

VITA

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Research Interests

Machine Intelligence, application of ML and AI to help society. Adversarial ML and Trustworthy, fair and Explainable AI. Applications of machine intelligence to medicine, security, networking and DoD applications. Formalizing novelties and building intelligent systems that react and continue nonstop operations.

EDUCATION

1966 B.S. Mathematics (Honors), Punjab University
1969 B.E. Electrical Communication Engineering (With Distinction), Indian Institute of Science, Bangalore
1974 MS and Ph.D., Electrical and Computer Engineering, Purdue University
1971-73 Thirty credit hours toward M.S. in Industrial Administration, Purdue University

PROFESSIONAL EMPLOYEMENT

1973-76 Research Associate (Regenstrief Institute), Department of Medicine, Indiana University
1976-78 Assistant Professor, Cleveland State University
1978-summer Visiting Faculty, Stanford University
1978-84 Assistant Professor, University of Pittsburgh
1984-88 Associate Professor, Purdue University
1988- Professor, Purdue University,
1991-2019 Summer Visiting Professor (Various years), ETH-Zurich and EPFL-Lausanne

PUBLICATIONS (over 400 including ten books, journal and conference papers)

1. Edited Proceedings

1. S. Jain, B. Bhargava, S. Groppe, D. Kalra (editors), International Health Informatic Conference (IHIC), ISBN 978-981-97-7189-9, <https://doi.org/10.1007/978-981-97-7190-5>, Springer, 2025, 491 pages.
2. S Jain, S. Groppe, B. Bhargava (editors), Semantic Intelligence, Springer Verlag. Lecture Notes in Electrical Engineering, ISBN number: 978-981-19-7125-9, Semantic Intelligence: Select Proceedings of ISIC 2022 | SpringerLink, 2023.
3. S. Jain, B. Bhargava, D. Kalra, S. Groppe "International Health Informatics Conference IHIC 2023", MERI Delhi, India, Oct 17-19, 2023, LNEE Series, Springer, 2024

4. B. Bhargava, P. Angin, SRMC 2022: International Workshop on Reliable and Secure Microservices and Containers, September 2022
5. P. Singh, M. Paprzycki, B. Bhargava, J. Chhabra, N. Kaushal, and Yugal Kumar (Eds.), "Communications in Computer and Information Science", ISSN 1865-0929 ISSN 1865-0937 (electronic), ISBN 978-981-13-3803-8 ISBN 978-981-13-3804-5 (eBook), <https://doi.org/10.1007/978-981-13-3804-5>, Library of Congress Control Number: 2018964612
6. P. Singh, B. Bhargava, W. Hong, P. Angin, Futuristic trends and innovations in multimedia systems using big data, IoT and cloud technologies (FTIMS), *Multimedia Tools and Applications* 81 (24), 34439-34445, 2022
7. N. Adam, B. Bhargava, M. Halem, and Y. Yesha (eds.) "Digital Libraries Research and Technology Advances," edited proceedings, Springer-Verlag. *Lecture Notes in Computer Science* No. 1082, 1996, 290 pages and Adam, B. Bhargava, and Y. Yesha. "Digital Libraries," edited proceedings, Springer Verlag, *Lecture Notes in Computer Science* No. 916, December 1994, 321 pages.
8. N. Adam, B. Bhargava, and Y. Yesha. "Knowledge and Information Management," edited proceedings, ACM Press, 1994, 688 pages.
9. N. Adam and B. Bhargava. "Advanced Database Concepts and Research Issues," edited proceedings, Springer Verlag, *Lecture Notes in Computer Science* No. 759, September 1993, 451 pages.
10. B. Bhargava. "Parallel and Distributed Systems," edited proceedings, IEEE Press, 1993, 170 pages.
11. B. Bhargava, Y. Yesha, and T. Finin. "Knowledge and Information Management," edited proceedings, ACM Press, 1993, 742 pages.

2. Books

12. S. Jain, S Groppe, P. Kaur, B. Bhargava, *Transparent Intelligence: A Guide to Explainable AI*, Nova Science Publishers New York, (Forthcoming 2025)
13. B. Bhargava, L. Avasthi, S. Prasath, B. Balusamy, A. Sagay, *Computational Intelligence for Sustainable Technologies - Artificial Intelligence, Deep Learning, Internet of Things*. De Gruyter Brill, STM – Science, Technology and Medicine series, (Forthcoming 2026).
14. D. Priyanka, R. Bhadoriya, B. Bhargava, S. Kumar, *Intelligent Computational Paradigms for Next-Gen Vehicular Networks*, World Scientific Publishing Co Pte Ltd, 5 Toh Tuck Link, Singapore, 2025
15. *Intelligent Security Solutions for Cyber-Physical Systems*, edited by V. Sood, Y. Singh, B. Bhargava, S. Narang, CRC Press, 2024 - Hardback: 9781032521527 - Paperback: 9781032523194.
16. B. Bhargava, S. Jain, A. Sharma, (April 2023) "An Ethnolinguistic Research Agenda for Intelligent Autonomous Systems", In: Jain, S., Groppe, S., Bhargava, B.K. (eds) *Semantic Intelligence. Lecture Notes in Electrical Engineering (LNEE)*, vol. 964, pp. 105-117, Springer Cham. Print ISBN: 978-981-19-7125-9. Online ISBN: 978-981-19-7126-6.
17. Sarika Jain, Sven Groppe, Bharat Bhargava (eds.) 2023: *Proceedings of the International Semantic Intelligence Conference ISIC 2022*. Georgia Southern University, The United States, May 17-19, 2022, LNEE Series, vol 964, Springer.

18. Futuristic Trends in Network and Communication Technologies, Edited by P. Singh, M. Paprzycki, B. Bhargava, J. Chhabra, N. Kaushal, Y. Kumar, Springer, 2018, ISBN 978-981-13-3804-5
19. Handbook of Wireless Sensor Networks: Issues and Challenges, P. Singh, B. Bhargava, M. Paprzycki, N. Kaushal, W. Hong, Springer, 2020, Nature ISBN 978-3-030-40304-1
20. Managing Trust in Cyberspace (Hardback) Edited by S. Thampi, B. Bhargava, and P. Atrey, CRC Press Inc, December 2013, ISBN 13: 9781466568440 ISBN 10: 1466568445
21. A. Helal, B. Bhargava, and A. Heddaya. "Advanced Replication Techniques for Distributed Systems," Kluwer Academic Publisher, 1996, 150 pages.
22. N. Adam, B. Bhargava, and Y. Yesha (Editors), Digital Libraries: Current Issues, Lecture Notes in Computer Science, Springer-Verlag, May 1995.
23. N. Adam and B. Bhargava (Editors), Advanced Database Systems, Lecture Notes in Computer Science, Springer-Verlag, December 1993.
24. B. Bhargava (ed.). "Concurrency Control and Reliability in Distributed Systems," Van Nostrand and Reinhold, 1987.
25. CODASYL Systems Committee. A Framework for Distributed Database Systems: Distribution Alternatives and Generic Architectures, September 1982. Published by ACM. 134 pages.

