Chiu C. Tan

CONTACT INFORMATION

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RESEARCH OVERVIEW

My general research is in the areas of security and privacy for pervasive computing systems such as Internet of Things and Smart Cities, mobile/cloud computing systems, and wireless networks (SDN, RFID, vehicular, and 802.11). My current focus are on wearable systems for public safety and healthcare applications.

EDUCATION

- Ph.D. in Computer Science, College of William and Mary, 2010.
  Thesis title: "Secure and Efficient Data Extraction for Ubiquitous Computing Applications"
  Advisor: Qun Li

- B.S. in Computer Science, The University of Texas at Austin, 2004.

- B.A. in Economics, The University of Texas at Austin, 2004.

EMPLOYMENT

- Temple University, Department of Computer and Information Sciences
  Associate Professor, July 2018–Present.

- Temple University, Department of Computer and Information Sciences
  Assistant Professor, July 2012–June 2018.

- Temple University, Department of Computer and Information Sciences
  Research Assistant Professor, September 2010–June 2012.

- College of William and Mary, Department of Computer Science
  Research Assistant, June 2007–August 2010.

- College of William and Mary, Department of Computer Science
  Teaching Assistant, January 2005–May 2007.

RESEARCH GRANTS

Active Grants

1. "Proto-OKN Theme 1: DREAM-KG: Develop Dynamic, REsponsive, Adaptive, and Multifaceted Knowledge Graphs to address homelessness with Explainable AI". Co-PI, joint with Yuzhou Chen (Temple University), Huanmei Wu (Temple University, Public Health), and Ying Ding (University of Texas at Austin, iSchool), *National Science Foundation*, 2023-2026. ($1,496,897).

2. "SaTC: EDU: Enhancing Cybersecurity Training for Next Generation Healthcare Professionals". Co-PI, joint with Jie Wu (Temple University), Huanmei Wu (Temple University, Public Health), and Jenifer Ibrahim (Temple University, Public Health), *National Science Foundation*, 2023-2026. ($400,000).

3. "Assessing Everyday Function in Older Adults with the Virtual Kitchen". Co-PI, joint with Tania Giovannetti (Temple University, Psychology), Deborah Drabick (Temple University, Psychology), Donna Coffman (Temple University, Public Health), *National Institute of Aging*, 2020-2025. ($1,481,661).

Completed Grants

1. "Feasibility of the SmartPrompt for Improving Everyday Function in Dementia". Co-PI, joint with Tania Giovannetti (Temple University, Psychology), *National Institutes of Health*, 2019-2021. ($425,920).

2. "Feasibility Study of a Smartphone-based Augmented Reality (AR) System". Primary Investigator, joint with Tania Giovannetti (Temple University, Psychology), *Temple University Targeted Grant Program*, 2018-2019. ($25,000).

3. "TWC: Small: Evidence of Presence for Intelligent Vehicles using Environment-Based Security". Primary Investigator, joint with Jie Wu and Haibin Ling (Temple University, CIS), *National Science Foundation*, 2016 - 2020, ($416,938).

4. "CSR: Small: Collaborative Research: Multi-party Collaborative Data Access". Co-Primary Investigator, joint with Krishna Kant (Temple University, CIS) and Ehab Al-Shaer (University of North Carolina at Charlotte, CS), *National Science Foundation*, 2015 - 2018, ($358,894).

5. "EAGER: US Ignite: Mobility-Enhanced Public Safety Surveillance System using 3D Cameras and High Speed Broadband Networks ". Co-Primary Investigator, joint with Jie Wu, Haibin Ling, and Eugene Kwatny (Temple University, CIS), *National Science Foundation*, 2014 - 2016, ($199,999).

6. "REU Site: Enhancing Undergraduate Experience in Next Generation Networking Technologies". Primary Investigator, joint with Jie Wu (Temple University, CIS), *National Science Foundation*, 2012 - 2016, ($320,000)

7. "NSF Career Workshop". Co-Primary Investigator, joint with Jie Wu and Shan Lin (Temple University, CIS), *National Science Foundation*, 2012 - 2013, ($49,999).

8. "EAGER:A Meso-Scale GENI WiMAX Project". Co-Primary Investigator, joint with Jie Wu, Eugene Kwatny, Shan Lin (Temple University, CIS), Kapil Dandekar, and Moshe Kam (Drexel University, ECE), *National Science Foundation*, 2011 - 2012, ($199,716).

9. "Body Sensor Networks and Their Applications in Maternal Fetal Monitoring". Co-Primary Investigator, joint with Jie Wu (Temple University, CIS), Dimitrios Mastrogiannis (Temple Medical School), and Li Bai (Temple University, ECE), *State of Pennsylvania Formula Fund*, 2011 - 2013, ($300,000).

10. "Improving Privacy Preserving Search Performance in Cloud Computing". Primary Investigator, *Amazon Web Services in Education Research Grant*, 2011 - 2013 ($7,500).

11. "Verifiable Data Sharing with Concurrency Control in Hybrid Clouds". Co-Primary Investigator, joint with Jie Wu (Temple University, CIS), *Amazon Web Services in Education Research Grant*, 2010 - 2012 ($7,500)

RESEARCH

The authors from the following list denoted with an "*" are students advised or co-advised by me.

Book Chapters

1. Sarah Lehman* and **Chiu C. Tan** , "Leveraging Edge Computing for Mobile Augmented Reality", in *Fog/Edge Computing For Security, Privacy, and Applications*, Wei Chang and Jie Wu (editors), Springer, 2021.

