Abdul Serwadda, PhD

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RESEARCH INTERESTS

Cyber Security and Privacy
Machine Learning and Data Mining
Human-Computer Interaction
Mobile Computing

PROFESSIONAL EXPERIENCE

Texas Tech University, Lubbock, Texas, USA — Jan, 2016 — Present
Assistant Professor, Computer Science Department,

Syracuse University, Syracuse, USA — March, 2015 — Dec, 2015
Research Assistant Professor, Department of
Electrical Engineering and Computer Science

Syracuse University, Syracuse, USA — Sept, 2014 — Feb, 2015
Post-doc, Department of
Electrical Engineering and Computer Science

Louisiana Tech University, Ruston, USA — March, 2014 — Sept, 2014
Post-doc, Center for Secure Cyberspace
Department of Computer Science

Louisiana Tech University, Ruston, USA — Sept, 2013 — March 2014
Research Associate, Center for Secure Cyberspace
Department of Computer Science

Louisiana Tech University, Ruston, USA — Nov, 2009 — August 2013
Graduate Research Assistant, Center for Secure Cyberspace
Department of Computer Science

EDUCATION

Louisiana Tech University, Ruston, USA — 2014
Ph.D. in Computational Analysis and Modeling (Cyber Security Specialization)

Louisiana Tech University, Ruston, USA — 2013
M.S., Mathematics

Louisiana Tech University, Ruston, USA — 2012
M.S., Computer Science

Makerere University, Kampala, Uganda 2009
Postgraduate Diploma in Data Communications and Software Engineering

Makerere University, Kampala, Uganda 2001
B.S., Mechanical Engineering (with honours)

RESEARCH GRANTS

Active Grants

Program: NSF SaTC — Secure and Trustworthy Cyberspace.
Proposal Title: User-Transparent Spoof-Resistant Smartphone Authentication using Collaborating Wearables
Total Amount: approx. 500K
Role: I am Co-PI with PIs Vir Phoha (SU) and Nitesh Saxena (UAB)
Project Duration: Sept 2015 – Aug 2018

Other Federal Funded Projects in which I have Served as a Senior Personnel and (or) Participated in Proposal Writing

Program: DARPA Active Authentication. Phase II— Mobile Devices (TA 1b).
Proposal Title: Context-Aware Active Authentication Using Typing Patterns, Touch Gestures and Body Movements.
Total Amount: approx. 240K
Project Dates: Sept 2013-Sept 2014

Program: DARPA Active Authentication, Phase II— Desktop (TA 1a).
Proposal Title: Continuous Authentication Using Keystroke Dynamics.
Total Amount: approx. 2M
Project Dates: Sept 2013-Feb 2015

PUBLICATIONS

Books

[1] Rastko Selmic, Vir V. Phoha, **Abdul Serwadda**. Wireless Sensor Networks: Security, Coverage, and Localization, Springer, ISBN-13: 978-3319467672

Journal Publications

[1] **Abdul Serwadda**, Vir Phoha, Zibo Wang, Rajesh Kumar, Diksha Shukla. Toward Robotic Robbery on the Touch Screen, ACM Transactions on Information and System Security, 2016.

[2] **Abdul Serwadda**, Vir Phoha. When Mice Devour the Elephants: A DDoS Attack Against Size-based Scheduling Schemes in the Internet, Elsevier Journal on Computers and Security, 2015.

[3] **Abdul Serwadda**, Vir V. Phoha, Examining a Large Keystroke Biometrics Dataset for Statistical Attack Opennings, ACM Transactions on Information and System Security, 2013.

[4] Idris Rai, **Abdul Serwadda**, Towards End-host-based Identification of Competing Protocols against TCP in a Bottleneck Link, Springer Annals of Telecommunications, 2011.

Conference Publications

[1] R. Matovu, **A. Serwadda**, Your Substance Abuse Disorder is an Open Secret! Gleaning Sensitive Personal Information from Templates in an EEG-based Authentication System, In the Proceedings of IEEE BTAS 2016.

[2] **A. Serwadda**, V. V. Phoha, S. Poudel, L Hirshfield, D. Bandara, S. Bratt, M. Costa , fNIRS: A New Modality for Brain Activity-Based Biometric Authentication, Proceedings of IEEE BTAS 2015.

[3] Sujit Poudel, **Abdul Serwadda** Vir V. Phoha , On Humanoid Robots Imitating Human Touch Gestures on the Smart Phone, IEEE BTAS 2015.

[4] D. Shukla, R. Kumar, **A. Serwadda**, V. Phoha, Beware, Your Hands Reveal Your Secrets, Proceedings of ACM CCS, 2014.

[5] A. Primo, V. Phoha, R. Kumar, **A. Serwadda**, Context-Aware Active Authentication Using Smart-phone Accelerometer Measurements, CVPR Workshop on Biometrics, 2014.

[6] **Abdul Serwadda**, Vir V. Phoha, When Kids Toys Breach Mobile Phone Security, Proceedings of ACM CCS 2013.

[7] **Abdul Serwadda**, Vir V. Phoha, Zibo Wang, Which Verifiers Work?: A Benchmark Evaluation of Touch-based Authentication Algorithms, Proceedings of IEEE BTAS 2013.

[8] **Abdul Serwadda**, Zibo Wang, Patrick Koch, Sathya Govindarajan, Raviteja Pokala, Adam Goodkind, David-Guy Brizan, Andrew Rosenberg, Vir V. Phoha, Kiran Balagani, Scan-based Evaluation of Continuous Keystroke Authentication Systems, IEEE IT Professional (2013).

[9] Zibo Wang, **Abdul Serwadda**, Kiran Balagani, Vir V. Phoha , Transforming Animals in a Cyber-behavioral Biometric Menagerie with Frog-boiling Attacks, IEEE BTAS 2012. (***Paper was a finalist for the best paper award at BTAS 2012***).

[10] **Abdul Serwadda**, Vir V. Phoha, Kiremire Ankunda , Using Global Knowledge of Users' Typing Traits to Attack Keystroke Biometrics Templates, MMSEC 2011.

[11] **Abdul Serwadda**, Vir V. Phoha, Idris A. Rai , Size-based Scheduling: A Recipe for DDoS? (Extended Abstract), Proceedings of ACM CCS 2010.

PEER REVIEW ACTIVITIES

- IEEE Transactions on Information Forensics and Security
- IEEE Transactions on Mobile Computing
- IEEE Transactions on Emerging Topics in Computing
- International Journal of Information Security

- IEEE International Conference on Identity, Security and Behavior Analysis 2017