in programming languages and software engineering. I specifically work on applying Natural Language Processing techniques on software artifacts to improve developer/tester/end-user productivity.

Education

2015(expected)	**Ph.D.**, *Computer Science, North Carolina State University*, Raleigh, NC, USA.
Advisor	Dr. Laurie Williams
2011	**M.S.**, *Computer Science, North Carolina State University*, Raleigh, NC, USA.
Advisor	Dr. Tao Xie, REPORT: Guided Test Generation for Coverage Criteria
2007	**B.E.**, *Computer Science*, AVCoE, *Pune University*, Maharashtra, INDIA.

Awards

2013	Student Grant to attend USENIX Security Symposium
2012	FDA Group Recognition Award
2010	Virtual Teaching Assistant Award, NCSU Department of Computer Science

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PUBLICATIONS

Peer-reviewed Conference Publications (4 total)

2015 **Enabling Forensics by Proposing Heuristics for Identifying Loggable User Activity**. Jason King, Rahul Pandita, and Laurie Williams. *In Proceedings of the Symposium and Bootcamp on the science of security (HOTSOS'15), Illinois, USA, April 2015*

2013 **WHYPER: Towards Automating Risk Assessment of Mobile Applications**. Rahul Pandita, Xusheng Xiao, Wei Yang, William Enck, Tao Xie. *In Proceedings of the 22nd USENIX Security Symposium (USENIX Security '13), Washington DC, USA, August 2013*. 45/277(16.2%)

2012 **Inferring Method Specifications from Natural Language API Descriptions**. Rahul Pandita, Xusheng Xiao, Hao Zhong, Tao Xie, Stephen Oney, and Amit Paradkar. *In Proceedings of the 34th International Conference on Software Engineering (ICSE 2012), Zurich, Switzerland, July 2012*. 87/408(21%)

2010 **Guided Test Generation for Coverage Criteria**. Rahul Pandita, Tao Xie, Nikolai Tillmann, and Jonathan de Halleux. *In Proceedings of the 26th IEEE International Conference on Software Maintenance (ICSM 2010), Timișoara, Romania, September 2010*. 36/133(27%)

Peer-reviewed Refereed Workshop Publications (1 total)

2013 **Literature Review of Testing Techniques for Medical Device Software**. John J. Majikes, Rahul Pandita, and Tao Xie. *In Proceedings of the 4th Medical Cyber-Physical Systems Workshop (MCPS 2013), Philadelphia, USA, April 2013*.

Miscellaneous

2014	Poster: **Improving Mobile Application Security by Enhancing User Perceptions of Application Behaviors**. Wei Yang, Xusheng Xiao, Rahul Pandita, William Enck, and Tao Xie. *In Proceedings of the Symposium and Bootcamp on the Science of Security (HOTSOS 2014), Raleigh, USA, April 2014.*
2013	**22nd USENIX Security Symposium Conference Summaries**, USENIX ;login Magazine, Rahul Pandita, Dec, 2013

Industrial Experience

May-Aug'13	**Summer Intern**, Accenture Technology Labs, San Jose, CA, USA.
	Designed and implemented an approach to infer usage constraints from natural language API documents of REST Services. The inferred constraints are directed towards automatic verification and validation of both the REST API as well as clients consuming the API.
Mentors	Dr. Kunal Taneja, Dr. Qing Xie

May-Aug'10	**Summer Intern**, US Food and Drug Administration, SilverSpring, MD, USA.
Aug-Dec'11	Development of a framework to perform efficient retrieval of information from medical adverse event reports using
May-Aug'12	textual mining and display results to the user in a graphical reports. Designed and implemented an approach to infer semantic relationships from Natural Language Text. Designed and implemented a Apache Lucene based generic search framework on principles of semantic text mining. Furthermore, was also responsible to develop the web-based frontend to interact with the system using JSP and JQuery.
Mentors	Dr. Raoul Jetley, Dr. Sithu Sudarshan

May-Aug'11	**Summer Intern**, IBM India Research Labs, Bangalore, India.
	Designed and implemented an approach to understand unit test evolution; specifically focusing on how test-repair is performed.
Mentors	Dr. Saurabh Sinha, Dr. Suresh Thummalapenta

May'07- Dec'08	**Software Engineer**, Hughes Systique Corporation, Gurgaon, India.
	Development of network management system to manage satellite base service station components. Designed and implemented SIP-XMPP Gateway for IM compatibility. Performed Integration testing and acceptance testing at the client site.
Supervisor	Mr. Danish Aggarwal

Technical skills

Frameworks	Hibernate, jUnit, Microsoft Pex, Struts, Spring, Apache Tomcat, Stanford Parser for NLP, Apache Lucene
Platforms	Windows, Unix, Android
Programming/ Scripting	J2EE, JavaScript, JSP, C#, HTML, CSS, JQuery
Tools	Eclipse, Microsoft Visual Studio, GIT, SVN

Relevant Courses

- Software Reliability and Testing
- Software Engineering
- Design and Analysis of Algorithms
- Software Security
- Service Oriented Computing
- Automata and Computation Theory
- E Commerce
- Computer Networks

- Database Management Systems	- Human Computer Interaction

Extra Curricular Activities

External Reviewer	UbiComp'14, DSN'13, Journal for Empirical Software Engineering'14
Co-Reviewer	WWW'13, ICSE'11, FSE'13, ASE'10'14

References

Available Upon Request