2. Alkhansaa A Abuhashim* and **Chiu C. Tan** , "Blockchain-Based Internet-of-Vehicle", in *Intelligent Technologies for Internet of Vehicles*, Naercio Magaia, George Mastorakis, Constandinos Mavromoustakis, Evangelos Pallis, and Evangelos K. Markakis (editors). Springer, 2021.

3. Wei Chang, Huanyang Zheng, Jie Wu, **Chiu C. Tan** , and Haibin Ling, "Environment-assisted Vehicular Data in Smart Cities", In *Smart Cities: Foundations, Principles, and Applications*, Houbing Song, Ravi Srinivasan, Tamim Sookoor, and Sabina Jeschke. (editors). John Wiley & Sons. 2017

4. Blake Hurd, **Chiu C. Tan** and Jie Wu, "The Future in Mobile Multicore Computing". In *Scalable Computing: Theory and Practice*, Samee U. Khan, Lizhe Wang, and Albert Y. Zomaya (editors). John Wiley & Sons. 2012

5. **Chiu C. Tan** and Jie Wu, "Security in RFID Networks and Communications". In *Wireless Network Security: Theories and Applications*, L. Chen and J. Ji (editors). Springer and HEP. 2012

Journal Publications

1. Hassan A. Shafei and **Chiu C. Tan** . "A Closer Look at Access Control in Multi-User Voice Systems", *IEEE Access*, (2024)

2. Semir Elezovikj, Jianqing Jia, **Chiu C. Tan** , and Haibin Ling. "PartLabeling: A Label Management Framework in 3D Space", *Virtual Reality & Intelligent Hardware*, (2023)

3. Alkhansaa A. Abuhashim and **Chiu C. Tan** . "Improving smart contract search by semantic and structural clustering for source codes", *Blockchain: Research and Applications*, (2023)

4. Hassan A. Shafei and **Chiu C. Tan** . "Do smart speaker skills support diverse audiences?", *Pervasive and Mobile Computing*, (2022)

5. Abrar S Alrumayh, and **Chiu C. Tan** . " VORI: A Framework for Testing Voice User Interface Interactability", *High-Confidence Computing*, (2022)

6. Sarah Lehman, Semir Elezovikj, Haibin Ling, and **Chiu C. Tan** ."ARCHIE++: A cloud-enabled framework for conducting AR system testing in the wild", *IEEE Transactions on Visualization and Computer Graphics*, (2022)

7. Katherine Hackett, Sarah Lehman, Ross Divers, Matthew Ambrogi, Likhon Gomes, **Chiu C. Tan** , and Tania Giovannetti. "Remind Me To Remember: A pilot study of a novel smartphone reminder application for older adults with dementia and mild cognitive impairment". *Neuropsychological Rehabilitation*, (2022)

8. Sarah M Lehman, Abrar S Alrumayh, Kunal Kolhe, Haibin Ling, and **Chiu C. Tan** . "Hidden in Plain Sight: Exploring Privacy Risks of Mobile Augmented Reality Applications". *ACM Transactions on Privacy and Security*, (2022)

9. Abrar S Alrumayh, Sarah M Lehman, and **Chiu C. Tan** . "Emerging mobile apps: Challenges and open problems". *CCF Transactions on Pervasive Computing and Interaction*, (2021)

10. Jianqing Jia, Semir Elezovikj, Heng Fan, Shuojin Yang, Jing Liu, Wei Guo, **Chiu C. Tan** , and Haibin Ling. "Semantic-aware label placement for augmented reality in street view." *The Visual Computer*, (2020).

11. Katherine Hackett, Sarah Lehman*, Ross Divers, Matthew Ambrogi, Likhon Gomes*, **Chiu C. Tan** , and Tania Giovannetti. "Remind Me To Remember: A pilot study of a novel smartphone reminder application for older adults with dementia and mild cognitive impairment", *Neuropsychological Rehabilitation*, 2020.

12. Abrar Alrumayh*, Sarah Lehman*, and **Chiu C. Tan** . "Context aware access control for home voice assistant in multi-occupant homes" *Pervasive and Mobile Computing (PMC)* , 2020.

13. Shuai Di, Qi Feng, Chun-Guang Li, Mei Zhang, Honggang Zhang, Semir Elezovikj, **Chiu C. Tan** , and Haibing Long. "Rainy Night Scene Understanding With Near Scene Semantic Adaptation", *IEEE Transactions on Intelligent Transportation Systems*, 2020.

14. Tania Giovannetti, Takehiko Yamaguchi, Emily Roll, Tetsuya Harada, Sarah Seligman Rycroft, Ross Divers, Jacob Hulswit, **Chiu C. Tan** , Anastasia Matchanova, Lillian Ham, and Katherine Hackett. "The Virtual Kitchen Challenge: preliminary data from a novel virtual reality test of mild difficulties in everyday functioning", *Aging, Neuropsychology, and Cognition*, 2018

15. Zhengyu Yang, Yufeng Wang* Janki Bhamini, **Chiu C. Tan** , and Ningfang Mi"EAD: elasticity aware deduplication manager for datacenters with multi-tier storage systems". *Cluster Computing*, 2018.