3. Book Chapters

26. A. Sharma, S. Jain, B. Bhargava, A research agenda towards Culturally aware Information Systems, 369- 378, Advances in IoT and Security with Computational Intelligence, edited by A Mishra, D. Gupta, G. Chetty, (Proceedings of ICAISA 2023). Lecture Notes in Networks and Systems, vol. 755, pp. 369-378, Springer Cham. Print ISBN: 978-981-99-5084-3. Online ISBN: 978-981-99-5085-0.
27. T Bonjour, M Haliem, V. Aggarwal, M. Kejriwal, B. Bhargava, Multi-agent Game Domain: Monopoly in A unified Framework for Formal Theories of Novelty, ISBN 978-3-031-33054-4, print 978-3-031-33052-7 (edited by Terry Boulton and Walter Scheirer), August 2023, DOI:10.1007/978-3-031-33054-4_7
28. A. Zhang and B. Bhargava, "Flexible Transaction Models", book chapter in C. Panos (editor), Extended Transactions Models and Advanced Concurrency Control in Encyclopedia of Database Systems, C. Panos Editor, Springer Verlag, 2008
29. L. Lilien and B. Bhargava, "Privacy and Trust in Online Interactions," book chapter in: K. Chen and A. Fadlalla (eds.), "Online Consumer Protection: Theories of Human Relativism," Idea Group, 2007
30. G. Ding, X. Wu, and B. Bhargava. "Cross-Layer Algorithm for Video Transmission over Wireless Network," in Handbook of Algorithms for Mobile and Wireless Networking and Computing, (A. Boukerche, ed.), CRC Press, 2005.
31. I. Chung, B. Bhargava, and S. Madria. "Taxonomy of Data Management via Broadcasting in a Mobile Computing Environment." Book Chapter in Mobile Computing: Implementing Pervasive Information and Communication Technologies, Kluwer Academic Publishers, December 2002.

32. S. Madria, B. Bhargava, M. Mohania, and S. Bhowmick. "Data and Transaction Management in a Mobile Environment." Book Chapter in *Mobile Computing: Implementing Pervasive Information and Communication Technologies*, Kluwer Academic Publishers, December 2002.
33. B. Bhargava and A. Helal. "Configurable Distributed Database Systems: Living with Failures and Surviving Catastrophes," Tutorial Notes, IEEE Press, October 1993.
34. H. Tirri, J. Srinivasan, and B. Bhargava. "Integrating Distributed Data Sources Using Federated Objects," in *Distributed Object Management*, (T. Ozsu, U. Dayal, and P. Valduriez, eds.), Morgan Kaufmann Publisher, Inc., June 1993.
35. B. Bhargava and Y. Jiang. "Transition from Relational to Object Model Implementation," in *Advanced Database Concepts and Research Issues*, (N. Adam and B. Bhargava, eds.), Springer Verlag, Lecture Notes in Computer Science, No. 759, September 1993.
36. B. Bhargava, Y. Zhang, and E. Mafla. "Communication Facilities for Distributed Transaction Processing Systems," in *Readings in Distributed Computing Systems*, (T. Casavant and M. Singhal, eds.), IEEE Press, November 1992.
37. B. Bhargava and L. Lilien. "Expert Systems for Fault Tolerant Distributed Database Systems," *Essays in Computer Vision and other topics*, (Julious Tou, ed.), (dedicated to Professor K.S. Fu), pp. 41-182. June 1990. Published by Academic Sinica.
38. B. Bhargava. "Concurrency Control and Reliability in Distributed Database System," in *Software Engineering Handbook*, Van Nostrand Reinhold Company, 1983, pp. 331-358.
39. B. Bhargava. "Design of Intelligent Query Systems for Large Databases," in *Pictorial Information Systems*, Springer-Verlag, May 1980, pp. 431-445

4. Research Journals

Referred Journal Publications

Publications have author names (Students first, Postdoc second, faculty third or LAST, outside collaborators fourth)

2026

1. N. Wang, J. Wang, J. Fu, W J. Liu, B. Bhargava, VLMS: Verifiable Lattice-based Encryption with Multi-keyword Search in Cloud Storage, Accepted for publication in *IEEE Transaction on Dependable and secure computing*, doi: 10.1109/TDSC.2026.3675085
2. P. Bagchi, A. Roy, M. Wazid, A. K. Das, B. K. Bhargava and Y. Park, "Big Data Analytics-Envisioned Quantum-Safe Lattice-Based Three-Party Authenticated Key Agreement Protocol for Cloud IoT-Enabled Healthcare Applications," in *IEEE Transactions on Dependable and Secure Computing*, vol. 23, no. 1, pp. 368-385, Jan.-Feb. 2026, doi: 10.1109/TDSC.2025.3605524.
3. Z. Liu, B. Bhargava, N. Aneja, S. Aneja, R. Oliviera, RDCollab: Reasoning and Detecting Collaborative Attacks in Autonomous UAV Networks, in *IEEE Transactions on Dependable and Secure Computing*. 13: 3053-3069 (2026)

4.

2025

1. J. Zhao, Q. Li, Z. Han, J. Fu, G. Nan, M. Shen, B. Bhargava
ReTrial: Robust Encrypted Malicious Traffic Detection via Discriminative Relation Incorporation and Misleading Relation Correction. *IEEE Transaction on. Information Forensics & Security*. 20: 677-692 (2025)
2. B. Palaniswamy, A. Karati, T. Chen, A. Das, and B. Bhargava, QPCASIN: A Quantum-Defended Privacy-Aware Preemptive Handover-Enabled Continuous Authentication in Space Information Networks, *IEEE Transactions on Information Forensics & Security* 20: 6910-6922 (2025)
3. B. Palaniswamy, A. Karati, T. Chen, A. Das, B. Bhargava, QPCASIN: A Quantum-Defended Privacy-Aware Continuous Authentication in Space Information Networks, *IEEE Transactions on Information Forensics & Security*, Vol. 20, pp 6910-6922, ISSN 1556-6013 (2025), Digital Object Identifier: 10.1109/TIFS.2025.3583246
4. M. Villarreal-Vasquez and B. Bhargava, ConFoc: Content-Focus Protection Against Trojan Attacks on Neural Networks, Submitted to *IEEE Transactions on Dependable and Secure Computing*
5. N. Wang, W. Zhou, J. Wang, J. Fu, and B. Bhargava, VLMS: Verifiable Lattice-based Encryption with Multi-keyword Search in Cloud Storage, Under revision in *IEEE Transactions on Dependable and Secure Computing*

2024

6. J. Zhao, Q. Li, Z., Han, J. Fu, G. Nan, M. Shen, B. Bhargava, ReTrial: Robust Encrypted Malicious Traffic Detection via Discriminative Relation Incorporation and Misleading Relation correction , in *IEEE Transactions on Information Forensics and Security*, Print ISSN: 1556-6013, Online ISSN: 1556-6021, Vol. 20, 677-692, 2025, doi: 10.1109/TIFS.2024.3515821
7. S. Islam, M Chiu, T. Bonjour, R Oliviera, B. Bhargava, M. Kejriwal, A Q-learning Novelty Search Strategy for Evaluating Robustness of Deep Reinforcement Learning in Open-world Environments, *IEEE Intelligent Systems*, Vol. 9, 1-10, September, 2024, doi: 10.1109/MIS.2024.3469574
8. B. Bera, A Bisht, A Kumar, B. Bhargava, D. Yau, BioKA-ASVN based key agreement scheme for Air smart vehicular network using Blockchain service, *IEEE Transactions on Vehicular Technology*, Vol. 73, Issue 7, 9478-9494, July 2024
9. M. Jiang, J. Jian, J. Chen, B. Cui, J. Fu, T. Wang, L. Yao, B. Bhargava, RUDOLF: An Efficient and Adaptive Defense Approach Against Website Fingerprinting Attacks Based on Soft Actor-Critic Algorithm, ACCEPTED for publication as a REGULAR paper in the *IEEE Transactions on Information Forensics & Security*, 19: 7794-7809, Jan. 2024, doi:10.1109/TIFS.2024.3436818
10. M. Palash and B. Bhargava, EMERSK -Explainable Multimodal Emotion Recognition with Situational Knowledge, in *IEEE Transactions on Multimedia* 26: 2785-2794 (2024)
11. C. Chen, B. Bhargava, V. Aggarwal, B. Tonshal, A. Gopal, A Hybrid Deep Reinforcement Learning Approach for Jointly Optimizing Offloading and Resource Management in Vehicular Networks, in *IEEE Transactions on Vehicular Technology*, 73(2): 2456-2467 (2024), doi: 10.1109/TVT.2023.3312340
12. U. Bansal, G. Sikka, L. Avasthi, B. Bhargava, Quantitative evaluation of extensive vulnerability set using cost benefit analysis, in *IEEE Transactions on Dependable and Secure Computing*, 21(1): 298-308 (2024)

