

Appointments

- **Associate Professor**
Department of Informatics & Networked Systems, School of Computing & Information, University of Pittsburgh 2019 - present
- **Affiliate Scholar**
University of Pittsburgh Institute for Cyber Law, Policy, and Security 2017 - present
- **Assistant Professor**
Department of Informatics & Networked Systems, School of Computing and Information, University of Pittsburgh 2013 - 2019

Research Interests

- Blockchains, Data Privacy and Data Security, Cloud & Edge Computing

Education

- **Georgia Institute of Technology** Atlanta, GA
Ph.D. in Computer Science Aug. 2008 - Aug. 2013
- **Georgia Institute of Technology** Atlanta, GA
M.S. in Computer Science Dec. 2009
- **Pondicherry Engineering College** Pondicherry, India
B.Tech. in Computer Science June 2006
— Ranked 1st in a class of 64

Honors/Awards

- IEEE Distinguished Lecturer (VTS) - 2025 Class
- Best Student Paper Award candidate, 39th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy, DBSec 2025
- Best Demo Award, 44th IEEE International Conference on Distributed Computing Systems, ICDCS 2024
- Distinguished Paper Award, 30th ACM Conference on Computer and Communications Security, CCS 2023
- Best Paper Award, 36th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy, DBSec 2022
- Best Paper Award Nominee, 29th IEEE International Conference on High Performance Computing, Data, and Analytics, HiPC 2021
- Best Paper Award, 7th International Congress on Big Data, BigData Congress 2018
- IBM Faculty Award 2017
- Best Paper Award, 6th IEEE International Congress on Big Data, IEEE BigData Congress 2017
- Faculty Honoree in the 2016 and 2017 Honors Convocation at the University of Pittsburgh
- Best Paper Award, 15th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, IEEE/ACM CCGrid 2015

- Best Paper Award, 5th International Conference on Cloud Computing, IEEE Cloud 2012
- First Patent Application Invention Achievement Award, IBM Research 2012
- IBM Research PhD Fellowship 2012-2013
- Best Paper Award, 18th International Conference on Advanced Computing and Communications, ADCOM 2006
- Best Undergraduate Thesis Award, 2006
- Tata Consultancy Services Best Project Award, 2006

Publications

Peer-reviewed Journal Publications

1. Ying Song and Balaji Palanisamy, “MAPPING: Debiasing Graph Neural Networks for Fair Node Classification with Limited Sensitive Information Leakage”, in *World Wide Web Journal 2025*
2. Akshay Madan, David Tipper, Vinay Chamola, Balaji Palanisamy, Mai Abdelhakim, Prashant Krishnamurthy, “BLE-based Sensors for Privacy-Enabled Contagious Disease Monitoring with Zero Trust Architecture”, in *Ad Hoc Networks Journal 2025*
3. Chao Li and Balaji Palanisamy, “T-Watch: Towards Timed Execution of Private Transaction in Blockchains”, in *IEEE Transactions on Services Computing, IEEE TSC 2024*
4. Chao Li, Runhua Xu, Balaji Palanisamy, Li Duan, Meng Shen, Jiqiang Liu, Wei Wang, “Blockchain Takeovers in Web 3.0: An Empirical Study on the TRON-Steem Incident”, in *ACM Transactions on the WEB, ACM TWEB 2025*.
5. David Tipper, Amy Babay, Balaji Palanisamy, Prashant Krishnamurthy, “Network Connectivity Resilience in Next Generation Backhaul Networks: Challenges and Future Opportunities”, in *IEEE Transactions on Network and Service Management, IEEE TNSM 2024*
6. Jingzhe Wang, Balaji Palanisamy, “Securing Blockchain-based Timed Data Release against Adversarial Attacks”, in *Journal of Computer Security, JCS 2023*
7. Jinlai Xu, Balaji Palanisamy, Qingyang Wang, Heiko Ludwig, Sandeep Gopisetty, “Amnis: Optimized stream processing for edge computing”, in *Journal of Parallel and Distributed Computing, JPDC 2022*
8. Chao Li, Balaji Palanisamy, “SilentDelivery: Practical Timed-Delivery of Private Information Using Smart Contracts”, in *IEEE Transactions on Services Computing, IEEE TSC 2022*
9. Jinlai Xu and Balaji Palanisamy, “Optimized Contract-based Model for Resource Allocation in Federated Geo-distributed Clouds”, in *IEEE Transactions on Services Computing, IEEE TSC 2021* .
10. Constantino, Rose & Reyes, Andrew & Scott, Paul & Petrie-Wyman, Jennifer & Carmack, Suzanne & Ramos, Mary Dioise & Palanisamy, Balaji & Cuevas, Pearl & Kang, Harmeet & Palompon, Daisy & Hui, Chi Ching Vivian & Burkart, Rebecca & Allen, Larissa, “Life Course In HEARTS: Enhancing Telehealth Resilience and Mindfulness Intervention in Older Adults Experiencing Abuse and Trauma-A Conceptualization”, in *Open Access Journal of Complementary & Alternative Medicine 2021, vol. 3, issue 1, p. 303-312*
11. Yang Zhou, Ling Liu, Kisung Lee, Balaji Palanisamy, Qi Zhang, “Improving Collaborative Filtering with Social Influence over Heterogeneous Information Networks”, in Proc. of *ACM Transactions on Internet Technology, ACM TOIT 2020*

12. Rose E Constantino, Andrew Thomas Reyes, Claudia M Kregg-Byers, Betty J. Braxter, Paul Wesley Scott, Jordan Cobb, Vivian Hui, Dianxu Ren, Brayden N. Kameg, Pearl Ed Cuevas, Daisy R. Palompon, Jennifer L. Petrie and Balaji Palanisamy.. “Matters of HEARTS: health, experience of abuse, resilience, technology use, and safety of older adults”, in *Educational Gerontology*, 2020, 46(7), 367–381.
13. Qingyang Wang, Shungeng Zhang, Yasuhiko Kanemasa, Calton Pu, Balaji Palanisamy, Lilian Harada, Motoyuki Kawaba, “Optimizing N-Tier Application Scalability in the Cloud: A Study of Soft Resource Allocation”, in *ACM Transactions on Modeling and Performance Evaluation of Computing Systems*, *ACM TOMPECS 2019*.
14. Chao Li, Balaji Palanisamy, “Reversible Location Perturbation Mechanisms for Protecting Multi-level Location Privacy”, in *Elsevier Computer Communications 2019*
15. Qingyang Wang, Hui Chen, Shungeng Zhang,, Liting Hu, Balaji Palanisamy, “Integrating Concurrency Control in n-Tier Application Scaling Management in the Cloud”, in *IEEE Transactions on Parallel and Distributed Systems*, *IEEE TPDS 2019*.
16. Chao Li and Balaji Palanisamy, “Privacy in Internet of Things: from Principles to Technologies”, in *IEEE Internet of Things Journal*, *IEEE IoT-J 2018*.
17. Lei Jin, Chao Li, Balaji Palanisamy and James Joshi, “k-Trustee: Location Injection Attack-resilient Anonymization for Location Privacy”, in *Elsevier Computers & Security 2018*.
18. Balaji Palanisamy, Ling Liu, Yang Zhou and Qingyang Wang, “Privacy-preserving Publishing of Multi-level Utility Controlled Graph Datasets”, in *ACM Transactions on Internet Technology*, *ACM TOIT 2018*.
19. Nathalie Baracaldo, Balaji Palanisamy and James Joshi, “G-SIR: An Insider Attack Resilient Geo-Social Access Control System”, in *IEEE Transactions on Secure and Dependable Computing*, *IEEE TDSC 2018*.
20. Kisung Lee, Ling Liu, Balaji Palanisamy and Emre Yigitoglu, “Road Network-Aware Spatial Alarms”, in *IEEE Transactions on Mobile Computing*, *IEEE TMC 2016*.
21. Qiulei Guo, Balaji Palanisamy, Hassan Karimi and Leming Zhang , “Distributed Algorithms for Spatial Retrieval Queries in Geospatial analysis”, in *Services Transactions on Cloud Computing*, *STCC 2016*.
22. Balaji Palanisamy and Ling Liu, “Attack-resilient Mix-zones over Road Networks: Architecture and Algorithms”, in *IEEE Transactions on Mobile Computing*, *IEEE TMC 2015*.
23. Balaji Palanisamy, Aameek Singh and Ling Liu, “Cost-effective Resource Management for MapReduce in a Cloud,” in *IEEE Transactions on Parallel and Distributed Systems*, *IEEE TPDS 2015*.
24. Balaji Palanisamy, Ling Liu, Kisung Lee, Shicong Meng, Yuzhe Tang and Yang Zhou, “Delay-tolerant Mix-zones on Road Networks”, in *Distributed and Parallel Databases* , *DAPD 2014*.
25. Balaji Palanisamy and Ling Liu, “Effective Mix-zone Anonymization for Mobile Travelers”, in *Geoinformatica 2014*.

