Changsha Ma

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Education

| | Ph.D Student in Computer Science | (Aug. 2013 - Present) | |
|--|--|---|--|
| | University at Buffalo, the State University of New York | | |
| | Courses: Modern Networking Concepts, Advanced Networking Concepts, Algorithm Des | | |
| | Analysis, Advanced Machine Learning, etc. | GPA 3.9/4.0 scale | |
| | independent Courses: Foundations of Business Strategy, Introduction to Finance, Microeconomics. | | |
| | M.S. in Information Security | (Sep. 2010 - June 2013) | |
| | University of Science and Technology of China (USTC) | | |
| | Courses: Network Information Theory, Network Security, Wireless Co | ommunications, Information | |
| | Networks and Protocols, Wireless Sensor Networks, etc. | Ranked first in class 2010 | |
| | B.S. in Information Engineering | (Sep. 2006 - June 2010) | |
| | Southeast University, China (SEU) | | |
| Resear | ch Interests | | |
| | Mobile network security; Social network Privacy; Content delivery net | work; Data analytics. | |
| Progra | mming languages | | |
| | C/C++. Matlab | Advanced | |
| | Java, Android, Javascript, Python, VHDL | Intermediate | |
| Intorn | Fynarianca | | |
| | Research Intern in Future Wei Technologies Santa Clara CA | (May 2015 - Aug 2015) | |
| | • Worked on NEV lab research project within the mobile broadband re | esearch division with a focus | |
| | on proactive caching strategy for video optimization in mobile broadband | | |
| | Responsibilities include proposal and experimental verification | Jano. | |
| П | Intern in FutureWei Technologies Santa Clara CA | (May 2014 - Aug 2014) | |
| Worked on NEV lab POC project within the mobile broadband research division with a formula second seco | | arch division with a focus on | |
| | network virtualization, cloud computing, video optimization and NFV. | | |
| | Responsibilities include system integration testing and documentati | on | |
| D | - toop on show and a spectral more surrow, too show and to take the | | |
| Resear | Ch Projects | $(\mathbf{S}_{ab}, 2)(12, \mathbf{D}_{ab})$ | |
| | Deliquitous Multimedia Lab, University at Buffalo | (Sep. 2013 - Present) | |
| | • Researched on improving mobile video conferencing QoE. Proposed a protocol-independent re- | | |
| Described an analysis of reducing realities with a side of the sid | | | |
| Researched on popularity evolution patterns of youtube videos and applications. Propose early-stage popularity forecast model and a long-term popularity evolution model. Researched on secure access control for scalable social media sharing. Efficient multi-dimensional scalable access control algorithms are developed and implemented on mobile devices. | | ution model | |
| | | Lution model. | |
| | | g. Efficient multi-dimensional | |
| | Descention arrively preservation in location based systems (LPS). A universal privacy arrively arr | | |
| • Researched on privacy preservation in location based systems (LBS). A universal privacy preservation in location based systems (LBS). A universal privacy preservation in location based systems (LBS). | |). A universal privacy-aware | |
| | LBS model with provable security features is proposed and testified of | n mobile devices. | |

- Other research topics include friend recommendation, topic modeling, and image processing.
- □ Wireless Communication Lab, USTC (Sep. 2010 June 2013)

- Researched on key management and secure fast handoff in wireless networks, authentication protocols for active RFID tag, and distributed access control in wireless sensor networks.
- Published SIX research papers (three as first author), one Chinese patent, and one IETF proposal.
- □ Mobile Communication Lab, Information Security Lab, SEU (June. 2009 June 2010)
 - Implemented RSA algorithm, SHA-1 algorithm, AES algorithm and random number generator algorithm on the trusted computing platform using C programming language.
 - Studied on evaluation of radio interface technologies for LTE.

Honors

- □ 2016 CRA-W Grad Cohort Workshop Invitation.
- □ 2012 Chinese Government Graduate Student Scholarship.
- □ 2010 Southeast University Outstanding Graduate.
- □ 2008 Jiangsu Province Altera Cup CPLD Circuit Design Contest First Prize.

Publication List

- □ C. Ma, C. W. Chen, "Forecasting Initial Popularity of Just-Uploaded User-Generated Videos", 2016 *IEEE ICIP, submitted.*
- □ C. Ma, C. W. Chen, "Formulating and Forecasting Popularity Patterns of User-Generated Videos", 2016 ACM MM, to be submitted.
- □ C. Ma, C. W. Chen, "Attribute-Based Multi-Dimension Scalable Access Control For Social Media Sharing", 2016 *IEEE ICME*, accepted.
- □ C. Ma, C. W. Chen, "Computationally Recoverable Camouflage For Secure Location Based Services", *IEEE Transactions on Mobile Computing, submitted*.
- □ C. Ma, C. W. Chen, "Nearby Friend Discovery with Indistinguishability for Stalkers", 11th International Conference on Mobile Systems and Pervasive Computing, 2015.
- □ C. Ma, C. W. Chen, "Secure Media Sharing in the Cloud: Two-Dimensional-Scalable Access Control and Comprehensive Key Management", 2014 *IEEE ICME*.
- □ C. Ma, K. Xue and P. Hong, "Distributed Access Control with Selectable Privacy-Preserving Property in Wireless Sensor Networks", *Security and Communication Networks*, 15(1): 104-114 (2013)
- C. Ma, K. Xue and P. Hong, "A Proxy Signature-Based Re-authentication Scheme for Secure Fast Handoff in Wireless Mesh Networks", *International Journal of Network Security*, 15(2): 122-132 (2013)
- C. Ma, K. Xue, P. Hong and R. Ding, "Hybrid Group Key Management Scheme Based on STR Unbalanced Tree Structure", *Journal of University of Science and Technology of China*, 41(7): 582-588 (2011)
- K. Xue, C. Ma, P. Hong and R. Ding, "A Temporal-Credential-Based Mutual Authentication and Key Agreement Scheme for Wireless Sensor Networks", *Journal of Network and Computer Applications*, 36(1): 316-323 (2013)
- K. Xue, P. Hong, C. Ma, "A Lightweight Dynamic Pseudonym Identity Based Authentication and Key Agreement Protocol without Verification Tables for Multi-Server Architecture", *Journal of Computer and System Sciences*, 80(1): 195-206 (2014)
- □ C. Ma, P. Hong and K. Xue, "Stateful Observation in CoAP", *draft-ma-core-stateful-observe-01*, work in progress, July 2012
- □ W. Xiong, K. Xue, P. Hong and C. Ma, "RFID Cryptographic Protocol Based on Two-dimensional Region Hash Chain", *Jour. of Univ. of Science and Technology of China*, 41(7): 594-598 (2011)