APARNA CHIRUMAMILLA

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Experienced researcher with a PhD in Computer Science and over a decade of academic and industry experience. Specialized in secure software development, risk analysis, and threat modeling.

EDUCATION

PhD in Computer Science

Norwegian University of Science and Technology

2014-2021 Trondheim, Norway

09/2017 - 08/2018 - Maternity leave
09/2018 - 06/2020 - 50% PhD
Research Area: *Analysis of security threats, requirements, and technologies in digital ecosystems*

Master of Technology in Computer Engineering

Pusan National University

2011-2013 Busan, South Korea

Research Area: *Security implementation and management for wireless network technologies*

Bachelor of Technology in Computer Science

Jawaharlal Neru Technological University

2005 – 2009 Kakinada, India

EXPERIENCE

Postdoctoral Fellow

Excited Research Center, Computer Science Department, NTNU

Feb 2023 – Present Trondheim, Norway

- Contributed to research proposals for NordForsk (Empowering SMEs for AI-Era Threats: Responsible Cybersecurity Readiness in the Nordic Region, as NTNU lead) and NFR (Assessment Integrity, as a project member), currently under review.
- Works as one of the teachers for a Risk Management course (DCST2005) for bachelor students.
- Works as project coordinator for the Informatics course (IT1901), and TA for the Advanced Software Development course (TDT4242) involving CI/CD pipelines with Python, Django, Git, Docker, Gitlab and Github, as well as configuration & server management, and monitoring.
- Research focusing on program-level assessment of learning outcomes and competencies in software engineering education

PhD Candidate

ISSE group, Computer Science Department, NTNU

2014 – 2021 Trondheim, Norway

- Identified and assessed security threats and risks for different technological systems, especially e-learning systems, using penetration testing, threat modeling methodologies, and risk assessment.
- Analyzed security and interoperability within the larger ecosystem of e-learning through standards review(ISO/NIST) across academic-industry projects.
- Trained in Azure, Isc2 CISSP-aligned materials with a focus on secure software architecture.

System Developer

Cipio AS

2014 Oslo, Norway

- Developed secure and responsive backend/frontend modules using Java, AngularJS, and Git for digital media client.

Research Scholar

Infosec Lab, Pusan National University

2011 – 2013 Busan, South Korea

- Implemented key management system for the DASH7 wireless network standard (that uses the OpenTag open-source stack and certifies DASH7-based small-scale IoT applications) using C++, PHP, JavaScript, HTML, CSS, SQL.

Research Scholar

Infonet Lab, Gwangju Institute of Science and Technology

2010 Gwangju, South Korea

- Implemented machine learning (SVM) algorithms for a secure Brain Computer Interface system.

KEY SKILLS

Security frameworks - ISO/IEC, NIST | OWASP Top 10 | Threat modelling | Risk assessment | Penetration testing

TECHNICAL SKILLS

C++,Java,Python | JavaScript | Angular JS | Azure | Docker | Git | Configuration Manager | Monitoring | Python | React JS | SQL | VMware | Windows, Linux

PROJECTS

- Windows EventLog: Failed RDP Logins from GeoData
- Implementation of certificate based authentication.
- Active directory implementation and administration through a Home Lab running Oracle VirtualBox. find these projects at Github Profile

CERTIFICATIONS

ISTQB Certified Tester Foundation Level(CTFL), 2013

PUBLICATIONS

1. Aparna Vegendla, Hwajeong Seo, Donggeon Lee,and Howon Kim. (2014). Implemementation of RFID Key Management System for DASH7,In *Journal of information and communication convergence engineering, Korea*, 12(1), p.19-25. https://doi.org/10.6109/jicce.2014.12.1.019
2. Aparna Chirumamilla, Guttorm Sindre. (2021). E-exams in Norwegian Higher Education: Vendors and managers views on requirements in a digital ecosystem perspective, In *Computers & Education*.https://doi.org/10.1016/j.compedu.2021.104263
3. Aparna Vegendla, Thea Marie Søgaard, Guttorm Sindre, (2016). Extending HARM to make Test Cases for Penetration Testing, In *Lecture Notes in Business Information Processing*, vol 249.p.254-265. Springer, Cham.https://doi.org/10.1007/978-3-319-39564-7_24
4. Aparna Vegendla, Hwajeong Seo, Donggeon Lee,and Howon Kim. (2014). Implemementation of RFID Key Management System for DASH7,In *Journal of information and communication convergence engineering, Korea*, 12(1), p.19-25. https://doi.org/10.6109/jicce.2014.12.1.019

   * The complete list can be found at https://scholar.google.no/citations?user=RgHhQKwAAAAJ&hl=en https://www.researchgate.net/profile/Aparna-Chirumamilla

LANGUAGES ELIGIBILITY

- English (Fluent)
- Norsk (Arbeidskunnskaper), Norsk Nivå B2/C1 i Det europeiske rammeverket for språk (CEF) , NFUT0301 - Norsk for utlendinger, trinn 3
- Right to work in Norway (Norwegian citizenship)