13. A. Aslam, B. Bhargava, ABAUS: Active Bundle Authentication Solution based on SDN for Vehicular networks, in *IEEE Access*, March 2024, Print ISSN: 2169-3536. Online ISSN: 2169-3536, Digital Object Identifier: 10.1109/ACCESS.2024.3374216, doi:10.1109/ACCESS.2024.3374216

Before 2023

14. G. Mani, M. Kim, B. Bhargava, P. Angin, A. Deniz, V. Pasumarti, Malware Speaks! Deep Learning Based Assembly Code Processing for Detecting Evasive Cryptojacking, in *IEEE Transactions on Dependable and Secure Computing*, pp 1-17, August 2023, doi 10.1109/TDSC.2023.3307445
15. J. Fu, S Xiong, N. Wang, R. Ren, A. Zhou, B. Bhargava, A Framework of High-speed Network Protocol Fuzzing based on Shared Memory, in *IEEE Transactions on Dependable and Secure Computing*, pp 1-18, Sept. 2023, doi: 10.1109/TDSC.2023.3318571.
16. N. Wang, J. Fu, S. Zhang, Z. Zhang, J Qiao, J. Liu, B. Bhargava, Secure and Distributed IoT Data Storage in Clouds based on Secret Sharing and Collaborative Blockchain, in *IEEE/ACM Transactions on Networking*, vol. 31, no. 4, pp. 1550-1565, Aug. 2023, doi: 10.1109/TNET.2022.3218933
17. N. Wang, S. Zhang, Z. Zhang, J. Qiao, J. Fu, B. Bhargava, Lightweight and Secure Data Transmission Scheme Against Malicious Nodes in Heterogeneous Wireless Sensor Networks, in *IEEE Transactions on Information Forensics & Security*, Vol. 18, pp. 4652-4667, 2023, July 2023, doi: 10.1109/TIFS.2023.3297904
18. P Angin, M. Anisi, B. Bhargava, G. Mani, I. you, Special issue on AI-driven security in 5G and beyond, *ITU (International Telecommunication Union) Journal on Future and Evolving Technologies*, Vol. 4, No. 2, June 2023
19. G. Mani, M. Haliem, B. Bhargava, I. Manickam, K. Kochpatcharin, M. Kim, E. Vugrin, W. Wang, C. Jenkins, P Angin, M. Yu, "Machine Learning Based Resilience Testing of an Address Randomization Cyber Defense," in *IEEE Transactions on Dependable and Secure Computing*, vol. 20, no. 6, pp. 4853-4867, Nov.-Dec. 2023, doi: 10.1109/TDSC.2023.3234561
20. N. Aneja, S. Aneja, B. Bhargava, "AI-Enabled Learning Architecture Using Network Traffic Traces over IoT Network: A Comprehensive Review," *Wireless Communications and Mobile Computing*, vol. 2023, Article ID 8658278, 12 pages, 2023. <https://doi.org/10.1155/2023/8658278>.
21. Z. Cui, B. Cui, J. Fu and B. K. Bhargava, "An Attack to One-Tap Authentication Services in Cellular Networks," in *IEEE Transactions on Information Forensics and Security*, 18: 5082-5095 (2023), doi: 10.1109/TIFS.2023.3304840
22. J. Fu, S Xiong, N. Wang, R. Ren, A. Zhou, B. Bhargava, A Framework of High-speed Network Protocol Fuzzing based on Shared Memory, Submitted to *IEEE Transactions on Dependable and Secure Computing*, pp 1-18, Sept. 2023, doi: 10.1109/TDSC.2023.3318571.
23. M. Villars, G Modelo-Howard, S. Dube, B. Bhargava, "Hunting for Insider Threats Using LSTM-based Anomaly Detection", *IEEE Transactions on Dependable and Secure Computing*, Vol. 20, pp 451-462, 2023.
24. S. E. Palacios Interiano, J. Krogmeier, B. Bhargava, C. Brinton, A. Ault, "Trellis++: A Practical, Auditable, Privacy-Preserving Certification Framework with Oblivious Smart Contracts." in *IEEE Transaction on Secure and Dependable Computing (TSDC)* 20(4), 3269-3286 (2023), <http://arxiv.org/abs/2207.12482>

25. S. Aneja, N. Aneja, B. Bhargava, R. Chowdhary, Device Fingerprinting using Deep Convolutional Neural Networks, *International Journal of Communication Networks and Distributed Systems*, 28(2): 171-198 (2022)
26. K. Solaiman, T. Sun, A. Nesen, B. Bhargava, and M. Stonebraker, "Applying Machine Learning and Data Fusion to the "Missing Person" Problem," in *IEEE Computer*, vol. 55, no. 6, pp. 40-55, June 2022, doi: 10.1109/MC.2022.3145507.
27. J. Fu, N. Wang, L. Nie, B. Cui, B. Bhargava, "Defending Trace-back Attack in 3D Wireless Internet of Things" *IEEE/ACM Transactions on Networking*, Vol. 30, No. 4, 1765-1079, August 2022
28. K. Manchella, M. Haliem, V. Aggarwal, and B. Bhargava, "PassGoodPool: Joint Passengers and Goods Fleet Management with Reinforcement Learning aided Pricing, Matching, and Route Planning", *The IEEE Transactions on Intelligent Transportation Systems, (T-ITS)* 23 (4): 3866-3877 (2022)
29. M. Haliem, V. Aggarwal, and B. Bhargava, AdaPool: A Diurnal-Adaptive Fleet Management Framework using Model-Free Deep Reinforcement Learning and Change Point Detection, *IEEE Transactions on Intelligent Transportation Systems, (T-ITS)*, Vol. 23, pp. 2471-2481, 2022.
30. T. Bonjour, M. Haliem, A. Alsalem, Shilpa; L. Yu, V. Aggarwal, M. Kejriwal, B. Bhargava, Decision Making in Monopoly using a Hybrid Deep Reinforcement Learning Approach, in *IEEE Transactions on Emerging Topics in Computational Intelligence*, Vol. 6, No. 6, pp. 1335-1344 (2022), doi: 10.1109/TETCI.2022.3166555.
31. R. Jiang, Q. Zhao, B. Bhargava, RL-ABE: A Revocable Lattice Attribute Based Encryption Scheme Based on R-LWE Problem in Cloud Storage, *IEEE Transactions on Services Computing*, vol. 15, no. 2, pp. 1026-1035, 1 March-April 2022, DOI: 10.1109/TSC.2020.2973256
32. J. Fu, N. Wang, L. Yun, B. Bhargava, "A Practical Framework for Secure Document Retrieval in Encrypted Cloud File Systems", *IEEE Transactions on Parallel and Distributed Systems*, Vol. 33, No. 5, 1246-1261, May 2022
33. N. Ahmed and B. Bhargava, Bio-inspired Formal Model for Space/Time Virtual Machine Randomization and Diversification, *IEEE Transactions on Cloud Computing*, Vol. 10, No. 2, pp 1190-1200, April 2022, Online ISSN: 2168-7161 Digital Object Identifier: 10.1109/TCC.2020.2969353
34. M. Jedh, L. b. Othmane, N. Ahmed and B. Bhargava, "Detection of Message Injection Attacks onto the CAN Bus using Similarities of Successive Messages-Sequence Graphs," in *IEEE Transactions on Information Forensics and Security*, 16: 4133-4146 (2021), doi: 10.1109/TIFS.2021.3098162.
35. N. Ahmed and B. Bhargava, Bio-inspired Formal Model for Space/Time Virtual Machine Randomization and Diversification, *IEEE Transactions on Cloud Computing*, Vol. 10, No. 2, pp 1190-1200, April 2022, Online ISSN: 2168-7161 Digital Object Identifier: 10.1109/TCC.2020.2969353
36. M. Haliem, G. Mani, V. Aggarwal, and B. Bhargava, "A Distributed Model-Free Ride-Sharing Approach for Joint Matching, Pricing, and Dispatching using Deep Reinforcement Learning", in *IEEE Transactions on Intelligent Transportation Systems (T-ITS)*, 22(12), 7931–7942, June 2021