Peer-reviewed Conference Publications

26. Yijun Yuan, Na Du, Adam Lee and Balaji Palanisamy, “VRSafe: A Secure Virtual Keyboard to Mitigate Keystroke Inference in Virtual Reality”, to appear in *Proc. of the 16th ACM Conference on Data and Application Security and Privacy*, *ACM CODASPY 2026*
27. Jingzhe Wang, Balaji Palanisamy, “SR-MPL: Single-round Fair Multiparty Lottery for Consensus”, in *Proc. of the 13th IEEE International Conference on Big Data*, *IEEE BigData 2025*

28. Abdulrahman Alhaidari, Balaji Palanisamy, Prashant Krishnamurthy, “On-Chain Decentralized Learning and Cost-Effective Inference for DeFi Attack Mitigation” in Proc. of *7th Conference on Advances in Financial Technologies, AFT 2025*
29. Jingzhe Wang, Balaji Palanisamy, “P-EDR: Privacy-Preserving Event-Driven Data Release Using Smart Contracts”, in Proc. of *39th IFIP WG 11.3 Annual Conference on Data and Applications Security and Privacy, DBSec 2025*
30. Bhavani Kalal, Abdulrahman Alhaidari, Balaji Palanisamy, Shamik Sural, “The Economics of Deception: Structural Patterns of Rug Pull Across DeFi Blockchains”, in Proc. of *30th European Symposium on Research in Computer Security, ESORICS 2025*
31. Abdulrahman Alhaidari, Balaji Palanisamy, Prashant Krishnamurthy, “Protecting DeFi Platforms against Non-Price Flash Loan Attacks”, in Proc. of *the 15th ACM Conference on Data and Application Security and Privacy, ACM CODASPY 2025*
32. Abdulrahman Alhaidari, Bhavani Kalal, Balaji Palanisamy, Shamik Sural, “SolRPDS: A Dataset for Analyzing Rug Pulls in Solana Decentralized Finance”, in Proc. of *the 15th ACM Conference on Data and Application Security and Privacy, ACM CODASPY 2025*
33. Ying Song, Rita Singh and Balaji Palanisamy, “Krait: Backdoor Attacks Against Graph Prompt Tuning”, in Proc. of *the 3rd IEEE Conference on Secure and Trustworthy Machine Learning, IEEE SaTML 2025*
34. Jingzhe Wang and Balaji Palanisamy, “Novel Applications of Blockchain-based Timed Data Release”, in Proc. of *the 11th IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 2025*
35. Shailesh Kumar Sharma, Balaji Palanisamy, Shamik Sural, Sandip Chakraborty, “RideCred: A Decentralized and Incentive-Driven Ride-Sharing System with Trustless Coordination”, in Proc. of *the 11th IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 2025*
36. Shailesh Kumar Sharma, Sandip Chakraborty, Balaji Palanisamy, Shamik Sural, “DeRide: An Incentivized Peer-to-Peer Ride Sharing Service using Permissioned Blockchain Networks”, in Proc. of *the 7th International Conference on Blockchain Computing and Applications, BCCA 2025*
37. Jingzhe Wang and Balaji Palanisamy, “PR-TDR: Privacy-preserving and Reliable Timed Data Release”, in Proc. of *the 43rd International Symposium on Reliable Distributed Systems, SRDS 2024*
38. Chao Li, Balaji Palanisamy, Runhua Xu, Li Duan, Jiqiang Liu, Wei Wang, “How Hard is Takeover in DPoS Blockchains? Understanding the Security of Coin-based Voting Governance”, in Proc. of *the 30th ACM Conference on Computer and Communications Security, CCS 2023 (Received Distinguished Paper Award)*
39. Chao Li, Balaji Palanisamy, Runhua Xu, Li Duan, “Cross-Consensus Measurement of Individual-level Decentralization in Blockchain”, in Proc. of *the 9th International Conference on Big Data Security on Cloud, BigDataSecurity, BigDataSecurity 2023*
40. Jingzhe Wang, Balaji Palanisamy, “CTDRB: Controllable Timed Data Release Using Blockchains”, in Proc. of *The 18th EAI International Conference on Security and Privacy in Communication Network, SecureComm 2022*
41. Jinlai Xu, Balaji Palanisamy, Qingyang Wang, Heiko Ludwig, Sandeep Gopisetty, “Decentralized Allocation of Geo-distributed Edge Resources using Smart Contracts”, in Proc. of *The 22 st IEEE/ACM international Symposium on Cluster, Cloud and Internet Computing, IEEE/ACM CCGrid 2022*

