

## Appointments

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

## Research Interests

- Data Privacy, Blockchains, Privacy-aware Computing, Cloud Computing, Big Data & IoT Infrastructures

## Education

- **Georgia Institute of Technology** Atlanta, GA  
*Ph.D. in Computer Science* Aug. 2008 - Aug. 2013  
– Thesis title: *Cost-effective and Privacy-conscious Cloud Resource Provisioning: Architectures and Algorithms*  
– Advisor: Prof. Ling Liu
- **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 1<sup>st</sup> in a class of 64

## Honors/Awards

- 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

### Book Chapters

1. Balaji Palanisamy, James Joshi, "Protecting Privacy in Indoor Positioning Systems", in *Indoor Wayfinding and Navigation, 2015*.

### Peer-reviewed Journal Publications

2. 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*.
3. Chao Li, Balaji Palanisamy, "Reversible Location Perturbation Mechanisms for Protecting Multi-level Location Privacy", in *Elsevier Computer Communications 2019*
4. 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*.
5. Chao Li and Balaji Palanisamy, "Privacy in Internet of Things: from Principles to Technologies", in *IEEE Internet of Things Journal, IEEE IoT-J 2018*.
6. Lei Jin, Chao Li, Balaji Palanisamy and James Joshi, "k-Trustee: Location Injection Attack-resilient Anonymization for Location Privacy", in *Elsevier Computers & Security 2018*.
7. 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 2018* .
8. 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*.
9. 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*.
10. Kisung Lee, Ling Liu, Balaji Palanisamy and Emre Yigitoglu, "Road Network-Aware Spatial Alarms", in *IEEE Transactions on Mobile Computing, IEEE TMC 2016*.
11. 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*.
12. Balaji Palanisamy and Ling Liu, "Attack-resilient Mix-zones over Road Networks: Architecture and Algorithms", in *IEEE Transactions on Mobile Computing, IEEE TMC 2015*.
13. 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*.
14. 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*.
15. Balaji Palanisamy and Ling Liu, "Effective Mix-zone Anonymization for Mobile Travelers", in *Geoinformatica 2014*.

### Peer-reviewed Conference Publications

16. 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*
17. 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*
18. 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*
19. 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)*
20. 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*.
21. 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*.
22. Balaji Palanisamy, Chao Li and Prashant Krishnamurthy, “Group Differential Privacy Preserving Publishing of Multi-level Graph Datasets”, in *2017 IEEE International Conference on Big Data, IEEE Big Data, Boston, USA*.
23. 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*
24. 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*.
25. 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*.
26. 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*.
27. 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)*
28. 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*.
29. 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*.
30. 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*.

31. 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.
32. 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.
33. 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**)
34. Qiulei Quo, Balaji Palanisamy and Hassan Karimi, "A Distributed Polygon Retrieval Algorithm using MapReduce", in *International Symposium on Spatio-temporal Computing, Fairfax, Virginia, USA, ISSC 2015* .
35. 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, New York, USA, IEEE CLOUD 2015*.
36. Qiulei Quo, Balaji Palanisamy and Hassan Karimi, "A MapReduce Algorithm for Polygon Retrieval in Geospatial Analysis", in *8th IEEE International Conference on Cloud Computing, New York, USA, IEEE CLOUD 2015* .
37. 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)*, New York, USA.
38. 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.
39. 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.
40. 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.
41. Shicong Meng, Arun Iyengar, Isabelle Rouvellou, Ling Liu, Kisung Lee, Balaji Palanisamy and Yuzhe Tang, "Reliable State Monitoring with Messaging Quality Awareness," in *Proceedings of IEEE International Conference on Cloud Computing, IEEE Cloud 2012*, Honolulu, Hawaii, June 2012 (**Received Best Paper Award**).
42. Kisung Lee, Ling Liu, Shicong Meng, Balaji Palanisamy, "Road Network Aware Spatial Alarm Processing," in *Proceedings of IEEE International Conference on Web Services, ICWS 2012*, Honolulu, Hawaii, June 2012.
43. Balaji Palanisamy and Ling Liu, "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.
44. 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.

45. 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.
46. Balaji Palanisamy, T.Siva Prasad, and N.Sreenath, "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**)
47. 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.
48. 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.
49. N.Sreenath and Balaji Palanisamy, "A Two-Phase Distributed Reconfiguration Algorithm for Node Failures in IP-Over-WDM Networks", in *the Proceedings of the International Conference on Systems and Networks Communication, ICSNC 2006*, French Polynesia, November 2006.
50. N.Sreenath, Balaji Palanisamy, and S.R.Nadarajan, "Grooming of Multicast Sessions in Sparse Splitting WDM Mesh Networks using Virtual Source Based Trees", in *the Proceedings of the International Conference on Systems and Networks Communication, ICSNC 2006*, French Polynesia, November 2006.
51. 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**

52. Balaji Palanisamy, Sheldon Sensenig, James Joshi and Rose Constantino, "LEAF:A Privacy-conscious Social Network-based Intervention Tool for IPV Survivors", in *15th IEEE International Conference on Information Reuse and Integration, IRI 2014*, San Francisco, USA.
53. Balaji Palanisamy, Ling Liu, Kisung Lee, Aameek Singh and Yuzhe Tang, "Location Privacy with Road Network Mix-zones," 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**

54. 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
55. 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 *workshop of 19th ACM Conference on Information and Knowledge Management, CIKM 2009*, Hong Kong, China, November, 2009 .
56. 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, San Francisco, USA (IRI 2015)*.