16. Xiaojun Zhu, Fengyuan Xu, **Chiu C. Tan** , Qun Li, and Guihai Chen. "Using Wireless Link Dynamics to Extract a Secret Key in Vehicular Scenarios". *IEEE Transactions on Mobile Computing (TMC)*, 2016.

17. Yifan Zhang, **Chiu C. Tan** , Fengyuan Xu, Hao Han, and Qun Li. "VProof: Lightweight Privacy-Preserving Vehicle Location Proofs". *IEEE Transactions on Vehicular Technology (TVT)*, 2015.

18. Hao Han, Fenguan Xu, **Chiu C. Tan** , Yifan Zhang, and Qun Li. "VR-Defender: Self Defense against Vehicular Rogue APs for Drive-thru Internet". *IEEE Transactions on Vehicular Technology (TVT)*, 2014

19. Hao Han, Yunxin Liu, Guobin Shen, Yongguang Zhang, Qun Li, and **Chiu C. Tan** ."Design, Realization and Evaluation of DozyAP for Power-Efficient Wi-Fi Tethering", *IEEE/ACM Transactions on Networking (TON)*, 2014.

20. Huanyang Zheng, Kangkang Li, Adam Blaisse, **Chiu C. Tan** , Jie Wu, "Cloud CPU Verification Scheme for Individual End Users", International Journal of Cloud Computing and Services Sciences, 2014.

21. Qin Liu*, **Chiu C. Tan** , Jie Wu, and Guojun Wang, "Towards Differential Query Services in Cost-Efficient Clouds", *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 2014.

22. Wei Chang*, **Chiu C. Tan** , and Jie Wu, "Improving Cooperative Trajectory Mapping Applications with Encounter-based Error Correction". *International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)*, 2014.

23. **Chiu C. Tan** , Michael Korostelev, Li Bai, Dimitrios S. Mastrogiannis, and Jie Wu, "Securing Remote Obstetrics Monitoring Systems", *International Journal of E-Health and Medical Communications*, 2013.

24. Fengyuan Xu, Xiaojun Zhu, **Chiu C. Tan** , Qun Li, Guanhua Yan, and Jie Wu,"SmartAssoc: Decentralized Access Point Selection Algorithm to Improve Throughput". *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 2013.

25. Wei Wei, Fengyuan Xu, **Chiu C. Tan** , and Qun Li,"SybilDefender: A Defense Mechanism for Sybil Attacks in Large Social Networks". *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, 2013.

26. Qin Liu*, **Chiu C. Tan** , Jie Wu, and Guojun Wang,"Cooperative Private Searching in Clouds". *Journal of Parallel and Distributed Computing (JPDC)* , 2012.

27. Wei Chang*, Jie Wu, and **Chiu C. Tan** ,"Wormhole Defense for Cooperative Trajectory Mapping". *International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)*, 2012.

28. Wei Chang*, Jie Wu, and **Chiu C. Tan** , "Friendship-based Location Privacy for Mobile Social Networks". *International Journal of Security and Networks (IJSN)*, 2011.

29. Haodong Wang, Bo Sheng, **Chiu C. Tan** , and Qun Li, "Public-Key Based Access Control in Sensornet". *Wireless Networks (WINET)*, Vol. 17, No. 5, July 2011.

30. Hao Han, Bo Sheng, **Chiu C. Tan** , Qun Li, and Sanglu Lu, "A Timing Based Scheme for Rogue AP Detection". *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Vol.22, No. 11, Nov 2011

31. Haodong Wang, **Chiu C. Tan** , and Qun Li, "Snoogle: A Search Engine for Pervasive Environments". *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Vol. 21, No. 8, Aug 2010

32. **Chiu C. Tan** , Bo Sheng, and Qun Li, "Efficient Techniques for Monitoring Missing RFID Tags". *IEEE Transactions on Wireless Communications (TWC)*, Vol. 9, Issue 6, June 2010.

33. **Chiu C. Tan** , Bo Sheng, Haodong Wang, and Qun Li, "Microsearch:A Search Engine for Embedded Devices Used in Pervasive Computing". *ACM Transactions on Embedded Computing Systems (TECS)*, Vol. 9, No.4, Article 43, March 2010.

34. **Chiu C. Tan** , Haodong Wang, Sheng Zhong, and Qun Li, "IBE-Lite: A Lightweight Identity Based Cryptography for Body Sensor Networks". *IEEE Transactions on Information Technology in BioMedicine. Special issue on Body Sensor Networks (TITB)* Pages 926-933, Nov 2009.

35. **Chiu C. Tan** , Bo Sheng, and Qun Li, "Secure and Serverless RFID Authentication and Search Protocols". *IEEE Transactions on Wireless Communications (TWC)*, Vol. 7, Issue 4, April 2008.

Conference and Workshop Publications

1. Gautham Ramajayam, Tao Sun, **Chiu C. Tan** , Lannan Luo, and Haibin Ling. "Saliency-Aware Privacy Protection in Augmented Reality Systems." *Workshop on Metaverse Systems and Applications*, (2023).

2. Alkhansaa A Abuhashim, Hassan A Shafei, and **Chiu C. Tan** . "Block-VC: A Blockchain-Based Global Vaccination Certification", *IEEE International Conference on Blockchain (Blockchain)*, (2021)

3. Abrar S Alrumayh, Sarah M Lehman, and **Chiu C. Tan** . "Understanding and Mitigating Privacy Leaks from Third-Party Smart Speaker Apps", *IEEE Conference on Communications and Network Security (CNS)* (2021)

4. Alkhansaa Abuhashim*, and **Chiu C. Tan** . "Smart Contract Designs on Blockchain Applications (short paper)"IEEE Symposium on Computers and Communications *(ISCC)*, 2020.