37. H. Chen, Y. Zhang, Y. Cao, B. Bhargava, Security Threats and Defensive Approaches in Machine Learning System Under Big Data Environment, *Wireless personal Communication*, Springer-US, pp 1-21, 2021, <https://doi.org/10.1007/s11277-021-08284-8>
38. A. Hu, R. Jiang, and B. Bhargava, "Identity-Preserving Public Integrity Checking with Dynamic Groups for Cloud Storage," *IEEE Transactions on Services Computing*, Vol. 14, No. 4, 1097-1110, 1 July-Aug. 2021, doi: 10.1109/TSC.2018.2859999
39. N. Ahmed, B. Bhargava, From Byzantine Fault-Tolerance to Fault-Avoidance: An Architectural Transformation to Attack and Failure Resilience. *IEEE Transactions on Cloud Computing*, Volume 8, No. 3, pp 847-860, September 2020.
40. I. You, C Choi, V Sharma, I. Woungang, B. Bhargava, Advances in In Security and Privacy Technologies for Forthcoming Smart Systems, *Services, Computing, and Networks*, Guest Editorial, *Intelligent Automation and Soft Computing*, 25 (1), 117-119, 2019
41. J. Xu, S. Wang, B. Bhargava and F. Yang "A Blockchain-enabled Trustless Crowd-Intelligence Ecosystem on Mobile Edge Computing", *IEEE Transactions on Industrial Informatics* 15(6): 3538-3547 (2019)
42. J. Fu, L. Yun, B. Bhargava, "Source-Location Privacy Protection based on Anonymity Cloud in Wireless Sensor Networks", *IEEE Transactions on Information Forensics and Security*, Vol. 15, 100-114, May, (2020)
43. H. Chen, C. Meng, Z. Shan, Z. Fu, B. Bhargava, "A novel Low-rate Denial of Service attack detection approach in ZigBee wireless sensor network by combining Hilbert-Huang Transformation and Trust Evaluation" *IEEE Access* 7: 32853-32866 (2019)
44. R. Ranchal, B. Bhargava, P. Angin and L. Ben Othmane, "EPICS: A Framework for Enforcing Security Policies in Composite Web Services," in *IEEE Transactions on Services Computing*, 12(3): 415-428 (2019)
45. S. Palacios, V. Santos, E. Barsallo, B. Bhargava, *MioStream: a peer-to-peer distributed live media streaming on the edge*, *Multimedia: Tools and Applications*, (2019). Springer
46. M. Javed, E. Hamida, A. Al-Fuqaha and B. Bhargava, Adaptive Security for Internet of Vehicle of Smart Cities, *IEEE Intelligent Transportation Systems Magazine*, 10(2): 110-120 (2018)
47. J. Fu, L. Yun, J. Jiang, B. Bhargava, "Secure Data Storage and Searching for Industrial IoT by Integrating Fog Computing and Cloud Computing", *IEEE Transactions on Industrial Informatics* (A special on Fog Computing for Industrial Applications submission). 14(10): 4519-4528 (2018)
48. X. Wu, R. Jiang, B. Bhargava, "On the Security of Data Access Control for Multiauthority Cloud Storage Systems", *IEEE Transactions on Services Computing*, No. 10, Vol. 2, pp. 258-272, 2017
49. N. Wang, J. Fu, B. Bhargava, J. Zeng, Efficient Retrieval Over Documents Encrypted by Attributes in Cloud Computing. *IEEE Trans. Information Forensics and Security* 13(10): 2653-2667 (2018)
50. N. Wang, J. Fu, J. Zeng, B. Bhargava, Source-location privacy full protection in wireless sensor networks. *Information. Science*. 444: 105-121 (2018)
51. A. Hu, R. Jiang, and B. Bhargava, "Identity-Preserving Public Integrity Checking with Dynamic Groups for Cloud Storage," in *IEEE Transactions on Services Computing*, 2018 doi:10.1109/TSC.2018.2859999
52. P Angin, B Bhargava, R Ranchal, A self-protecting agents based model for high-performance mobile-cloud computing, *Computers & Security*, 77: 380-396 (2018)

53. A. Bijarano, A. Jindal, and B. Bhargava, "Measuring user's influence in the Yelp recommender system", *PSU Research Journal Review*, Vol. 1 Issue: 2, pp.91-104, 2017, <https://doi.org/10.1108/PRR-02-2017-0016>
54. R. Jiang, X. Wu, B. Bhargava, SDSS-MAC: Secure data sharing scheme in multi authority cloud storage systems, *Computers & Security* Vol. 62, pp 193–212, 2016
55. B. Bhargava, A. Johnson, G. Munyengabe, and P. Angin, A Systematic Approach for Attack Analysis and Mitigation in V2V Networks, *Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications (JoWUA)* Vol. 7, No. 1, pp. 79-96, 2016
56. R. Ranchal, A. Mohindra, J. Manweiler, B. Bhargava, RADical Strategies for Engineering Web-Scale Cloud Solutions. *IEEE Cloud Computing* 2(5): 20-29 (2015)
57. L. Othmane, R. Fernando, R. Ranchal, B. Bhargava, E. Bodden, Incorporating Attacker Capabilities in Risk Estimation and Mitigation, *Journal of Computers and Security*, Volume 51, pp. 41–61, June 2015
58. Y. Zhong, B. Bhargava, Y. Lu, P. Angin, A computational Dynamic Trust Model for User Authorization, *IEEE Transaction on Dependable and Secure Computing*, Vol. 12, No. 1, pp. 1-15, 2015
59. K. Xu, Y. Sun, B. Bhargava: An Introduction to the Enterprise-Participant (EP) Data Model. *International Journal of Next Generation Computing (IJNGC)*, Vol. 5, No. 3, pp. 304-317, 2014
60. L. Othmane, R. Fernando, R. Ranchal, B. Bhargava, E. Bodden, Likelihood of Threats to Connected Vehicles. *International Journal of Next Generation Computing (IJNGC)*, Vol. 5, No. 3, pp. 290-303, 2014
61. R. Jiang, B. Bhargava: Formal Theory for Security Protocol Analysis of Distributed Denial of Service. *International Journal of Next Generation Computing (IJNGC)*, Vol. 5, No. 3, pp. 233-248, 2014
62. A. Can, B. Bhargava: k-anonymity Chord for Anonymous Query Response. *International Journal of Next Generation Computing (IJNGC)*, Vol. 5, No. 3, pp. 274-289, 2014
63. L. Othmane, P. Angin, H., Weffers, B. Bhargava, Extending the Agile Development Approach to Develop Acceptable Secure Software, *IEEE Transaction on Dependable and Secure Computing* Vol.11, No. 6, pp. 497-509, 2014.
64. B. Panja, D. Morrison, P. Meharia, B. Bhargava, A. Prakash, Group Security of V2V using Cloud Computing Processing and 4G Wireless Services, *International Journal of Next Generation Computing (IJNGC)*, Vol. 5, No. 3, pp. 218-232, 2014
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5. Refereed Conference Publications