42. Jingzhe Wang, Balaji Palanisamy, “Attack-Resilient Blockchain-Based Decentralized Timed Data Release”, in Proc. of *36th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy, DBSec 2022 (Received Best Paper Award)*
43. Ritik Kumar, Balaji Palanisamy, Shamik Sural, “Efficient Blockchain Enabled Attribute-based Access Control as a Service”, in Proc. of *The 4th IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications, IEEE TPS-ISA 2022*
44. Akshay Madan, David Tipper, Balaji Palanisamy, Mai Abdelhakim and Prashant Krishnamurthy, “BECT: Beacon-based Contact Tracing for Detecting Direct & Indirect Contacts”, in Proc. of *The 19th IEEE International Conference on Mobile Ad-Hoc and Smart Systems, IEEE MASS 2022*
45. Muthukur Venkata Akhil Vasishta, Balaji Palanisamy, Shamik Sural, “Decentralized Authorization using Hyperledger Fabric”, in Proc. of *2022 IEEE International Conference on Blockchain, Blockchain 2022*
46. Maddipati Varun, Balaji Palanisamy, Shamik Sural, “Mitigating Frontrunning Attacks in Ethereum”, in Proc. of *The 4th ACM International Symposium on Blockchain and Secure Critical Infrastructure, BSCI 2022*
47. Jinlai Xu and Balaji Palanisamy, “Model-based Reinforcement Learning for Elastic Stream Processing in Edge Computing”, in Proc. of *29th IEEE International Conference on High Performance Computing, Data, and Analytics, HiPC 2021 (Best Paper Award Nominee)*
48. Maddipati Varun, Muthukur Venkata Akhil Vasishta, Balaji Palanisamy and Shamik Sural, “Decentralized Authorization in Web Services Using Public Blockchain”, in Proc. of *2021 International Conference on Blockchain, ICBC 2021*
49. Jinlai Xu, Balaji Palanisamy and Qingyang Wang, “Resilient Stream Processing in Edge Computing”, in Proc. of *The 21st IEEE/ACM international Symposium on Cluster, Cloud and Internet Computing, IEEE/ACM CCGrid 2021*
50. Chao Li, Balaji Palanisamy, Runhua Xu, Jinlai Xu and Jingzhe Wang, “SteemOps: Extracting and Analyzing Key Operations in Steemit Blockchain based Social Media Platform” in Proc. of *ACM Conference on Data and Application Security and Privacy, CODASPY 2021*
51. Chao Li, Balaji Palanisamy, “Comparison of Decentralization in DPoS and PoW Blockchains”, in Proc. of *2020 International Conference on Blockchain, ICBC 2020*
52. Chao Li, Balaji Palanisamy, “EventWarden: A Decentralized Event-driven Proxy Service for Outsourcing Arbitrary Transactions in Ethereum-like Blockchains”, in Proc. of *2020 IEEE International Conference on Web Services, IEEE ICWS 2020*
53. Jingzhe Wang, Balaji Palanisamy and Jinlai Xu, “Sustainability-aware Resource Provisioning in Data Centers”, in Proc. of *The 6th IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 2020*
54. Chao Li, Balaji Palanisamy, Runhua Xu, Jian Wang and Jiqiang Liu, “NF-Crowd: Nearly-free Blockchain-based Crowdsourcing”, in Proc. of *The 39th International Symposium on Reliable Distributed Systems, SRDS 2020*
55. Chao Li and Balaji Palanisamy, “Incentivized Blockchain-based Social Media Platforms: A Case Study of Steemit”, in Proc. of *11th ACM International Web Science Conference, ACM WebSci 2019*
56. Yang Zhou, Ling Liu, Qi Zhang, Kisung Lee, Balaji Palanisamy, “Enhancing Collaborative Filtering with Multi-label Classification”, in Proc. of *8th International Conference on Computational Data and Social Networks, CSoNet 2019*

57. Chao Li and Balaji Palanisamy, “Decentralized Privacy-preserving Timed Execution in Blockchain-based Smart Contract Platforms”, in Proc. of *25th IEEE International Conference on High Performance Computing, Data, and Analytics, HiPC 2018*
58. Chao Li and Balaji Palanisamy, “Decentralized Release of Self-emerging Data using Smart Contracts”, in Proc. of *37th IEEE International Symposium on Reliable Distributed Systems, IEEE SRDS 2018*
59. Chao Li, Balaji Palanisamy and Prashant Krishnamurthy, “Reversible Data Perturbation Techniques for Multi-level Privacy-preserving Data Publication”, in *7th International Congress on Big Data, BigData Congress 2018, Seattle, USA. (Received Best Paper Award)*
60. Runhua Xu, Balaji Palanisamy, James Joshi, “QueryGuard: Privacy-preserving Latency-aware Query Optimization for Edge Computing” in *the 17th IEEE International Conference On Trust, Security And Privacy In Computing And Communications, IEEE TrustCom 2018*.
61. K. Areekijseree, Yuzhe Tang, Ju Chen, Shuang Wang, Arun Iyengar and Balaji Palanisamy, “Secure and Efficient Multi-Party Directory Publication for Privacy-Preserving Data Sharing”, in *2018 International Conference on Security and Privacy in Communication Networks, SecureComm 2018, Singapore*.
62. Balaji Palanisamy, Chao Li and Prashant Krishnamurthy, “Group privacy-aware disclosure of association graph data”, in *2017 IEEE International Conference on Big Data, IEEE Big Data, Boston, USA*.
63. Jinlai Xu, Balaji Palanisamy, Yuzhe Tang and S.D. Madhu Kumar, “PADS: Privacy-preserving Auction Design for Allocating Dynamically Priced Cloud Resources” in Proc. of *3rd International Conference on Collaboration and Internet Computing, IEEE CIC 2017, San Jose, USA*
64. Chao Li and Balaji Palanisamy, “Emerge: Self-emerging Data Release using Cloud Data Storage”, in Proc. of *10th IEEE International Conference on Cloud Computing, IEEE CLOUD 2017, Honolulu, USA*.
65. Jinlai Xu and Balaji Palanisamy, “Cost-aware resource management for federated clouds using resource sharing contracts”, in Proc. of *10th IEEE International Conference on Cloud Computing, IEEE CLOUD 2017, Honolulu, USA*.
66. Jinlai Xu and Balaji Palanisamy, Heiko Ludwig, and Qingyang Wang, “Zenith: Utility-aware Resource Allocation for Edge Computing”, in Proc. of *1st IEEE International Conference on Edge Computing, IEEE EDGE 2017, Honolulu, USA*.
67. Chao Li, Balaji Palanisamy and James Joshi, “Differentially Private Trajectory Analysis for Points-of-Interest Recommendation”, in Proc. of *6th IEEE International Congress on Big Data (BigData Congress 2017), Honolulu, USA. (Received Best Paper Award)*
68. Chao Li and Balaji Palanisamy, “Timed-release of Self-emerging Data using Distributed Hash Tables”, in Proc. of *37th IEEE International Conference on Distributed Computing Systems, ICDCS 2017, Atlanta, USA*.
69. Hui Chen, Qingyang Wang, Balaji Palanisamy, and Pengcheng Xiong, “DCM: Dynamic Concurrency Management for Scaling n-Tier Applications in Cloud”, in Proc. of *37th International Conference on Distributed Computing Systems, ICDCS 2017, Atlanta, GA, USA*.
70. Chao Li, Balaji Palanisamy and James Joshi, “SocialMix: Privacy-aware Communication in Online Social Networks”, in *23rd IEEE International Conference on Web Services, ICWS 2016, San Francisco, USA*.
71. Chao Li and Balaji Palanisamy, “ReverseCloak: Protecting Multi-level Location Privacy over Road Networks”, in *24th ACM International Conference on Information and Knowledge Management, CIKM 2015, Melbourne, Australia*.