#### **Invited Workshop Publications**

57. 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*

### Peer-reviewed Conference Posters and System Demonstrations

58. 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)*
59. 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)*
60. 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).
61. 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).
62. 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.
63. 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
64. 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

### Technical Reports

65. 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*

### Grants/ Funding

- NSF-CDL Award

2017-2020

- Security-assured Data Science Workforce Development in Pennsylvania, NSF OAC Award (2017-2020), 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

- **IBM Faculty Award**

2017

- 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- 2017

- 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 3350 - Doctoral Seminar - Information Privacy (Spring 2016)
- INFSCI 2740 - Cloud Computing (Spring 2016, Spring 2017, Spring 2018, Spring 2019)
- INFSCI 2955 - Special Topics: Systems - Cloud Computing (Spring 2015)
- INFSCI 1074 - Computer Security (Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2019)
- INFSCI 2150 - Information Security & Privacy (Spring 2014, Fall 2014, Spring 2017, Fall 2017, Spring 2018, Fall 2018)

## Students Advising and Committees

### *PhD Students (current):*

- Jinlai Xu (since Fall 2015) - Research focus: Edge Computing, Federated Clouds

### *PhD Students (past):*

- Chao Li (Fall 2014 - Spring 2019) - Research focus: Blockchains, Timed Data Release, Multi-level Data and Location Privacy. First employment: Assistant Professor, School of Computing and Information Technology, Beijing Jiaotong University

### *Doctoral Dissertation Committees:*

- Abdulaziz Alqahtani - PhD, University of Pittsburgh
- Mohammad Hasanzadeh Mofrad - PhD, University of Pittsburgh
- Zaeem Hussain - PhD, University of Pittsburgh
- Nathalie Baracaldo - PhD, University of Pittsburgh
- Qiulei Guo - PhD, University of Pittsburgh
- Sira Akavipat - PhD, University of Pittsburgh
- Luai Esmail Hasnawi - PhD, University of Pittsburgh
- Qun Yu - PhD, University of Pittsburgh
- Xiao Ma - PhD, University of Pittsburgh

### *Comprehensive Examination Committees:*

- Leila Karimi - PhD, University of Pittsburgh
- Runhua Xu- PhD, University of Pittsburgh
- Usman Anjum - PhD, University of Pittsburgh
- Jinlai Xu - PhD, University of Pittsburgh
- Qiulei Guo - PhD, University of Pittsburgh
- Chao Li - PhD, University of Pittsburgh
- Ayman AbdelHamid - PhD, University of Pittsburgh
- Amer Malki - PhD, University of Pittsburgh
- Qun Yu - PhD, University of Pittsburgh
- Ke Zhang - PhD, University of Pittsburgh
- FNU Xerandy - PhD, 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, IEEE Transactions on Services Computing, IEEE TSC
- Associate Editor, International Journal of Cooperative Information Systems, IJCIS
- 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 - 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
- Area Track Chair - Cloud as a Service - 9th IEEE International Conference on Cloud Computing, IEEE CLOUD 2016
- Area Track Chair - Security & Privacy track - 4th International Congress on Big Data, IEEE BigData Congress 2016
- Short paper Track chair - 4th International Conference on Mobile Services, IEEE MS 2016
- Workshop Chair - 1st and 2nd IEEE International Conference on Collaboration and Internet Technologies, IEEE CIC 2015 and IEEE CIC 2016
- Best Paper Award Committee - 17th IEEE International Conference on Information Reuse and Integration, IRI 2016
- Publicity Chair - 16th and 17th IEEE International Conference on Information Reuse and Integration, IRI 2015 and IRI 2016
- Publications Chair - 10th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing, Collaboratecom 2014
- Program Committee Chair - 2nd and 3rd International Workshop on Internet-scale Cloud and Big Data, ISCBD held in conjunction with CIC 2017 and CIC 2018
- Program Committee Chair - 3rd International Workshop on Collaborative Cloud (CollabCloud 2014), held in conjunction with Collaboratecom 2014

- **Conference Program Committees:**

- 35th-39th IEEE International Conference on Distributed Computing Systems, ICDCS 2015, ICDCS 2016, ICDCS 2017, ICDCS 2018, ICDCS 2019
- 24th-26th ACM International Conference on Information and Knowledge Management, CIKM 2015, CIKM 2016, CIKM 2017, CIKM 2018
- 2019 IEEE International Conference on Edge Computing, IEEE EDGE 2019
- 5th and 6th ACM Conference on Data and Application Security and Privacy, CODASPY 2015, CODASPY 2016
- 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
- 1st IEEE International Conference on Collaboration and Internet Computing, IEEE CIC 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 Communications Society**

- Chair, IEEE Communications Society, Pittsburgh Chapter, April 2014 - present

## Invited Talks

- “Supporting Time-varying Privacy with Self-emerging Data”, HotPrivacy Workshop collocated with IEEE International Symposium on Privacy aware Computing, IEEE PAC 2017
- “Supporting Time-varying Privacy with Self-emerging Data”, 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”, Computer Science Department Colloquium, University of Pittsburgh, 2015
- “Cost-effective and Locality-optimized MapReduce Clouds: Architecture and Techniques”, Computer Science Colloquium, Marquette University, Milwaukee, Wisconsin, 2014
- “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, July 2013.
- “Locality-aware and Cost-effective Processing of Big Data in a Cloud”, University of Buffalo, Buffalo, Newyork, March 2013.
- “MobiMix: Protecting Location Privacy with Road Network Mix-zones”, School of Information Science, University of Pittsburgh, February 2013.
- “Locality-aware and Cost-effective Processing of Big Data in a Cloud”, Wright State University, Dayton, Ohio, March 2013.
- “Locality-aware and Cost-effective Processing of Big Data in a Cloud”, Auburn University, Auburn, Alabama, March 2013.