

Curriculum Vitae

MAHESH NATH MADDUMALA

School of Computing and Engineering,
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EDUCATION

- Ph.D.** in Computer Science Aug. 2014 – Dec. 2017
University of Missouri – Kansas City, USA.
Dissertation title: Distributed Perimeter Firewall Policy Management Framework.
Advisor: Dr. Vijay Kumar
- Master of Technology** - Computer Science and Technology 2005 – 2007
Andhra University College of Engineering, India.
- Bachelor of Technology** - Computer Science and Information Technology 2000 – 2004
M.L. Engineering College, India.

RESEARCH CONTRIBUTIONS

My main research area is security, which includes Cybersecurity, Information security and Network security. In these areas, I have published and presented the following papers.

Publications (Conference)

- **Mahesh Nath Maddumala**, Vijay Kumar, “Dynamic Firewall Policy Management Framework for Private Cloud”, International Symposium on Sensor Networks, Systems and Security, USA, Springer (2017). (Accepted).
- **Mahesh Nath Maddumala**, Vijay Kumar, “Efficient Design of Firewall Temporal Policies”, 2016 IEEE 40th Annual Computer Software and Applications Conference: 449-454, 2016.
- **Mahesh Nath Maddumala**, Vijay Kumar, “A Logic-Based Security Framework for Mobile Perimeter”. 2015 16th IEEE International Conference on Mobile Data Management (MDM): 30-33, 2015.

Publications (Journal)

- Chetan Jaiswal, **Mahesh Nath Maddumala**, Vijay Kumar, “Location-Based Security Framework for Cloud Perimeters”. IEEE Cloud Computing 1(3): 56-64, 2014.

Presentations (Conference and Workshop)

- MasterCard Cybersecurity Conference and Job Fair, UMSL, St. Louis, MO, USA.
(Invited talk) Nov. 2016
- 2016 IEEE 40th Annual Computer Software and Applications Conference (COMSAC), Atlanta, Georgia, USA. (Paper presentation) June 2016

- US Army Funded Workshop on “Emerging Cyber Techniques and Technologies”, Miami, FL, USA. (Invited talk) Nov. 2015
- 16th IEEE International Conference on Mobile Data Management, Pittsburgh, PA, USA. (Paper presentation) June 2015
- NSF-Supported Faculty Workshop on Cybersecurity for Critical Infrastructure, Lubbock, Texas, USA. May 2015

RESEARCH EXPERIENCE AND INTERESTS

Research Experience (Research Assistant):

Sep. 2014 – Sep. 2016

University of Missouri – Kansas City

Research Project: A Logic-based Security Framework for Wired and Mobile Perimeter.

Description: The main objective of this framework is to change the conventional approach of building, implementing and managing distributed firewalls for providing strong security to wireless and wired perimeters.

Funding Agency: This project was funded by the National Science Foundation (NSF), USA.

Research Areas

My main research areas are

- *Cybersecurity*
- *Network Security*
- *Information Security*
- *Security Analytics*
- *Malware Analysis*
- *Digital Forensics*

TEACHING EXPERIENCE AND INTERESTS

I have taught a number of graduate and undergraduate courses. In all these courses my student evaluations has been excellent.

Teaching experience

Instructor

Fall 2016, Spring, Summer and Fall 2017

School of Computing and Engineering

University of Missouri – Kansas City, USA.

Course: CS5573 - Information Security and Assurance. (Graduate course)

Lab: Information Security and Assurance Lab

Graduate Teaching Assistant

Summer 2016

School of Computing and Engineering

University of Missouri – Kansas City, USA.

Course: CS5573 - Information Security and Assurance. (Graduate course)

Assistant Professor

June 2013 – May 2014

Sanketika Vidyaparishad Engineering College, India.

Courses taught: Cryptography and Network Security

Compiler Design

Computer Architecture and Organization

Teaching interests

- *Computer Networks*
- *Network Security*
- *Information Security and Assurance*
- *Cryptography*
- *Ethical Hacking*
- *Digital Forensics*
- *Operating Systems*
- *Programming Languages*

OVERALL EXPERIENCE

- I have been teaching the graduate course “Information Security and Assurance” as an **instructor** at the University of Missouri – Kansas City for the last four semesters.
- Worked as a **research assistant** at University of Missouri, Kansas City, USA for 2 years, on NSF funded firewall research project.
- Worked as an **assistant professor** for 1 year at Sanketika Vidya Parishad Engineering College, India.
- Worked as a **senior software engineer** for 2+ years at Aricent Group, USA.
- Worked as a **software engineer** for 3 years at Aricent Group, India.

INDUSTRY EXPERIENCE

Senior Software Engineer

Feb. 2010 – Sep. 2012

Aricent Group, USA and India.

Software Engineer

July 2007 – Feb. 2010

Aricent Group, India and USA.

INDUSTRY PROJECTS

Project1: GSM and UMTS protocol stack

Module: Non Access Stratum (NAS) Layer.

Client: Intel Mobile Communications, Bangalore, India

Technologies: knowledge of 3gpp specifications, NAS layer protocols, SIM Authentication and Intel's proprietary software for designing and developing 3gpp protocols for NAS layer.

Work Location: Bangalore, India

Duration: 1 year

Project2: AT&T's Columbus Project for Mobile Applications

Module: Call Processing Module and Dialer User Interface

Client: AT&T, USA

Technologies: 3gpp Specifications related to the call processing module, Qualcomm BREW, UiOne, TrigMI and Qualcomm's Proprietary Tools

Work Location: Austin, Texas, USA and Redmond, Washington, USA.

Duration: 2 years

Project3: Sprint's One Click for Mobile UI

Module: User Interface Applications and over the air downloads for Sprint's Mobiles

Client: Sprint, USA

Technologies: Qualcomm BREW, TrigMI and Qualcomm's Proprietary Tools

Work Location: Overland Park, Kansas and Bangalore, India

Duration: 1.5 year

CERTIFICATES

- EC-Council **Certified Ethical Hacker** (CEH) May 2017
This is a highly prestigious certificate in security.

AWARDS AND GRANTS

- Recipient of prestigious SNAP award for individual extraordinary performance for call processing module from Aricent Group, USA. 2011