72. Chao Li and Balaji Palanisamy, "De-anonymizable Location Cloaking for Privacy-controlled Mobile Systems", in *9th International Conference on Network and System Security, NSS 2015*, New York, USA.
73. Yuzhe Tang, Arun Iyengar, Wei Tan, Liana Fong, Ling Liu, Balaji Palanisamy, "Lightweight Indexing for Log-Structured Key-Value Stores", in *14th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, IEEE/ACM CCGrid 2015*, Shenzhen, Guangdong, China, 2015. (**Received Best Paper Award**)
74. Qiulei Quo, Balaji Palanisamy and Hassan Karimi, "A Distributed Polygon Retrieval Algorithm using MapReduce", in *International Symposium on Spatio-temporal Computing, Fairfax, ISSC 2015* .
75. Balaji Palanisamy and Ling Liu, "Privacy-preserving Data Publishing in the Cloud: A Multi-level Utility Controlled Approach", in *8th IEEE International Conference on Cloud Computing, IEEE CLOUD 2015* .
76. Qiulei Quo, Balaji Palanisamy and Hassan Karimi, "A MapReduce Algorithm for Polygon Retrieval in Geospatial Analysis", in *8th IEEE International Conference on Cloud Computing, IEEE CLOUD 2015* .
77. Yang Zhou, Ling Liu, Xianqiang Bao, Kisung Lee, Calton Pu, Balaji Palanisamy, Emre Yigitoglu, Qi Zhang, "Clustering Service Networks with Entity, Attribute and Link Heterogeneity" in *22nd IEEE International Conference on Web Services, IEEE ICWS 2015* .
78. Nathalie Baracaldo, Balaji Palanisamy and James Joshi, "Geo-Social-RBAC: A Location-based Socially Aware Access Control Framework", in *8th International Conference on Network and System Security, NSS 2014*, Xi'an, China.
79. Balaji Palanisamy, Aameek Singh, Nagapramod Mandagere, Gabriel Alatore and Ling Liu, "MapReduce Analysis for Cloud-archived Data", in *14th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, IEEE/ACM CCGrid 2014* , Chicago, IL, USA.
80. Balaji Palanisamy, Aameek Singh, Ling Liu and Bryan Langston, "Cura: A Cost-Optimized Model for MapReduce in a Cloud." in *27th IEEE International Parallel and Distributed Processing Symposium, IPDPS 2013*, Boston, Massachusetts, USA.
81. Shicong Meng, Arun Iyengar, Isabelle Rouvellou, Ling Liu, Kisung Lee, Balaji Palanisamy and Yuzhe Tang, "Reliable State Monitoring in Cloud Datacenters", in *Proceedings of IEEE International Conference on Cloud Computing, IEEE Cloud 2012*, Honolulu, Hawaii, June 2012 (**Received Best Paper Award**).
82. Kisung Lee, Ling Liu, Shicong Meng, Balaji Palanisamy, "Scaling Spatial Alarm Services on Road Networks," in *Proceedings of IEEE International Conference on Web Services, ICWS 2012*, Honolulu, Hawaii, June 2012.
83. Balaji Palanisamy and Ling Liu, "MobiMix: Protecting Location Privacy with Mix-zones over Road Networks," in *Proceedings of the 27th IEEE International Conference on Data Engineering, ICDE 2011*, Hannover, Germany, April 2011.
84. Balaji Palanisamy, Aameek Singh, Ling Liu and Bhushan Jain, "Purlieus: Locality-aware Resource Allocation for MapReduce in a Cloud," in *Proceedings of ACM/IEEE Supercomputing, SC 2011*, Seattle, November 2011.
85. Yuzhe Tang, Ting Wang, Ling Liu, Shicong Meng, Balaji Palanisamy, "Privacy-Preserving Indexing for e-Health information networks," in *Proceedings of 20th ACM Conference on Information and Knowledge Management, CIKM 2011*, Glasgow, October 2011.
86. Balaji Palanisamy, T.Siva Prasad, and N.Sreenath, "Distributed Traffic Adaptive Wavelength Routing in IP-Over- WDM Networks," in *Proceedings of the 14th International conference on Advanced Computing and Communications, ADCOM 2006*, Surathkal, December 2006. (**Received Best Paper Award**)

87. N.Sreenath and Balaji Palanisamy, "An Online Distributed Protocol for the Restoration of Connectivity in the Virtual topology after Link failure in IP over WDM networks", in *Proceedings of the International conference on Networking and Services, ICNS 2006*, Santa Clara, July 2006.
88. Balaji Palanisamy, "Peertalk: A Secure, Fully Decentralized Peer-to-peer Instant Messaging System", in *Proceedings of the International Conference on Information Security, ICIS 2005*, Pondicherry, December 2005.
89. N.Sreenath and Balaji Palanisamy, "A Two-Phase Distributed Reconfiguration Algorithm for Node Failures in IP-Over-WDM Networks", in *Proceedings of the International Conference on Systems and Networks Communication, ICSNC 2006*, French Polyneshia, November 2006.
90. N.Sreenath , Balaji Palanisamy, and S.R.Nadarajan, "Grooming of Multicast Sessions in Sparse Splitting WDM Mesh Networks using Virtual Source Based Trees", in *Proceedings of the International Conference on Systems and Networks Communication, ICSNC 2006*, French Polyneshia, November 2006.
91. N.Sreenath, N.Devendra, and Balaji Palanisamy, "Dynamic Routing of Reliability-differentiated services in Optical Burst-Switched Networks", in *Proceeding of "Modeling Complexity in a Distributed World"*, *The Indian Institute of Science Centenary Conference, MCDES 2008*, Bangalore, May 2008.

Invited Conference Publications

92. Jinlai Xu and Balaji Palanisamy, "Cost-aware & Fault-tolerant Geo-distributed Edge Computing for Low-latency Stream Processing", invited paper in Proc. of *The 7th IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 2021*
93. Balaji Palanisamy and Chao Li, "Self-emerging Data Infrastructures", invited paper in Proc. of *5th IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 2019*
94. Balaji Palanisamy, Sheldon Sensenig, James Joshi and Rose Constantino, "LEAF:A Privacy-conscious Social Network-based Intervention Tool for IPV Survivors", invited paper in *15th IEEE International Conference on Information Reuse and Integration, IRI 2014* , San Francisco, USA.
95. Balaji Palanisamy, Ling Liu, Kisung Lee, Aameek Singh and Yuzhe Tang, "Location Privacy with Road Network Mix-zones," invited paper in *Proceedings of the 8th IEEE International Conference on Mobile Ad-hoc and Sensor Network, MSN 2012*, Chengdu, China, December 2012.

Peer-reviewed Workshop Publications

96. Abdulrahman Alhaidari, Balaji Palanisamy, Prashant Krishnamurthy, "Digital Twin-based Dynamic Task Assignment for Smart Home Maintenance", in *2nd Workshop on Metaverse-based Networking, Computing and Security (MetaNCS 2024)*, collocated with the *IEEE International Conference on Communications, ICC 2024, Denver, CO, USA*
97. Leila Karimi, Balaji Palanisamy and James Joshi, "A Dynamic Privacy Aware Access Control Model for Location Based Services", in *1st International Workshop on Privacy in Collaborative & Social Computing, PICSoC 2016*, Pittsburgh, USA
98. Priyanka Prabhu, Shamkant B. Navathe, Stephen Tyler, Venu Dasigi, Neha Narkhede, Balaji Palanisamy, "LITSEEK: Public health literature search by metadata enhancement with External knowledge bases, " in *Proc. of the 3rd International Workshop on Data and Text Mining in Bioinformatics, DTMBIO 2009*, in conjunction with the *19th ACM Conference on Information and Knowledge Management, CIKM 2009*, Hong Kong, China, November, 2009 .