165. K. Solaiman, S. Islam, R. Oliviera, B. Bhargava, Pre-Deployment Complexity Estimation for Federated Perception Systems, In Edge AI San Diego Research Symposium 2026, March 24–26, 2026, San Diego, California,

166. A. Sharma, S. Jain, B. Bhargava, "A Vision towards Offensive Language Identification: Trends, Insights, and Prospects" in Proceedings of the, In *Semantic Intelligence: Select Proceedings of ISIC* (International Semantic Intelligence Conference) (ISIC 2025), pp. 67-75. Singapore: Springer Nature LNEE Vol. 967 Singapore, Oct. 2025
167. B. Jain, S. Dalal, B. Bhargava, "Ontology-Regularized Multimodal Neural Networks for Explainable Mental Health Assessment" In *Semantic Intelligence: Select Proceedings of ISIC* (International Semantic Intelligence Conference) (ISIC 2025), pp. 67-75. Singapore: Springer Nature Singapore, LNEE Vol. 967, Oct. 2025, (Best student paper award)
168. L. Li, N. Aneja, A. Nesen, B. Bhargava, "SentimentPulse: Real-Time Consumer Sentiment Analysis with Custom Language Models" In *Semantic Intelligence: Select Proceedings of ISIC* (International Semantic Intelligence Conference) (ISIC 2025), pp. 67-75. Singapore: Springer Nature Singapore, LNEE Vol. 967, Oct. 2025
169. S. Zhang, R. Jiang and B. Bhargava, "Multi-Authority Fine-Grained Lattice Encryption Scheme with Collusion Attack Resistance and Without Trapdoors," *2025 Information Science Frontier Forum and the Academic Conference on Information Security and Intelligent Control (ISF)*, Yinchuan, China, 2025, pp. 60-65, doi: 10.1109/ISF65011.2025.11047504.
170. S Mishra, B. Bhargava, S. Islam, Z. Liu, *UAV-Aware: IDS with Learned Traffic Augmentation*) Submitted to IEEE INFOCOM 2026 - IEEE Conference on Computer Communications. (July 2025)
171. S. Islam, K. Solaiman, R. Oliveira and B. Bhargava, Submitted to 2025 IEEE 7th International Conference on Cognitive Machine Intelligence (CogMI), August 2025
172. L. Li, J. Liu, J. He, Z. Yu, I-Ta Lee, T. Du, A. Overwijk, B. Bhargava, C. Xiong, Weakly Supervised Training for Sequential Recommendation Models, Submitted to ACL-ARR Conference, 2025
173. K. Solaiman and B. Bhargava, FemmIR: Graph-Based Weakly Supervised Retrieval with Structured Property Alignment Across Modalities, Submitted to AAAI Conference, 2026
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175. T. Bonjour, V. Aggarwal and B. Bhargava. Dabler: Deep adaptive broad learning agent with environment recognition. (preprint), 2024
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177. B. Bhargava, Collaborative Attacks and Defense, Proceedings of the 2nd International Conference on Next Generation Computing and Information Systems (ICNGCIS 2023), December 18-19, 2023, Jammu, J&K, India (Published in 2024 by CRC Press)
178. Q. Yang, R. Jiang, B. Bhargava, 8th International Conference on Signal and Image Processing (ICSIP) 2023, DOI:10.1109/ICSIP57908.2023.10270961
179. P. Calyam, M. Kejrival, K. Palaniappan, V. Ananad, B. Bhargava, and twelve authors, towards a Domain-Agnostic Knowledge Graph-as-a-Service Infrastructure for Active Cyber Defense with Intelligent Agents, In IEEE Applied Imagery Pattern Recognition Workshop 2023 (AIPR) (Acceptance 15%)
180. L. Li, N. Aneja, A. Nesen, B. Bhargava, SentimentPulse: Temporal-Aware Custom Language Models vs. GPT-3.5 for Consumer Sentiment NeurIPS 2023 Workshop ICBINB, Dec 2023

181. I. Shafkat, N. Aneja, R. Olivier, B. Bhargava, J. Hamlet, C. Jenkins, Detect Adapt: A Resiliency Enhancement Mechanism for Space Computing Platforms”, 10th IEEE Annual Conf. on Computational Science & Computational Intelligence (CSCI'23), 2023 (Acceptance 20%)
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183. A. Aslam, B. Bhargava, Privacy-Preserving Authentication Scheme for SDN-based Vehicular Ad-hoc Networks, Submitted to 22nd IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom), Exeter, UK, November 2023 (Acceptance 15%)
184. T. Bonjour, B. Bhargava, Information-Theoretic Approach to Detect Collusion in Multi-Agent Games, 38th Conference on Uncertainty in Artificial Intelligence (UAI 2022) (Acceptance 15%)
185. KMA Solaiman, B. Bhargava, Open-Learning Framework for Multi-modal Information Retrieval with Weakly Supervised Joint Embedding. in AAI Spring Symposium, March 2022, Palo Alto, Ca
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187. B. Ganguly, M. Haliem, M. Agarwal, T. Bonjour, V. Aggarwal, and B., Decision making without prior knowledge in dynamic environments using Bootstrapped DQN, in AAI Spring Symposium, March 2022, Palo Alto, Ca (Acceptance 15%)
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189. T. Bonjour, V. Aggarwal, B. Bhargava, Information-Theoretic Approach to Detect Collusion in Multi-Agent Games, in AAI Spring Symposium, March 2022, Palo Alto, Ca (Acceptance 15%)
190. A. Nesen, K. Solaiman, B. Bhargava, Dataset Augmentation with Generated Novelty, 3rd IEEE Transdisciplinary Artificial Intelligence Conference (TransAI) 2021
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197. M. Haliem, V. Aggarwal, B. Bhargava, AdaPool: An Adaptive Model-Free Ride-Sharing Approach for Vehicle Dispatching using Deep Reinforcement Learning, 7th ACM International Conference on Systems for Energy-Efficient Built Environments, 2020
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425. B. Bhargava and K. Fu. "Transformation and Inference of Tree Grammars for Syntactic Pattern Recognition," in Proceedings of the IEEE International Conference on System, Man, and Cybernetics, 1974, pp. 330-334.
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Under Submission