5. Katherine Hackett, Sarah Lehman*, Ross Divers, **Chiu C. Tan** , Tania Giovannetti, "SmartPrompt reminder application improves everyday task completion and reduces inefficient behaviors in mild cognitive impairment and dementia". Forty Eighth Annual Meeting International Neuropsychological Society. 2020. Accepted as a Symposium Presentation. Denver, USA.

6. Abrar Alrumayh*, and **Chiu C. Tan** . "Supporting Home Quarantine with Smart Speakers.", Deep Learning for Wellbeing Applications Leveraging Mobile Devices and Edge Computing (workshop) *(HeadlthDL '20)*. Virtual.

7. Sarah Lehman*, Abrar Alrumayh*, Haibin Ling, and **Chiu C. Tan** . "Stealthy Privacy Attacks Against Mobile AR Apps", IEEE Conference on Communications and Network Security (workshop), *(CNS '20')*. Virtual.

8. Sarah Lehman*, Haibin Ling, and **Chiu C. Tan** . "ARCHIE: A User-Focused Framework for Testing Augmented Reality Applications in the Wild". IEEE Conference on Virtual Reality and 3D User Interfaces *(IEEE VR '20')*. Virtual.

9. Abrar Alrumayh*, Sarah Lehman*, and **Chiu C. Tan** . "ABACUS: audio based access control utility for smarthomes." ACM/IEEE Symposium on Edge Computing (workshop) *(SEC'19)*. Washington DC, USA.

10. Jianhai Su, Chenglong Fu, Golam Kayas, Lannan Luo, Qiang Zeng, Xiaojiang Du, **Chiu C. Tan** , and Jie Wu "A Multiversion Programming Inspired Approach to Detecting Audio Adversarial Examples". IEEE/IFIP International Conference on Dependable Systems and Networks *(DSN'19)*. Oregon, USA.

11. Chu Peng, Heng Fan, **Chiu C. Tan** , and Haibin Ling. "Online multi-object tracking with instance-aware tracker and dynamic model refreshment." IEEE Winter Conference on Applications of Computer Vision *(WACV'19)*. Hawaii, USA.

12. Sarah Lehman*, Jenna Graves*, Carlene Mcaleer, Tania Giovanetti, and **Chiu C. Tan** , "A Mobile Augmented Reality Game to Encourage Hydration in the Elderly", International Conference on Human-Computer Interaction *(HCII'18)*. Las Vegas, USA.

13. Sarah Lehman* and **Chiu C. Tan** , "PrivacyManager: An Access Control Framework for Mobile Augmented Reality Applications", IEEE Conference on Communications and Network Security *(CNS'17)*. Las Vegas, USA.

14. Theodore Hauser*, James Klein*, Philip Coulomb*, Sarah Lehman*, Takehiko Yamaguchi, Tania Giovanetti, and **Chiu C. Tan** , "Wearable Computing Support for Objective Assessment of Function in Older Adults", International Conference on Human-Computer Interaction *(HCII'17)*. Vancouver, Canada.

15. Dong Xiao, Zhiwen Yu, Fei Yi, Liang Wang, **Chiu C. Tan** , and Bin Guo, "SmartSwim: An Infrastructure-Free Swimmer Localization System Based on Smartphone Sensors", International Conference on Smart Homes and Health Telematics *(ICOST'16)*. Wuhan, China.

16. Liang Du, Haitao Lang, Ying-Li Tian, **Chiu C. Tan** , Jie Wu, and Haibin Ling, "Covert Video Classification by Codebook Growing Pattern", International Workshop on Moving Cameras Meet Video Surveillance: From Body Cameras to Drones. 2016. Las Vegas, USA.

17. Yufeng Wang*, Waqas Latif*, **Chiu C. Tan** , and Yifan Zhang, "Security and Privacy for Body Cameras Used in Law Enforcement", IEEE Conference on Communications and Network Security *(CNS'15)*. Florence, Italy.

18. Yufeng Wang*, Hongxu Zhang*, **Chiu C. Tan** , Xiaojiang Du, and Bo Sheng, "WiGroup: A Lightweight Cellular-assisted Device-to-Device Network Formation Framework", IEEE International Conference on Ubiquitous Intelligence and Computing *(UIC'15)*. Beijing, China.

19. Amy Puente* and **Chiu C. Tan** , "Survey of Smartphone-based Police Monitoring Apps", IEEE National Workshop for REU Research in Networking and Systems *(REUNS'15)*. Dallas, USA.

20. Vincent Martin*, Adama Coulaby, Nathan Schaff, **Chiu C. Tan** , and Shan Lin, "Bandwidth Prediction on a WiMAX Network", IEEE National Workshop for REU Research in Networking and Systems. *(REUNS'14)*. Philadelphia, USA.

21. Jake Roemer*, Mark Groman*, Zhengyu Yang, Yufeng Wang*, **Chiu C. Tan** , and Ningfang Mi, "Improving Virtual Machine Migration via Deduplication", IEEE National Workshop for REU Research in Networking and Systems. *(REUNS'14)*. Philadelphia, USA.