99. Hardik Vasa, Anirudh Vasudevan and Balaji Palanisamy, “Link Analysis of Wikipedia Documents using MapReduce”, in *4th IEEE International Workshop on Data Integration and Mining (DIM), collocated with 16th IEEE International Conference on Information Reuse and Integration, IRI 2015, San Francisco, USA* .

Invited Workshop Publications

100. Chao Li, Balaji Palanisamy and Runhua Xu, “Scalable and Privacy-preserving Design of On/Off-chain Smart Contracts”, in *1st International Workshop on Blockchain and Data Management, BlockDM 2019, in conjunction with 35th IEEE International Conference on Data Engineering, ICDE 2019*

Conference Tutorials, Posters and System Demonstrations

101. Abdulrahman Alhaidari, Balaji Palanisamy, Prashant Krishnamurthy, “FlashGuard: Real-time Disruption of Non-Price Flash Loan Attacks in DeFi”, to appear in poster session of *31st ACM Conference on Computer and Communications Security, ACM CCS 2024*
102. Balaji Palanisamy, Jinlai Xu, “Efficient and Resilient Edge Computing: Algorithms, Techniques and Research Opportunities”, Tutorial publication in *Proceedings of the 25th International Conference on Distributed Computing and Networking, ICDCN 2024, Chennai, India*
103. Jingzhe Wang, Haocheng Wang, Chao Li and Balaji Palanisamy, “Timed Data Release using Smart Contracts”, in demo track of *44th IEEE International Conference on Distributed Computing Systems, ICDCS 2024, Jersey City, New Jersey, USA (Received Best Demo award)*
104. Somay Chopra, Balaji Palanisamy, Shamik Sural, “Credit-based Peer-to-Peer Ride Sharing using Smart Contracts”, oral presentation of poster track, in Proc. of *IEEE International Conference on Blockchain and Cryptocurrency, IEEE ICBC 2022*
105. Jingzhe Wang, Balaji Palanisamy, “Protecting Blockchain-based Decentralized Timed release of Data from Malicious Adversaries”, oral presentation of poster track, in Proc. of *IEEE International Conference on Blockchain and Cryptocurrency, IEEE ICBC 2022*
106. Ritik Kumar, Balaji Palanisamy and Shamik Sural, “BEAAS: Blockchain Enabled Attribute-Based Access Control as a Service”, oral presentation of poster track, in Proc. of *IEEE International Conference on Blockchain and Cryptocurrency, IEEE ICBC 2021*
107. Balaji Palanisamy and Chao Li, “Timed data release using Blockchain smart contracts”, Conference Tutorial, in *the 16th International Conference on Information Systems Security, ICISS 2020*
108. Chao Li, Balaji Palanisamy, Aravind Kalaivanan and Sriram Raghunathan, “ReverseCloak: A Reversible Multi-level Location Privacy Protection System”, in Proc. of *37th IEEE International Conference on Distributed Computing Systems, ICDCS 2017, Atlanta, USA. (System Demonstration)*
109. Balaji Palanisamy, Chao Li and Prashant Krishnamurthy, “Group Differential Privacy-preserving Disclosure of Multi-level Association Graphs”, in Proc. of *37th IEEE International Conference on Distributed Computing Systems, ICDCS 2017, Atlanta, USA.(Poster)*
110. Lei Jin, Balaji Palanisamy and James Joshi, “Compromising Cloaking-based Location Privacy Preserving Mechanisms with Location Injection Attacks”, in *21st ACM Conference on Computer and Communications Security, CCS 2014* , Scottsdale, Arizona, USA (Poster).
111. Qiulei Guo, Balaji Palanisamy and Hassan Karimi, “A Distributed Polygon Retrieval Algorithm using MapReduce”, in *10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, Collaboratecom, 2014, Miami, USA (Poster)*.

112. Balaji Palanisamy, Sindhuja Ravichandran, Ling Liu, Binh Han and Kisung Lee, “Road Network Mix-zones for Anonymous Location Based Services,” *Demo at the 27th IEEE International Conference on Data Engineering, ICDE 2013*, Brisbane, Australia, 2013.
113. Kisung Lee, Ling Liu, Binh Han, Balaji Palanisamy, “RoadAlarm: a Spatial Alarm System on Road Networks,” *Demo at the 27th IEEE International Conference on Data Engineering, ICDE 2013*, Brisbane, Australia, 2013
114. Mustaque Ahamad, Douglas Blough, Ling Liu, David Bauer, Apurva Mohan, Daisuke Mashima, Bhuvan Bamba, Balaji Palanisamy, Ramkumar Krishnan, Italo Dacosta, and Ketan Kalgaonkar, “MedVault: Health Professional Access to Source-Verifiable Patient-Centric PHR Repository,” *at poster session in 19th Usenix Security Symposium, USENIX Security 2010*, Washington, DC, August, 2010.

Book Chapters

115. Balaji Palanisamy, James Joshi, “Protecting Privacy in Indoor Positioning Systems”, in *Indoor Wayfinding and Navigation, 2015*.

Technical Reports

116. Apurva Mohan , David Bauer, Douglas M. Blough, Mustaque Ahamad, Bhuvan Bamba, Ramkumar Krishnan, Ling Liu, Daisuke Mashima, Balaji Palanisamy, “A Patient-centric, Attribute-based, Source-verifiable Framework for Health Record Sharing,” *GIT CERCS Technical Report No. GIT-CERCS-09-11, 2009*, Georgia Institute of Technology, Atlanta, GA, USA

Patents

- Balaji Palanisamy and Aameek Singh, “Locality-aware Resource Allocation for Cloud Computing”, *United States Patent Application No. 13/481,614*
- Marielle Gross and Balaji Palanisamy, “Non-fungible Token System for Ensuring Ethical, Efficient and Effective Management of Biospecimens”, Application No.: PCT/US2022/043481

Grants/ Funding

• NSF-CNS Award

2022-2026

- Collaborative Research: CNS Core: Medium: The Privacy Backplane - A Full Stack Approach to Individualized Privacy Controls Throughout the Internet-of-Things, PI: Adam Lee, Co-PI: Balaji Palanisamy, Former PI: John Lange, Award amount: \$389,827

• Pitt Cyber Accelerator Grant

2025-2026

- Mitigating Activity Inference Attacks in Virtual Reality and Augmented, PI: Balaji Palanisamy Co-PIs: Na Du, Adam Lee, Award amount: \$4,500

• NSF-SaTC Award

2020-2025

- SaTC: CORE: Small: Blockchain-based Mechanisms for Timed Data Release and Timed Transactions, NSF Secure and Trustworthy Computing program Award, Balaji Palanisamy (PI), Award amount: \$442,515