Submitted to Journals

5. N. Wang, K. Zheng, J. Fu, Z. Liu, L. Deng, J. Liu, B. Bhargava, VMSKS: Verifiable Multi-Semantic Keyword Search for Electronic Medical Record, Submitted to IEEE Transactions on Services Computing, Jan 2025
6. A. Kumar, A. Srivastava, B. Bhargava, Online Classification in Resource Constrained Environments, Submitted to ACM Transactions on AI for Science (2025)
7. A. Das, A. Pandey, S. Shetty, B. Bhargava, Reinforcement Learning-Empowered Authentication for IoMT-Based Smart Healthcare Security, IEEE Internet of Things Journal, Submitted for Publications (2025)
8. N. Wang, J. Wang, J. Fu, W J. Liu, B. Bhargava, VLMS: Verifiable Lattice-based Encryption with Multi-keyword Search in Cloud Storage, Accepted for publication in IEEE Transaction on Dependable and secure computing, doi: 10.1109/TDSC.2026.3675085
9. P. Banchi, A. Bisht, B. Bera, A Das, B. Bhargava, B. Sidkar, Blockchain-Enabled Quantum Safe Lattice-Based Aggregate Signature Scheme for IoT-based Healthcare Application, Submitted to ACM transactions on Sensor Networks, March 2026
10. A. Alsalem, B. Bhargava, BEREP: BEhavior-Based REPUTation Scheme for Privacy Preservation in VANETs Using Blockchain Technology, Submitted to IEEE Transactions on Vehicular Technology, May 2024
11. A. Pandey, A Das, S. Pal, B. Bhargava, C. Dong, Authenticated Key Agreement Scheme for Securing IoMT-Based Consumer Smart Healthcare Using Reinforcement Learning-as-a-Service, IEEE Transactions on Consumer Electronics, Submitted, January 2026
12. S. Dalal, S. Jain and B. Bhargava, RR-IPL: A Benchmark Dataset for Rhetoric Role Prediction in Indian Legal Judgments, Submitted to IEEE Transactions on Emerging Topics in Computational Intelligence, Feb. 2026
13. N. Pecka, L. Ben Othmane, B. Bhargava, R. Bryce, Semi-Automated Threat Modeling of Cloud-Based Systems Through Extracting Software Architecture from Configuration and Network Flow, submitted to IEEE Transactions on Services Computing, 2026
14. N. Wang, H. Qi, L. Wie, J. Fu. B. Bhargava, UP2CMR: A Unified Privacy-Preserving Framework for IoT Cloud-Optimized Cross-Modal Retrieval, Submitted to IEEE Internet of things Journal, March 2026

Submitted to Conferences

- K. Solaiman and B. Bhargava, Structured Weak Supervision for Multimodal Retrieval without Similarity Labels, Submitted to ACM SIGIR conference, January 2026
- S. Mishra and B. Bhargava, FlowRAG: A Two-Stage Retrieval-Augmented Intrusion Detection System for Adaptive UAV Network Security, Submitted to 56th Annual International IEEE/IFIP Dependable Systems and Networks (DSN) Conference, Feb. 2026
- S Mishra, B. Bhargava, Z. Liu, S. Islam, FlowFusion-IDS: Interpretable Collaborative Attack Detection in UAV Networks, Submitted to 4th USENIX Symposium on Vehicle Security and Privacy (VehicleSec) , 2026
- Z. Li, B. Bhargava, Structure-Aware Cross-Modal Retrieval under Weak Supervision, Submitted to ACM SIGIR, 2026

S Mishra, B. Bhargava, Z. Liu, S. Islam, UAV-Aware: IDS with Learned Traffic Augmentation, 19th ACM Conference on Security and Privacy in Wireless and Mobile Networks (ACM WiSec), 2026

Talks and keynotes/plenary (Included Leadership in Conferences as Program Chair/General Chair)

1. Advisory Board Member for International Conference on Edge Intelligence (ICEI 2026), May 2026, Malaysia.
2. Keynote Speaker, International Conference on Semantic Intelligence, Lubeck, Germany, October, 2025
3. General Chair, International Conference on Advancements in Computing Technologies and Artificial Intelligence (Computatia2026), Jaipur, August-2026.
4. Chief Guest and keynote speaker, Empowering Research with AI Tools and Techniques, New Delhi, 2025 (Invited)
5. Keynote speaker, International Semantics Intelligence Conference (ISIC), October 2025, Germany
6. Keynote, Sixth International Conference on Soft Computing and its Engineering Applications December 2024, Bangkok, Thailand (Invited)
7. Keynote, International Conference on Punjabi Intellectuals meet (Punjab Academy of Science), Nov 2024, India (Invited)
8. Member-International Advisory Committee for *Second International Conference on Pioneering Developments in Computer Science & Digital Technology, New Delhi, 2025.*
9. Invited Speaker, Second International Conference on Next Generation Computing and Information Systems, December 2023, India (Invited)
10. Keynote Second IEEE-sponsored International Conference on Computer, Electronics, Electrical Engineering and Their Applications (IC2E3-2023), June 2023, India (Invited)
11. Keynote, International Conference Computational Science and Computational Intelligence (CSCI), December 2023, Las Vegas (Invited)
12. Chairman, International Workshop on Secure and Reliable Microservices and Containers, Vienna, 2022.
13. Keynote Speaker, International Semantics Intelligence Conference (ISIC), May 2022 (Invited)
14. Keynote Speaker, 16th International *Conference* on Risks and Security of Internet and Systems. November 2021. Ames, Iowa (Invited)
15. Keynote Speaker, International Semantics Intelligence Conference (ISIC), February 2021, New Delhi, India (Invited)
16. Keynote Speaker, IEEE World AI Internet of Things (IOT) Congress, Seattle, 2021(invited)
17. Chairman of Workshop on Novelties in Open World, ISIC, 2021
18. Chairman, ML4SeC: Workshop on Machine Learning for Security and Cryptography, Istanbul, September, 2019, in conjunction with IEEE International Symposium on Personal, Indoor and Mobile Radio Communications
19. Award in honor of C. V. Ramamoorthy, committee member in IEEE Artificial Intelligence and Knowledge Engineering (AIKE) conference.
20. Best paper C.V. Ramamoorthy award chair, IEEE Symposium on Reliable Distributed Systems, 2018, Brazil
21. Best paper award chair, IEEE Cloud Conference, 2018, San Francisco
22. Organizing Committee, International Conference on Satellite and Telecommunication, September 2018, Stockholm, Sweden
23. Keynote Speaker, Artificial Intelligence Conference, April 2018, Las Vegas (invited)
24. Keynote Speaker, International Conference on Recent Innovation in Computing, March 2018, Jammu, India (invited)

