SAURAV NANDA

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EDUCATION

Purdue University, West Lafayette, USA *Aug 2014 - Current*
Ph.D. Student, Computer and Information Technology *GPA 3.96*

Research Area: Dynamic Resource Management in Cloud Environment.

Advisor: Dr. Thomas J Hacker

Indian Institute of Technology (IIT) Kharagpur, India *Aug 2007 - May 2009*
M.Tech. School of Information Technology

Masters Thesis: Prediction of Optimal Attack Path using Soft Computing Techniques.

Siddaganga Institute of Technology, India *Aug 2003 - Jul 2007*
B.E. Computer Science and Engineering

Bachelors Thesis: Implementation of Periodic Group Re-keying Methods for Secure Multicast Communication.

RESEARCH EXPERIENCE

Summer Research Project, University of Stavanger, Norway Jun 2015 - Aug 2015

- Implemented a scheduling algorithm for live migration of virtual machines to improve the user experience of the applications hosted in cloud environment.
- Deployed an OpenStack based Cloud infrastructure to host more than 10 Hadoop clusters for academic research purposes.

Graduate Research Assistant, Purdue University Aug 2015 - Dec 2015

- Responsible for managing the High Performance Computing (HPC) Lab which has a small data center as well.
- Deployed an OpenStack based cloud infrastructure in HPC Lab for providing Hadoop clusters to 24 grad students for Cyber Infra & Big-Data Analytics course (CNIT 581).

PUBLICATIONS

Ghosh, N., Nanda, Saurav, and Ghosh, S. (2009). A quantitative approach towards detection of an optimal attack path in a wireless network using modified PSO technique. In *Proceedings of the First IEEE International Conference on Communication Systems and Networks and Workshops. COMSNETS 2009.*, pages 1–10. IEEE.

Ghosh, N., Nanda, Saurav, and Ghosh, S. K. (2010). An ACO based approach for detection of an optimal attack path in a dynamic environment. In *Proceedings of the 11th International Conference on Distributed Computing and Networking. ICDCN 2010.*, pages 509–520. Springer.

Nanda, Saurav, Hacker, T. J., and Lu, Y.-H. (2016). Predictive model for dynamically provisioning resources in multi-tier web applications. In *25th International ACM Symposium on High-Performance Parallel and Distributed Computing.* ACM (Submitted).

Nanda, Saurav and Hansen, R. A. (2016). Forensics as a service: Three-tier architecture for cloud based forensic analysis. In *International Conference On Cloud Computing And Big Data (CloudCom-Asia).* Springer (Submitted).

INDUSTRY EXPERIENCE

Chief Technology Officer at Abhitech IT Solutions, Lucknow, India Jan 2010 - Jul 2014

- Led the technical front for more than four years, and handled clients across the globe.
- Delivered more than 10 big and 40 small projects with a team of 20 professionals.
- Expertise in Customized Web Application and Mobile Application (iPhone, iPad, Android, Blackberry) Development.

TEACHING EXPERIENCE

Assistant Professor, Lovely Professional University, India

- Course: Programming in Linux. *Aug 2009 - Dec 2009*

Graduate Teaching Assistant, IIT Kharagpur, India

- Computing Systems Lab *Aug 2008 - Dec 2008*
- Internet Technologies Lab *Jan 2009 - May 2009*

TERM PAPERS AND COURSE PROJECTS

Search Engine Spam Avoidance Technologies IIT Kharagpur (2008)

- Analyzed the influence of web spam on the evolution of search engines, described different spam techniques and the methods used by search engines to fight against the spam techniques.

Security Model for Web Services IIT Kharagpur (2008)

- Discussed new opportunities and advantages of security models for web services. Focused on challenges faced along with fault-tolerance ability, security composition ability and transaction-process ability. Introduced the conception of WS-DOS and built an extensible security architecture model SXRSRPM.

Mobile Commerce Technologies and Solutions IIT Kharagpur (2008)

- Analyzed the factors influencing m-commerce installation, elaborated on the WAP standard for faster and reliable communication and discussed the advantages and flexibilities m-commerce will offer.

Performance Evaluation in Parallel Databases IIT Kharagpur (2007)

- Elaborated different techniques that help in the design of database systems by estimating the relative performances of other designs and finding out potential bottlenecks.

Reliability Enhancement in Knowledge Discovery Process IIT Kharagpur (2007)

- Proposed a reliability model for generic KDD process to describe the relationship between each stage and the final reliability of the process. This was later extended for real-world situations under the CRISPDM.

TECHNICAL STRENGTHS

Web Technology	PHP, Perl, Python, HTML, CSS, JS, JQuery, Adobe InDesign
Programming Languages	C, C++, Objective C, Matlab
Protocols & APIs	XML, JSON
Databases	MySQL, Oracle, MongoDB
Others	Latex, Amazon Web Services, OpenStack, git