- **GenCyber Grant** *2023-2025*
 - GenCyber@Pitt Teachers Preparedness Program, PI: Ahmed Ibrahim, Co-PI: Balaji Palanisamy, Senior Personnel: Prashant Krishnamurthy, Sherif Khattab, Keith Trahan, award amount: 148,864.50
- **GenCyber Grant** *2022-2024*
 - GenCyber@Pitt, PI: Ahmed Ibrahim, Co-PI: Balaji Palanisamy, Senior Personnel: Prashant Krishnamurthy, Sherif Khattab, Keith Trahan, award amount: 148,377.33
- **Pitt Cyber Accelerator Grant** *01/2023-12/2023*
 - A Sampling and Modeling Framework to Counter Online Conspiratorial Propaganda, PI: Yu-Ru Lin, Co-PIs: Balaji Palanisamy, Michael Colaresi and Amin Rahimian, Award amount: \$17,495
- **Emerson Collective grant** *01/2022-12/2024*
 - NFTs for Ethical, Efficient, Effective Use of Biosamples. John Hopkins University - PI: Jeff Khan, Co-I: Mario Macis et al, University of Pittsburgh - PI: Marielle Gross, Co-I: Balaji Palanisamy, Adrian Lee, Adam Lee, Dmitriy Babichenko et al, Total amount: 600,531, sub-award to Pitt: 273,530
- **Chancellor’s Gap Award** *01/2022- 12/2022*
 - An NFT-backed Biobanking App and Platform, Pitt Chancellor’s Gap funding Off cycle Award (2022), PIs: Balaji Palanisamy, Marielle Gross, award amount: \$36,495
- **NSF-CDL Award** *2017-2022*
 - Security-assured Data Science Workforce Development in Pennsylvania, NSF OAC Award (2017-2022), Balaji Palanisamy (PI), Kostas Pelechrinis (Co-PI), James Joshi (Co-PI) and Brian Langston (Co-PI), Senior Personnel: Prashant Krishnamurthy, Michael Spring, David Tipper, Robert Perkoski and David Thaw, Award Amount: \$476,903.00
- **Pitt Cyber Accelerator Grant** *05/2020-12/2020*
 - A Beacon Approach to Providing Covid 19 Contact Tracing Privacy, PI: David Tipper, Co-PIs: Kostas Pelechrinis, Mai Abdel-Hakim, Prashant Krishnamurthy, Alex Labrinidis, Balaji Palanisamy, and Jacob Biehl, Award Amount: \$10,025
- **Pitt Cyber Grant** *2018-12/2023*
 - Distinguished Cybersecurity Seminar Series, Balaji Palanisamy (Co-PI) with James Joshi (PI), Award Amount: \$10,000
- **IBM Faculty Award** *2017-2019*
 - Decoupled Service Architecture for Seamless Edge Resource Allocation and Service Management, IBM (2017), Balaji Palanisamy (PI), Award Amount: \$20,000.00
- **NSF-CICI Award** *2016- 2018*

- SAC-PA: Towards Security Assured Cyberinfrastructure in Pennsylvania, NSF CICI Award (2016 - 2018), Balaji Palanisamy (Co-PI) with J. Joshi (PI), B. Stengel (Co-PI), M. Spring (CoPI), P. Krishnamurthy (Co-PI), Award Amount: \$499,951.00

- **NSF-DGE Award**

2014- 2018

- A Curriculum for Security Assured Health Informatics, NSF-DGE Award (2014 - 2018), Balaji Palanisamy (Co-PI) with J. Joshi (PI), K. Pelechrinis (Co-PI), B. Parmanto (CoPI), P. Krishnamurthy (Co-PI), Award Amount: \$897,055.00

- **Central Research Development Fund from University of Pittsburgh**

2015- 2019

- Sustainability-aware Datacenter Management for Sustainable Cloud Computing (2015 - 2017), Balaji Palanisamy (PI) , Award Amount: \$15,975.00

- **Center on Race and Social Problems, University of Pittsburgh**

2016- 2018

- A+ FamCare: African American Family- and Child-Affirming Resilience Education, Balaji Palanisamy (Co-PI) with Lovie Foster (PI), Award Amount: \$10,000.00

Courses

- INFSCI 2750 - Cloud Computing (Spring 2016, Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024, Spring 2025, Spring 2026)
- INFSCI 3005 - Introduction to the Doctoral Program (Fall 2023, Fall 2024, Fall 2025, Fall 2026)
- INFSCI 3350 - Doctoral Seminar - Blockchains (Spring 2022)
- INFSCI 2150 - Information Security & Privacy (Spring 2014, Fall 2014, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Fall 2019, Fall 2022, Summer 2024)
- INFSCI 1690 - Cloud Computing (Fall 2021)
- INFSCI 1620 - Advanced Information Security & Privacy (Spring 2021, Fall 2022)
- INFSCI 3350 - Doctoral Seminar - Information Privacy (Spring 2016)
- INFSCI 2955 - Special Topics: Systems - Cloud Computing (Spring 2015)
- INFSCI 1074 - Computer Security (Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2019)

Students Advising and Committees

PhD Students (current):

- Ying Song (since Fall 2022) - Dissertation title: “Security Vulnerabilities and Privacy Risks of Graph Neural Networks”, Research focus: Privacy and fairness in Machine Learning, Dissertation Defense - Fall 2026 (expected)
- Abdulrahman Mohsen Alhaidari (since Summer 2022) - Dissertation title: “Defense Mechanisms for Economic Attacks in Blockchain-based Decentralized Finance (DeFi)”, Research focus: Blockchains, Decentralized Finance, Economic Security, Dissertation Defense - Fall 2026 (expected)
- Yijun Yuan (since Fall 2023) - Research focus: Security and Privacy in Virtual and Augmented Reality Environments, Comprehensive Exam - Summer 2026 (planned)

PhD Students (past):

- Chao Li (Fall 2014 - Spring 2019) - Dissertation title: “Protecting Data Privacy with Decentralized Self-emerging Data Release Systems”, Research focus: Blockchains, Timed Data Release, Data Privacy. Current employment: Associate Professor, School of Computing and Information Technology, Beijing Jiaotong University
- Jinlai Xu (Fall 2015 - Fall 2021) - Dissertation title: “Geo-distributed Edge and Cloud Resource Management for Low-latency Stream Processing”, Research focus: Edge Computing, Internet-of-things, Federated Clouds, Current employment: Researcher/Engineer, Infrastructure System Lab, ByteDance
- Jingzhe Wang (Fall 2020 - Spring 2026) - Dissertation title: “Security and Privacy of Blockchain-based Timed Data Release”, Research focus: Blockchains, Data Security, Timed Data Release

Doctoral Dissertation Committees:

- PhD - Information Science
 - Maryam Aldairi, University of Pittsburgh
 - Leila Karimi, University of Pittsburgh
 - Runhua Xu, University of Pittsburgh
 - Nathalie Baracaldo, University of Pittsburgh
 - Qiulei Guo, University of Pittsburgh
- PhD - Information Science, Telecom
 - Akshay Madan, University of Pittsburgh
 - Abdulaziz Alqahtani, University of Pittsburgh
 - Sira Akavipat, University of Pittsburgh
 - Luai Esmail Hasnawi, University of Pittsburgh
 - Qun Yu, University of Pittsburgh
 - Xiao Ma, University of Pittsburgh
- PhD - Computer Science
 - In Jung Kim, University of Pittsburgh
 - Maher Hassan Khan, University of Pittsburgh
 - Wenqi Wei, Georgia Institute of Technology
 - Mohammad Hasanzadeh Mofrad, University of Pittsburgh
 - Zaeem Hussain, University of Pittsburgh

Comprehensive Examination Committees:

- PhD - Information Science
 - Jingzhe Wang - PhD- Information Science, University of Pittsburgh
 - Leila Karimi - PhD- Information Science, University of Pittsburgh
 - Runhua Xu- PhD- Information Science, University of Pittsburgh
 - Jinlai Xu - PhD- Information Science, University of Pittsburgh
 - Qiulei Guo - PhD- Information Science, University of Pittsburgh

- PhD - Information Science, Telecom
 - Usman Anjum - PhD- Information Science, Telecom, University of Pittsburgh
 - Chao Li - PhD- Information Science, Telecom, University of Pittsburgh
 - Ayman AbdelHamid - PhD - Information Science, Telecom, University of Pittsburgh
 - Amer Malki - PhD - Information Science, Telecom, University of Pittsburgh
 - Qun Yu - PhD - Information Science, Telecom, University of Pittsburgh
 - Ke Zhang - PhD - Information Science, Telecom, University of Pittsburgh
 - FNU Xerandy - PhD - Information Science, Telecom, University of Pittsburgh

Master's Thesis Committees

- Angela Horneman - MS, University of Pittsburgh
- Shauna Michelle Policicchio - MS, University of Pittsburgh

Work Experience

- **IBM Almaden, Research** San Jose, CA
Research Intern, Services Innovation Lab *May 2012 - Aug 2012*
 - FileSystem based Caching techniques for seamless integration of Storage across Compute and Storage Clouds
- **IBM Almaden, Research** San Jose, CA
Research Intern, Storage Systems *May 2011 - Aug 2011*
 - Utility-based cloud usage model for MapReduce clouds with associated VM-aware scheduling and resource provisioning techniques and virtual machine management
- **IBM Almaden, Research** San Jose, CA
Research Intern, Storage Systems *May 2010 - Aug 2010*
 - Locality-optimizations for MapReduce in a Cloud
- **Google, Inc.** Mountain View, CA
Software Engineering Intern *May 2008 - Aug 2008*
 - Network monitoring systems for the Google Video Conferencing network infrastructure
- **Google, Inc.** Mountain View, CA
Software Engineering Intern *May 2009 - Aug 2009*
 - Troubleshooting and remote monitoring tool for controlling the Google Video Conferencing network infrastructure and the associated Audio/ Video devices
- **Indian Institute of Science, IISc** Bangalore, India
Project Assistant *Jan 2007 - May 2007*
 - Routing and resource allocation techniques for wireless sensor networks - with Prof. Joy Kuri and Prof. Anurag Kumar

Professional Services

- Journal Editorial Boards
 - Associate Editor, ACM Transactions on Privacy and Security, ACM TOPS (2024 - present)
 - Associate Editor, IEEE Transactions on Big Data, IEEE TBD (2025 - present)
 - Associate Editor, IEEE Transactions on Dependable and Secure Computing, IEEE TDSC (2021- 2025)

- Associate Editor, IEEE Transactions on Services Computing, IEEE TSC (2016 - 2024)
 - Associate Editor, International Journal of Cooperative Information Systems, IJCIS (2017 - 2024)
 - Guest Editor, Special Issue on Security, Privacy, and Trust in Blockchain and Web 3.0, IET Blockchain (2023)
 - Editorial Review Board member, Services Transactions on Internet of Things, STIOT
- Journal Reviews
 - IEEE Transactions on Dependable and Secure Computing, IEEE TDSC
 - IEEE Transactions on Services Computing, IEEE TSC
 - IEEE Transactions on Parallel and Distributed Systems, IEEE TPDS
 - IEEE Transactions on Mobile Computing, IEEE TMC
 - IEEE Transactions on Reliability
 - IEEE Transactions on Learning Technologies, IEEE TLT
 - IEEE Transactions on Vehicular Technology, IEEE TVT
 - ACM Transactions on Database Systems, ACM TODS
 - ACM Transactions on the Web, ACM TWEB
 - ACM Transactions on Internet Technology, ACM TOIT
 - International Journal of Very Large Databases, VLDBJ
 - Journal of Parallel and Distributed Computing, JPDC
 - Wireless Networks Journal
 - Transactions on Collaborative Computing
 - Journal of Grid Computing
- Conference/Workshop Program Committee Chairing & Organization
 - Program Committee Chair - 40th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy, DBSec 2026
 - Program Committee Chair - Fifth IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications, IEEE TPS 2023
 - Program Committee Vice Chair - 2021 IEEE International Conference on Big Data, IEEE BigData 2021
 - Senior Program Committee member - ACM International Conference on Information and Knowledge Management, CIKM 2022, CIKM 2023, CIKM 2024
 - Conference Co-ordination Chair - IEEE CIC/CogMI/TPS 2021-2022
 - Vice Program Committee Chair - 2020 International Conference on Blockchain, ICBC 2020
 - Program Committee Chair - 4th International Conference on Internet of Things, ICIOT 2019
 - Program Committee Chair - 18th and 19th IEEE International Conference on Information Reuse and Integration, IRI 2017 and IRI 2018
 - Demo Track Chair - 37th IEEE International Conference on Distributed Computing Systems, ICDCS 2017
 - Best Paper Award Committee - 17th IEEE International Conference on Information Reuse and Integration, IRI 2016
- Conference Program Committees

- 31st - 33rd ACM Conference on Computer and Communications Security, CCS 2024, CCS 2025, CCS 2026
- 35th USENIX Security Symposium, USENIX Security 2026
- The Science of Blockchain Conference 2025, 2026, SBC'25, SBC'26
- World Wide Web Conference, WWW 2019, WWW 2020, WWW 2021, WWW 2022, WWW 2023, WWW 2024
- 35th-45th IEEE International Conference on Distributed Computing Systems, ICDCS 2015, ICDCS 2016, ICDCS 2017, ICDCS 2018, ICDCS 2019, ICDCS 2021, ICDCS 2022, ICDCS 2023, ICDCS 2024, ICDCS 2025
- 5th, 6th, 15th & 16th ACM Conference on Data and Application Security and Privacy, CODASPY 2015, CODASPY 2016, CODASPY 2025, CODASPY 2026
- 24th-33rd ACM International Conference on Information and Knowledge Management, CIKM 2015, CIKM 2016, CIKM 2017, CIKM 2018, CIKM 2021, CIKM 2022, CIKM 2023, CIKM 2024
- 2019 IEEE International Conference on Edge Computing, IEEE EDGE 2019
- 19th International Conference on Information Systems Security, ICISS 2020, ICISS 2023, ICISS 2024
- 2nd & 3rd International Workshop on Blockchain and Data Management, BlockDM 2020, BlockDM 2021, in conjunction with ICDE 2020 and ICDE 2021
- 16th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, CCGrid 2016
- 7th - 10th- International Conference on Cloud Computing, IEEE CLOUD 2014, IEEE CLOUD 2015, IEEE CLOUD 2016, IEEE CLOUD 2017
- 15th International Conference on High Performance Computing, HiPC 2015
- 7th IEEE International Conference on Cloud Computing Technology and Science, CloudCom 2015
- 20th International Conference for Database Systems for Advanced Applications, DASFAA 2015
- 21th and 22nd International Conference on Web Services, ICWS 2014, ICWS 2015
- 15th, 16th and 17th IEEE International Conference on Information Reuse and Integration, IRI 2014, IRI 2015, IRI 2016
- IEEE Activities
 - IEEE Distinguished Lecturer (VTS) - 2025 Class
 - * Information and Network Security Technical Area
 - Chair, IEEE ComSoc/VTS Joint Chapter, Pittsburgh Section, 2014 - present
 - * Organized a number of joint IEEE meetings and talks on emerging topics in information security and networking
 - * Represented the chapter in the Regional Chapter Chairs Congress
 - IEEE Senior Member
- Department, School and University Service
 - Director of Graduate Studies, Department of Informatics & Networked Systems, 2019 - 2025
 - Associate Chair, Department of Informatics & Networked Systems, 2022 - 2024
 - Vice Chair, School of Computing and Information Faculty Council, 2021 - 2023
 - Chair, PhD Admissions and Financial Aid Committee, Department of Informatics & Networked Systems, 2022-present
 - Member, Diversity, Equity and Inclusion Committee, School of Computing and Information, 2021 - 2023