25. Keynote Speaker, IEEE International Conference on Advanced Networks and Telecommunications Systems (AINTS), December 2017, Bhubaneswar, India
26. Co-chair, International Symposium on Multi-media Security and Digital Forensic Conference, December 2017, Guangzhou, China
27. Co-chair, NSF conference on Network and Security (CanSec), October 2017, Rolla, Missouri
28. General Conference Chair, Third International Symposium on Security in Computing and Communications (SSCC-15), August 2015, India
29. Conference chair, 2016 the 6th International Conference on Power and Energy Systems, Paris, France.
30. Keynote speaker, National conference on Recent Advances in Embedded Technologies at JIMS, April 2015, India
31. Keynote speaker, International Conference on advance Computing and Creating Entrepreneurs (IACC), February 2013, India
32. Keynote speaker, 9th IEEE International Conference on Heterogeneous Networking for Quality, Reliability, Security, and Robustness (Qshine) conference, January 2013, India
33. Keynote speaker, IEEE International Advance Computing conference, February 2013, India
34. Co-chair, International Conference on Advances in Computing, Communications and Informatics (ICACCI-2012), August 3-5, 2012, Chennai
35. Steering Committee for IEEE International Symposium on Wireless Pervasive Computing (ISWPC 2011), Hong Kong, 2011
36. Co-chair, Second IEEE International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2010), Minneapolis, June 2011
37. Advisory Committee, International Conference on Advanced Computing, Networking and Security (ADCONS 2011), NIT Karnataka, Surathkal
38. Advisory Committee, International Conference on High Performance and Grid Computing, 2011, Chitkara University, India
39. Advisory Committee, International Conference on Advances in Computing and Communication at NIT (Himachal)-India
40. Chair of Steering committee of IEEE Symposium on Reliable Distributed Systems (SRDS)
41. General Chair of the ACM/IET/ICST International Workshop on Performance and analysis of Wireless Networks, to be held in conjunction with The International Conference on Mobile Technology, Applications, and Systems (Mobility 2008), September, 2008, Ilan, Taiwan.
42. Co-Chair of the 2nd IEEE International Workshop on Broadband Wireless Internet Access, to be held in conjunction with the 4th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob 2008) October 12, 2008, Avignon, France
43. Co-chair of CRA-W sponsored workshop on Pervasive Computing, St Louis
44. Co-chair, First IEEE International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2007), Toronto, Canada, June 29, 2007

45. IEEE Fellow Committee, 2004, 2005, 2006
46. PolyU's Distinguished Scholar, Hong Kong Polytechnic University 70th Anniversary
47. Keynote speaker at DEXA conference workshop, Krakow, Poland, 2006
48. Keynote speaker at International Conference on Distributed Computing and Internet Technology, Bhuvneshwar, India, 2004.
49. NSF PI workshop, Area Chair for Privacy & Trust Management, 2003 and 2004.
50. IEEE Computer Society' Technical Achievement Award Committee, 2003.
51. Invited Speaker, 14th International Workshop on Mobile Distributed Database System, Prague, September 2003.
52. Keynote Speaker at International Conference on Advances in Computing and Communications (ADCOM), Bhuvneshwar, India, December 2001.
53. Chairman, IEEE workshop on Secure Mobile Systems, New Orleans, October 2001.
54. Keynote Speaker at Greece Database Conference, Ioannina, Greece, May 2001.
55. Invited Speaker at International Workshop on Mobility in Databases (MDDS-2000), London, September 2000.
56. Invited Speaker at International Conference on Data Warehousing and Knowledge Discovery (DaWak-2000), London, September 2000.
57. Keynote Speaker at Database and Expert Systems (DEXA-99) conference, Florence, September 1999.
58. Chairman of 18th IEEE Symposium on Reliable Distributed Systems and Three Workshops on Multimedia, Security and Parallel and Dist. Systems, October 1998, Purdue University (156 attendees).
59. Invited Speaker at IEEE ASSET-98 Workshop, March 1998.
60. Chairman of the Steering Committee of the IEEE Symposium on Reliable Distributed Systems, 1995-1999. (Also, Liaisons of the Technical Committee of Distributed Processing).
61. Keynote Speaker, Sixth International Conference on Databases and Expert Systems (DEXA-95), London, UK, September 1995.
62. Chairman of Workshop on Research Issues in Digital Libraries, in association with DEXA-95, London, September 1995.
63. Co-Chair of the NASA International Conference and Forum on Advances in Digital Libraries, Washington DC. (Jointly funded by NASA, ARPA, AT&T, BellCore and NSF), May 1995.
64. Co-Chair of the Rutgers-Purdue Workshop on Digital Libraries, Newark (jointly sponsored by funding from AT&T and BellCore), May 1994.
65. General Chair of the International Conference on Information and Knowledge Management, Gaithersburg, Maryland, November 1994.
66. Vice-chair of ISMM Conference on Parallel and Distributed Systems, Las Vegas, October 1994.

67. Program Chair of the IEEE Workshop on Parallel and Distributed Systems, Princeton, October 1993.
68. Invited Speaker in the International Conference on Intelligent and Cooperative Information Systems, Rotterdam, May 1993.
69. Tutorial Speaker in IEEE Symposium on Reliable Distributed Systems, Princeton, NJ, October 1993.
70. Program Chairman of the International Conference on Information and Knowledge Management, Washington DC, November 1993.
71. Invited Speaker, International Conference on Information and Knowledge Management, Baltimore, November 1992.
72. Co-Guest Editor of IEEE Computer (special issue on Object-Oriented Systems and Applications), October 1992.
73. Co-Program Chairman (with Nabil Adam) of the Rutgers-Purdue Workshop on Current Issues in Database Systems and Applications, Newark, October 1992.
74. Tutorial Speaker in IEEE Symposium on Reliable Distributed Systems, Houston, October 1993.
75. General Vice Chair of the IEEE Technical Committee on Distributed Processing, January 1992-December 1993.
76. Invited Speaker at the Annual Conference of the Computer Society of India, October 1991, New Delhi, India.
77. Program Chairman of IEEE Computer Society's Workshop on Design Principles for Experimental Distributed Systems, October 1986, Purdue University, West Lafayette. (A special issue of IEEE Transactions on Software Engineering in June 1989 published selected papers that were presented at the workshop.)
78. Vice Chairman of Program Committee for Ninth IEEE Computer Society's Conference on Distributed Computing Systems, Newport Beach 1989. (Distributed Systems Architecture Track.)
79. American Liaison of Tenth IEEE Computer Society's Conference on Distributed Computing Systems, Paris, 1990.
80. Program Chairman of the IEEE Workshop on Experimental Distributed Systems, October 1990, Huntsville, Alabama.
81. Founding member of IEEE Data Engineering Conference Committee, 1985
82. Vice Program Chairman of IEEE Computer Society's Sixth International Conference on Distributed Computing Systems Conference, May 1986, Cambridge.
83. Vice Chairman of IEEE Computer Society's Technical Committee on Distributed Processing, (1982-1984).
84. Founder of IEEE Computer Society's Symposium on Reliability in Distributed Software and Database Systems. (Renamed Reliability in Distributed Systems). Program Chairman (July 1981), General Chairman (July 1982), and Program Committee Member (1983-1986, 1988-1989, 2004-2008) for IEEE Computer Society's Symposia on Reliability in Distributed Software and Database Systems.
85. Member of IEEE computer society Education Activity Board, (1982-1983)

86. Member of IEEE computer society Publication Board, (1981-1984)

Graduate student and postdoc supervision

Postdocs and visiting scholars

1. Dr. Sanjay Madria (1998-2000)
2. Dr. Ladjel Bellatreche (2000)
3. Dr. Malika Mahoui (2000-2001)
4. Dr. I Young Chung (2001-2002)
5. Dr. Florian Baumgartner (2002)
6. Dr. Mamata Jenamani (2003-2004)
7. Dr. Leszek Lilien (2002-2006)
8. Dr. Xiaoxin Wu (2002-2005)
9. Dr. Wen Zen (2003-2004)
10. Dr Jungho Huh (2006-2010)
11. Dr. Ruy Olivier (2007-2009)
12. Dr. Rui Jiang (2013-2015)
13. Dr. Gong Tao (2012-2014)
14. Dr. Hongsong Chen (2014-2016)
15. Dr JunSong Fu (2018-2020)
16. Dr. Sikai Chen (2020-2023) (with Prof. Sam Labi in Civil Engineering)
17. Prof. Ruy Oliviera (2022-2023), visiting scholar
18. Prof. Nagender Aneja (2023-2024), visiting scholar.