22. Hongxu Zhang*, Yufeng Wang*, and **Chiu C. Tan** , "WD2: An Improved WiFi-Direct Group Formation Protocol", ACM MobiCom Workshop on Challenged Networks *(CHANTS '14)*. Hawaii, USA.

23. Shuang Liang, Xiaojiang Du, **Chiu C. Tan** , and Wei Yu, "An Effective Online Scheme for Detecting Android Malware", IEEE International Conference on Computer Communications and Networks *(ICCCN '14)*. Shanghai, PRC.

24. Yufeng Wang*, **Chiu C. Tan** , and Ningfang Mi, "Using Elasticity to Improve Inline Data Deduplication Storage Systems". IEEE International Conference on Cloud Computing *(CLOUD '14)*. Alaska, USA, 2014.

25. Ryan Houlihan, Xiaojiang Du, **Chiu C. Tan** , Jie Wu, and Mohsen Guizani, "Auditing Cloud Service Level Agreement on VM CPU Speed". IEEE International Conference on Communications *(ICC '14)*. Sydney, Australia, 2014

26. Yufeng Wang* and **Chiu C. Tan** , "Looking at the Overheads of Transmitting Encrypted Data to the Cloud". IEEE International Workshop on Security and Privacy in Cloud Computing *(CNS-SPCC '13)*. MD, USA, 2013.

27. Wei Chang*, Jie Wu, **Chiu C. Tan** , and Feng Li, "Sybil Defenses in Mobile Social Networks". IEEE Global Communications Conference, *(GLOBECOM '13)*. GA, USA, 2013. Acceptance rate: 37 %

28. Huanyang Zheng, Kangkang Li, **Chiu C. Tan** , and Jie Wu, "User-based CPU Verification Scheme for Public Cloud Computing". IEEE International Conference on Cloud Computing *(CLOUD 2013)*. CA, USA, 2013.

29. Yifan Zhang, **Chiu C. Tan** , and Qun Li, "CacheKeeper: A System-wide Web Caching Service for Smartphones", ACM International Joint Conference on Pervasive and Ubiquitous Computing *(Ubi-Comp '13)*, Zurich, Switzerland. Acceptance rate: 18 %

30. Xiaojun Zhu, Fengyuan Xu, Edmund Novak, **Chiu C. Tan** , Qun Li, and Guihai Chen "Extracting Secret Key from Wireless Link Dynamics in Vehicular Environments". IEEE Conference on Computer Communications , *(Infocom '13)*. MA, USA, 2013. Acceptance rate: 17 %

31. Bo Sheng and **Chiu C. Tan** , "Group Authentication in Heterogeneous RFID Networks". IEEE Conference on Technologies for Homeland Security , *(HST '12)*. MA, USA, 2012.

32. **Chiu C. Tan** , Li Bai, Dimitrios Mastrogiannis, and Jie Wu, "Security Analysis of Emerging Remote Obstetrics". IEEE International Conference on E-Health Networking, Application and Services, *(Healthcom '12)*. Beijing, China, 2012.

33. James Robison, Li Bai, Dimitrios Mastrogiannis, **Chiu C. Tan** , and Jie Wu, "A Survey on PHR Technology". IEEE International Conference on E-Health Networking, Application and Services, *(Healthcom '12)*. Beijing, China, 2012.

34. Michael Korostelev, Li Bai, Jie Wu, **Chiu C. Tan** , and Dimitrios Mastrogiannis, "Body Sensor Networks in Fetal Monitoring with NFC Enabled Android Devices". International Conference on Body Area Networks, *(Bodynets '12)*. Oslo, Norway, 2012.

35. Qin Liu, **Chiu C. Tan** , Jie Wu, and Guojun Wang., "Efficient Information Retrieval for Ranked Queries in Cost-Effective Cloud Environments". IEEE Conference on Computer Communications , *(Infocom '12 mini-conference)*. Orlando, USA, 2012.

36. Wei Wei, Fengyuan Xu, **Chiu C. Tan** , and Qun Li, "SybilDefender: Defend Against Sybil Attacks in Large Social Networks". IEEE Conference on Computer Communications , *(Infocom '12)*. Orlando, USA, 2012.

37. Wei Chang*, Jie Wu, and **Chiu C. Tan** , "Encounter-based Noise Cancelation For Cooperative Trajectory Mapping (*concise paper*)". IEEE Pervasive Computing and Communication , *(Percom '12)*. Lugano, Switzerland, 2012.

38. Qin Liu*, **Chiu C. Tan** , Jie Wu, and Guojun Wang, "Efficient Information Retrieval for Ranked Queries in Cost-Effective Cloud Environments (*mini-conference*)". IEEE Conference on Computer Communications, *(Infocom '12)*. Orlando, Florida, 2012.

39. Wei Wei, Fengyuan Xu, **Chiu C. Tan** , and Qun Li, "SybilDefender: Defend Against Sybil Attacks in Large Social Networks". IEEE Conference on Computer Communications, *(Infocom '12)*. Orlando, Florida, 2012.