- Member, Faculty Search Committee, School of Computing and Information, 2018 - 2019
- Member, Graduate Fellowship Review Committee, University of Pittsburgh, 2021 - present
- Head Faculty Liaison for Department of Informatics & Networked Systems, Pitt College in High School, 2021 - present
- Faculty Liaison, Pitt College in High School, 2016- present
- Member, Curriculum Committee, Master of Science in Information Science Program, 2013 - 2017
- Organizer, Cybersecurity Seminar series hosted by LERSAIS, Pitt Cyber and SCI, 2013 - present
- Member, Master of Science in Information Science Application Review Committee, 2014-2018

Invited Talks

- “Takeover Attacks in Delegated Proof-of-Stake Blockchains”, invited speaker, 18th International Conference on Communication Systems & Networks, COMSNETS 2026
- “Decentralization in Delegated Proof-of-Stake (DPoS) Blockchains: Myths Vs Reality”, Microsoft Research India, 2026
- “Latency-aware and Resilient Stream Data Processing in Edge Computing”, IEEE **Distinguished Lecture**, Indian Institute of Technology, Delhi, 2025
- “Decentralized Release of Timed Information using Blockchain”, invited **Keynote**, 7th International Conference on Computational Intelligence, Cyber Security, and Computational Models, ICC3 2025
- “Latency-aware and Resilient Stream Data Processing in Edge Computing”, IEEE **Distinguished Lecture**, IEEE Madras Section, 2025
- “Protecting Virtual Reality (VR) Applications from Keystroke Inference Attacks”, Cisco Research, San Jose, CA, 2025
- “Timed Release of Protected Information using Blockchains”, IBM ThinkLab **Distinguished Speaker Series**, IBM Research, Almaden, 2025
- “Timed Execution of Private Transactions with Private Data Inputs using Blockchains”, invited Seminar talk, Rutgers University, 2025
- “Latency-aware and Resilient Stream Data Processing in Edge Computing”, IEEE **Distinguished Lecture**, New Jersey Coast Section, 2025
- “Decentralized Protection and Delivery of Private Information using Smart Contracts”, invited tutorial, 26th IEEE International Conference on Information Reuse and Integration for Data Science, IRI 2025
- “Secure and attack-resilient Release of Timed Information using Blockchains”, invited **Keynote**, 10th ACM International Workshop on Security and Privacy Analytics, IWSPA 2025, collocated with CODASPY 2025
- “Secure and attack-resilient Release of Timed Information using Blockchains”, IEEE ComSoc Communications & Information Security Technical Committee Webinar, 2024
- “Decentralization in Delegated-Proof-of-Stake (DPoS) Blockchains: Myths Vs Reality”, Department of Computer Science Colloquium, Colorado State University, 2024
- “Efficient and Resilient Edge Computing: Algorithms, Techniques and Research Opportunities”, tutorial, 25th International Conference on Distributed Computing and Networking, ICDCN 2024

- “Security and Privacy in beyond 5G Cellular Systems”, invited panelist, Cyber Security and Privacy Workshop co-located with the 16th International Conference on Communication Systems & Networks, COMSNETS 2024
- “Introduction to Blockchains”, PC4A Faculty Development Program, Indiana University of Pennsylvania, 2023
- “Blockchains and Timed Data Release using Blockchains”, 2021 Cyber Security Day, Indiana University of Pennsylvania, 2021
- “Timed data release using Blockchain smart contracts”, invited tutorial, 16th International Conference on Information Systems Security, ICISS 2020
- “Self-emerging Data Infrastructures”, invited vision talk, the 5th IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 2019
- “Privacy-preserving Data Management using Self-emerging Data Systems”, Indian Institute of Science, IISc Bangalore, 2018
- “Privacy-preserving Data Management using Self-emerging Data Systems”, Amrita University, Coimbatore, 2018
- “Cost-aware Resource Management for Geo-distributed Cloud and Edge Computing”, SSN College of Engineering, Chennai, 2018
- “Supporting Time-varying Privacy with Self-emerging Data”, invited talk at the HotPrivacy Workshop collocated with IEEE International Symposium on Privacy aware Computing, IEEE PAC 2017
- “Supporting Time-varying Privacy with Self-emerging Data”, invited talk at the International workshop on Privacy and Security in Big Data Ecosystem, PSBD 2017, collocated with ICDCS 2017
- “Protecting Multi-level Data and Location Privacy through Reversible Data Perturbation”, Department of Computer Science Colloquium, University of Pittsburgh, 2015
- “Cost-effective and Locality-optimized MapReduce Clouds: Architecture and Techniques”, Computer Science Colloquium, Marquette University, Milwaukee, Wisconsin, 2014
- “Information Security & Privacy Issues in Healthcare”, University of Pittsburgh Health Career Scholars Academy, 2015
- “Location Privacy with Attack-resilient Mix-zones over Road Networks: Architecture and Algorithms”, Privacy Seminar, Carnegie Mellon University, Pittsburgh, Pennsylvania, 2014
- “Privacy-aware Cloud computing”, Bside Pittsburgh Security event, 2014.
- “Cost-effective and Locality-optimized MapReduce Clouds: Architecture and Techniques”, Telecommunications Seminar, University of Pittsburgh, 2014
- “Cost-optimized Resource Provisioning for MapReduce in a Cloud”, Robert Bosch Research and Technology Center, Pittsburgh, Pennsylvania, 2014
- “Cost-effective Resource Management for MapReduce Clouds: Challenges, Architectures and Techniques”, National Institute of Technology, Calicut, India, 2013.
- “Locality-aware and Cost-effective Processing of Big Data in a Cloud”, University of Buffalo, Buffalo, Newyork, 2013.

- “MobiMix: Protecting Location Privacy with Road Network Mix-zones”, School of Information Science, University of Pittsburgh, 2013.
- “Locality-aware and Cost-effective Processing of Big Data in a Cloud”, Wright State University, Dayton, Ohio, 2013.
- “Locality-aware and Cost-effective Processing of Big Data in a Cloud”, Auburn University, Auburn, Alabama, 2013.
- “Purlieus: Locality-aware Resource Allocation for MapReduce in a Cloud”, IBM F2C2 Workshop, IBM T. J. Watson, 2012.
- “Locality-aware Resource Allocation for MapReduce in a Cloud”, Center for Experimental Research in Computer Systems Seminar, Georgia Institute of Technology, 2011