40. Qin Liu*, **Chiu C. Tan** , Jie Wu, and Guojun Wang "Reliable Re-encryption in Unreliable Clouds". IEEE Global Communications Conference, *(GLOBECOM '11)*. Houston, USA, 2011. Acceptance rate: 36.61%

41. Wei Chang*, Jie Wu, and **Chiu C. Tan** , "Enhancing Mobile Social Network Privacy". IEEE Global Communications Conference, *(GLOBECOM '11)*. Houston, USA, 2011. Acceptance rate: 36.61%

42. **Chiu C. Tan** , Qin Liu*, and Jie Wu, "Secure Locking For Untrusted Clouds". IEEE Conference on Cloud Computing, *(CLOUDS '11)*.Washington DC, USA, 2011. Acceptance rate: 18%

43. Fengyuan Xu, Zhenrui Qin, **Chiu C. Tan** , Baosheng Wang, and Qun Li, "IMDGuard: Securing Implantable Medical Devices with the External Wearable Guardian". IEEE Conference on Computer Communications, *(Infocom '11)*. Shanghai, China. Acceptance rate: 15.96%

44. Hao Han, Fengyuan Xu, **Chiu C. Tan** , Yifan Zhang, and Qun Li, "Defending Against Vehicular Rogue AP". IEEE Conference on Computer Communications, *(Infocom '11)*. Shanghai, China. Acceptance rate: 15.96%

45. **Chiu C. Tan** , Lei Xie, and Qun Li,"Privacy Protection for RFID-based Tracking Systems". IEEE International Conference on RFID, *(RFID '10)*, Orlando, FL. Acceptance rate: 30%.

46. Hao Han, Bo Sheng, **Chiu C. Tan** , Qun Li, Weizhen Mao, and Sanglu Lu,"Counting RFID Tags Efficiently and Anonymously". IEEE Conference on Computer Communications, *(Infocom '10)*. San Diego, CA. Acceptance rate: 17.5%

47. Fengyuan Xu, **Chiu C. Tan** , Qun Li, Guanhua Yan, and Jie Wu,"Designing a Practical Access Point Association Protocol". IEEE Conference on Computer Communications, *(Infocom '10)*. San Diego, CA. Acceptance rate: 17.5%

48. Lei Xie, Bo Sheng, **Chiu C. Tan** , Qun Li, and Daoxu Chen,"Efficient Tag Identification in Mobile RFID Systems". IEEE Conference on Computer Communications, *(Infocom '10)*. San Diego, CA. Acceptance rate: 17.5%.

49. Zhong Ren, **Chiu C. Tan** , Dong Wang, and Qun Li, "Experimental Study on Mobile RFID Performance". International Conference on Wireless Algorithms, Systems and Applications, *(WASA '09)*. Boston, MA.

50. Hao Han, Bo Sheng, **Chiu C. Tan** , Qun Li,and Sanglu Lu,"A Measurement Based Rogue AP Detection Scheme". IEEE Conference on Computer Communications, *(Infocom '09)*. Rio de Janeiro, Brazil. Acceptance rate: 19.6%.

51. Bo Sheng, **Chiu C. Tan** , Qun Li, and Weizhen Mao, "Finding Popular Categories for RFID Tags". International Symposium on Mobile Ad Hoc Networking & Computing, *(MobiHoc '08)*. Hong Kong SAR, China. Acceptance rate: 14.6%.

52. **Chiu C. Tan** , Bo Sheng and Qun Li, "How to Monitor for Missing RFID Tags". International Conference on Distributed Computing Systems, *(ICDCS '08)*. Beijing, China. Acceptance rate: 16.0%.

53. Haodong Wang, Bo Sheng, **Chiu C. Tan** and Qun Li, "Comparing Symmetric Key and Public Key Based Schemes in Sensor Networks: A Case Study of User Access Control". International Conference on Distributed Computing Systems, *(ICDCS '08)*, Beijing, China. Acceptance rate: 16.0%.

54. **Chiu C. Tan** , Bo Sheng, Haodong Wang and Qun Li, "Microsearch:When Search Engines Meet Small Devices". International Conference on Pervasive Computing, *(Pervasive '08)*. Sydney, Australia. Acceptance rate: 15.0%.

55. Haodong Wang, **Chiu C. Tan** , and Qun Li, "Snoogle: A Search Engine for the Physical World". IEEE International Conference on Computer Communications, *(Infocom '08)*. Phoenix, AZ. Acceptance rate: 20.3%.

56. **Chiu C. Tan** , Haodong Wang, Sheng Zhong, and Qun Li, "Body Sensor Network Security: An Identity-Based Cryptography Approach. (short paper)". ACM Conference on Wireless Network Security *(WiSec '08)*. Alexandria,VA. Acceptance rate: 27.0%.

57. Bo Sheng, **Chiu C. Tan** , Qun Li, and Weizhen Mao, "An Approximation Algorithm for Data Storage Placement in Sensor Networks". International Conference on Wireless Algorithms, Systems and Applications *(WASA '07)*. Chicago, IL. Acceptance rate: 22.0%.

58. **Chiu C. Tan** , Bo Sheng and Qun Li, "Severless Search and Authentication Protocols for RFID". International Conference on Pervasive Computing and Communications *(PerCom '07)*. White Plains, NY. Acceptance rate: 9.6%.

59. **Chiu C. Tan** and Qun Li, " A Robust and Secure RFID-based Pedigree System *(Short paper)*". International Conference on Information and Communication Security *(ICICS '06)*. Raleigh, NC. Acceptance rate: 32.8%.

Poster Papers and Presentations

1. Tania Giovannetti, Takehiko Yamaguchi, Emily Roll, Hibiki Fujino, Takuya Maeta, Sarah S. Rycroft, Jacob Hulswit, Brandon Greenstein, Katherine L Leung, Lee Thompson, Ross Divers, and **Chiu C. Tan** ,"The Virtual Kitchen: Preliminary Data from A Novel Virtual Reality Test of Mild Difficulties in Everyday Function (PRESENTATION)", Meeting of International Neuropsychological Society, 2017, New Orleans, USA.

2. Daniel Martinez*, Claire M. Cochrane* and **Chiu C. Tan** , "Encryption-based Privacy Protection for Police Body-worn Cameras (POSTER)", IEEE Conference on Communications and Network Security *(CNS'16)*. Philadelphia, Pennsylvnia, USA.

3. Claire M. Cochrane* and **Chiu C. Tan** , "A Study on the Privacy and Security of Police Body Cameras Deployments (POSTER)", IEEE International Conference on Technologies for Homeland Security *(HST'16)*. Waltham, Massachusetts, USA.

4. Claire M. Cochrane* and **Chiu C. Tan** , "Improving Privacy Protection for Police Body Camera Systems in Smart Cities (POSTER)", IEEE Smart Cities Initiative - Kansas City. 2016. Kansas City, USA.

5. Waqas Latif* and **Chiu C. Tan** , "SmartArgos: Improving Mobile Surveillance Systems with Software Defined Networks (POSTER)", IEEE Conference on Communications and Network Security *(CNS'15)*. Florence, Italy.

6. Hongxu Zhang*, Yufeng Wang*, **Chiu C. Tan** , and Yifan Zhang, "mQual: A Mobile Peer-to-Peer Network Framework Supporting Quality of Service (POSTER)", IEEE International Conference on Distributed Computing Systems *(ICDCS'15)*. Columbus, USA.

PROFESSIONAL ACTIVITIES

Grant Panels and Reviews

1. Panelist for National Science Foundation (CISE), multiple years.

2. Panelist for National Science Foundation (GRFP), 2015, 2016

3. Reviewer for Coopération européenne dans le domaine de la recherche scientifique et technique (COST), 2015

Organization and Leadership Positions

1. Local chair for ACM/IEEE Conference on Connected Health:Applications, Systems and Engineering Technologies (CHASE), 2017

2. PC vice-chair for IEEE International Conference on Distributed Networks (ICDCN), 2016

3. TPC chair for the National Workshop for REU Research in Networking and Systems (REUNS), 2015

4. PC vice-chair for IEEE International Conference on Ubiquitous Intelligence and Computing (UIC), 2014

5. TPC chair for the National Workshop for REU Research in Networking and Systems (REUNS), 2014

6. TPC chair for the International Workshop for Machine-to-Machine Security (M2MSec), 2014

7. General chair for the First Workshop on Mobile Cloud Computing in Healthcare (WMCCH), 2013

8. Local arrangement chair for IEEE International Conference on Distributed Computing Systems (ICDCS), 2013

9. Local program committee for NSF REU PI annual meeting, 2013

10. Organizer for NSF Career Award Writing Program for Aspiring PIs, 2013

Editorships

1. Editor, KSII Transactions on Internet and Information Systems, 2013 - 2018

2. Guest editor, Personal and Mobile Computing, Special Issue: International Conference on Distributed Computing and Networking (ICDCN) 2016: Networking Track. 2017.

3. Guest editor, International Journal of Distributed Sensor Networks, Issue on Cyber-Physical Systems for Smart Grid. (converted to regular issue), 2012

Technical Program Committee

1. IEEE International Conference on Pervasive Computing and Communications (Percom), 2015, 2016, 2017, 2018, 2019

2. IEEE Conference on Communications and Network Security (CNS), 2014,2015,2016,2017, 2018, 2019

3. IEEE Conference on Computer Communications (INFOCOM), 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019

4. IEEE International Conference on Distributed Computing Systems (ICDCS), 2019

5. IEEE International Conference on Computer Communications and Networks (ICCCN), 2012, 2013, 2014, 2015, 2016

6. IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS), 2013, 2014, 2015, 2016

7. IEEE Wireless Health Conference, 2015, 2016

8. International Conference on Cloud Computing and Big Data (CCDB), 2014

9. IEEE International Conference on High Performance Computing and Communications (HPCC), 2013,2014

10. International Workshop on Under Water Communication Systems and Networks (UWCSN), 2014

11. IEEE International Conference on Communications (ICC), 2014, 2015,2016,2017,2018

12. ACM International Workshop on Foundations of Mobile Computing (FOMC), 2014

13. International Symposium on Cyberspace Safety and Security (CSS), 2014

14. IEEE International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), 2014

15. International Conference on Body Area Networks (BODYNETS), 2013, 2014

16. Military Communications Conference (Milcom), 2012, 2013, 2014, 2015, 2017

17. IEEE International Conference on Networking, Architecture, and Storage (NAS), 2010, 2012, 2014

18. International Conference on Multimedia and Ubiquitous Engineering (MUE), 2012

19. International Conference on Frontier of Computer Science and Technology (FCST), 2011

20. IEEE International Conference on Cloud and Service Computing (CSC), 2011, 2013

21. IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC), 2011, 2013

22. IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC), 2011

23. IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC), 2011

24. International Conference on Ubiquitous Intelligence and Computing (UIC), 2011, 2013

25. IEEE Global Communications Conference (GLOBECOM), 2012, 2015

26. IEEE Conference on RFID (RFID), 2011

27. International Conference on Computer Communications and Networks (IPCCC), 2014, 2015

28. IEEE International Symposium on Future Information and Communication Technologies for Ubiquitous Healthcare (Ubi-Health Tech), 2015.

Journal Review

Each journal is listed only once

1. IEEE Transactions on Dependable and Secure Computing

2. IEEE Internet of Things Journal

3. ACM/IEEE Transactions on Networking

4. IEEE Internet of Things Journal

5. IEEE Transactions on Cloud Computing

6. IEEE Transactions on Information Technology in Biomedicine

7. IEEE Transactions on Mobile Computing

8. IEEE Transactions on Smart Grid

9. IEEE Journal on Selected Areas in Communications

10. IEEE Transactions on Wireless Communications

11. IEEE Transactions on Computers

12. IEEE Transactions on Parallel and Distributed Systems

13. IEEE Transactions on Vehicular Technologies

14. IEEE Wireless Communications

15. ACM Transactions on Intelligent Systems and Technology

16. International Journal of Ad Hoc and Ubiquitous Computing (Inderscience)

17. Computer Networks Journal (COMNET)

18. International Journal of Security and Networks (Inderscience)

19. Security and Communication Networks (Wiley)

20. Personal and Mobile Computing (Elsevier)

21. Wireless Communications and Mobile Computing (Wiley)

UNIVERSITY SERVICE

1. Temple University Graduate Board, 2019 - 2023

2. College of Science and Technology Dean's Advisory Committee, 2019 - 2023

3. CIS Director for graduate program, 2016 - 2018

4. CIS Department hiring committee, 2014, 2016, 2019, 2020

5. CIS Department representative to the Science Scholars Program, 2012

6. Reviewer for Temple University Faculty Senate Seed Money Fund, 2011

INVITED TALKS

1. "Smarter Aging with Wearable Computing", University of Delaware. 2016. Host: Dr. Rui Zhang

2. "Mobile Computing in a 5G World", New York Institute of Technology. 2015. Host: Dr. Cecilia Dong

3. "Introduction to Wearable Computing",Temple University Freshman Seminar. 2014. Host: Dr. Frank Friedman

4. "Introduction to Cloud Computing", Temple University Freshman Seminar. 2013. Host: Dr. Slobodan Vucetic

5. "Security for SmartHealth Systems", University of Nevada, Las Vegas. 2012. Host: Dr.Yoohwan Kim

6. "Security for SmartHealth Systems", Old Dominion University. 2012. Host: Dr.Yuzhong Shen

7. "Security for SmartHealth Systems", University of North Texas. 2012. Host: Dr. Barrett Bryant

8. "Security and Next Generation Computing", Temple University Freshman Seminar. 2011. Host: Dr. Anthony Hughes

9. "Security for Ubiquitous Computing Healthcare Applications", University of Delaware. 2011. Host: Dr. Chien-Chung Shen

10. "Secure and Privacy-Preserving Ubiquitous Computing for Health Care", Dartmouth College. 2010. Host: Dr. David Kotz.

11. "Security for Ubiquitous Computing Healthcare Applications", University of Colorado at Colorado Springs. 2010. Host: Dr. Edward Chow.

ADVISING

Current Ph.D. students

1. Yang Zhao. (co-advised with Yuzhou Chen) 2022 - present.

Graduated Ph.D. students

1. Hassan Ali Shafei. Ph.D. 2024
   Dissertation: *Testing Privacy and Security of Voice Interface Applications in the IoT Era*

2. Semir Elezovikj[1] Ph.D. 2024
   Dissertation:*Machine Learning Methods for Autonomous Driving: Visual Privacy, 3D Depth Perception and Trajectory Prediction Modeling*

3. Alkhansaa Abdulrahman. Ph.D. 2023
   Dissertation:*Improving Smart Contracts Management And Designs For Blockchain Systems*
   First position: *Assistant Professor, Imam Mohammad Ibn Saud Islamic University*

4. Abrar Alrumayh. Ph.D. 2022
   Dissertation:*Improving The Privacy, Usability, And Context-Awareness Of Smart Speakers*
   First position: *Teaching Assistant Professor, Stevens Institute of Technology*

5. Sarah Lehman. Ph.D. 2022
   Dissertation:*Testing Challenges Of Mobile Augmented Reality Systems*
   First position: *Researchers, NASA Langley Research Center*

6. Xinyi Li. [2] Ph.D. 2021
   Dissertation: *Robust 6-DOF Camera Relocalization in Multi-view Structure from Motion*

TEACHING

Graduate Course

1. CIS 5637: Network and Information Security

2. CIS 5210. Seminar in Information Science and Technology.

3. CIS 5107. Computer Systems Security and Privacy.

4. CIS 5590. Topics in Computer Science.

5. CIS 9617. Computer Networks and Communications.

6. CIS 9590. Advance Topics in Computer Science.

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[1]Administrative Ph.D. advisor. Took over when Haibin Ling left Temple University. Advised by Haibin Ling.
[2]Administrative Ph.D. advisor. Took over when Haibin Ling left Temple University. Advised by Haibin Ling.

Undergraduate Course

1. CIS 4419. Securing the Internet of Things

2. CIS 3319. Wireless Networks and Security

3. CIS 2229. Operating Systems and Networks. Fall 2016.

4. CIS 4378. Introduction to Computer and Network Security.

5. CIS 3223. Data Structures and Algorithms.

6. CIS 4319. Networks and Communications.

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