Graduate Students (Major Advisor)

1. L. Li, Large Language Models, (2023-)
2. Z Liu, Collaborative Attacks (2023-) Post Preliminary exam from April 2024
3. M. Kim, Quantum computing optimization (2023-), Fellowship from Air Force
4. S. Mishra, Scalable Distributed Systems (2025-)

Graduated Students with Ph. D (Major Advisor)

5. Cecil Hua, "Verification of Concurrency Control Algorithms for Distributed Database Systems," (1979-1981). (Employed at Internal Revenue Service after IBM.)
6. Leszek Lilien, "Integrity in Database Systems," (1980-1983). (Faculty at Western Michigan University.)

7. Zwang Ruan, ``Replication in Distributed Systems,’’ (1984-1986) (Motorola, China)
8. John Riedl, ``Formal Models and Implementation of Adaptable Distributed Systems,’’ (from 1985-1989). (Was Distinguished Professor at University of Minnesota.)
9. Pei-Jyun Leu, ``Consistent State Detection and Recovery for Concurrent Processing,’’ (from 1986-1988.) (Employed at Hewlett Packard Corporation.)
10. Shy Renn Lian, ``Global State Detection in Distributed Systems,’’ (from 1986-1990). (Employed at AT&T Corporation.)
11. Enrique Mafla, ``Transaction Processing in Operating System Kernel,’’ (from 1988-1990). (Professor at a University of Ecuador.)
12. Shirley Browne Moore, ``Recovery in Replicated Database Systems,’’ (1988-1990). (Faculty at University of Texas at El Paso)
13. Sumi Helal, ``Adaptability to failures in Distributed Systems,’’ (1988 -1991). (Professor at University of Florida.)
14. Srinivasan Jagannathan, ``Composite Object Replication in Distributed Database Systems,’’ (from 1988-1992). (Employed at Oracle Corporation.)
15. Yin-he Jiang, ``Enhancements to Relational Database Systems,’’ (from 1990-1994). (Employed at Oracle Corporation.)
16. Yongguang Zhang, ``Communications in Large Scale Distributed Systems,’’ (from 1990-1994). (Microsoft Research)
17. Aidong Zhang, ``Maintaining Consistency in Multi-databases,’’ (from 1993-1994). (Distinguished Professor at SUNY Buffalo and now chair professor at University of Virginia)
18. Evaggelia Pitoura, ``Advanced Transaction Model and Relaxed Consistency Criterion for Mobile Environments,’’ (from 1993 -1995). (Professor at University of Ioannina in Greece.)
19. Xiangning Liu, ``Experimental Study of Data Communication and Replication for Transaction Processing over Large Number of Distributed Sites,’’ (from 1993 -1995). (Employed in Sybase Corporation.)
20. Shunge Li, ``Experiments in Multi-media Object Oriented Systems,’’ (from 1993-1997). (VP at Wistron AiEdge Corporation.)
21. Shalab Goel, ``Concurrency and Coherency Control in Shared Disk Parallel Database Systems,’’ (from 1995-2000). (Employed at GE Digital)
22. Melli Annamalia, ``Context-based Retrieval in Digital Image Libraries,’’ (from 1993-1997). (Employed at Oracle Corporation.)
23. Sheng-Yih Wang, ``Adaptable Video-Audio Conferencing,’’ (from 1995-2000). (Principal Engineer at Palo Alto Networks.)
24. Ahsan Habib, ``Active Networks and DiffServ,’’ (from 2000-2003). (Employed as VP at Telenav, Santa Clara).
25. Mohamed Hefeeda, ``Multimedia Streaming,’’ (from 2001-2004). (Director of CS at Simon Fraser University, Canada).
26. Yi Lu, ``Adhoc Networks,’’ (from 2000-2004). (Employed at Microsoft Corporation.)
27. Yuhui Zhong, `` Formalization of Trust,’’ (from 2001-2005). (Employed at Microsoft Corporation.)

28. Weichao Wang, "Secure Routing in Wireless and Mobile Networks," (from 2002-2006). (Head of department at Univ of North Carolina, Charlotte)
29. Gang Ding, "Cross-layer Algorithms for Mobile Wireless Networks," (from 2002 - 2006). (Employed at Olympus Communication Technology of America)
30. Ahmet Burak Can, "Trust and Anonymity in Peer-to-Peer Systems," (from 2004 -2007). (Faculty at Hacettepe University, Turkey.)
31. Amit Sirsat, "Self-Configuration Algorithms for Mobile Adhoc Networks," (from 2004 - 2008). (Employed at Apple Corporation)
32. Yu Zhang, "Analysis of Port Scanning Attacks," (from 2006-2009). (Employed at Google)
33. Nwokedi Idika, "Security Measures" (from 2007-2010) (Employed at Google)
34. Pelin Angin, "Autonomous Agent-Based Mobile-Cloud Computing" (from 2009-213) (Employed at Middle Eastern Technical University, Turkey)
35. Ruchith Fernando, Privacy in Social Messaging And Identity Management (from 2011-2014) (Employed at Amazon)
36. Rohit Ranchal, "Cross-Domain Data Dissemination and Policy Enforcement" (from 2010-2015) (Employed at Amazon Corporation)
37. Norman Ahmed, "Design, Implementation and Experiments in Moving Target Defense" (from 2010-2016) (Employed at Air Force Research Laboratory)
38. Mehdi Azarmi, "End-to-End Security in Service-oriented-architecture (from 2010-2016) (Employed in Salesforce Corporation)
39. Denis Ulybyshev, Privacy preserving Data Dissemination (from 2015-2019) (Employed at University of Tennessee, Cookeville now at Florida Technology University, Lakeland)
40. Amber Johnson, Wearable device Security (from 2014-2019) (Employed at Northrup Grumman Corporation, Now Entrepreneur as Chief Executive Officer NEXTGENEDU INC)
41. Miguel Villarreal-Vasquez, Anomaly Detection and Secure Deep Learning Algorithms under Adversarial Situations (from 2016-2020) (Employed at J.P. Morgan)
42. Ganapathy Mani, Deep learning Based Models for Autonomy and Cybersecurity Intelligence in Autonomous System (from 2016-2020) (Employed at JP Morgan as VP for ML)
43. Servio Ernesto Palacios Interiano, Auditable Computations on (Un)Encrypted Graph-Structured Data (from 2017-2020) (Employed in startup, QLever.io and now professor in Tecnológico de Monterrey (Monterrey's Tech, México)
44. Alina Nesen, Anomaly Detection in Multi-modal Data with Semantic Analysis, (from 2018-2022) (Employed at Target)
45. K.A.L. Solaiman, Explainable Embedding-based Representation of Data Objects for Augmented Semantic Search, (from 2018- 2023) (Employed at University of Maryland, Baltimore)
46. Marina Wagdy Wadea Haliem, Novelities in Ride sharing games and Reinforcement Learning, Ph.D (from 2018-2022), (Employed at Google)
47. Aala Oqab Alsalema, Secure Authentication and Privacy-Preserving Techniques in Vehicular ad-hoc networks, Ph. D (2018-2024), Employed at Jouf University, Saudi Arabia

48. Mijanur Palash, Video analysis to detect Autism and Mental Problems, (from 2020-2023) (Employed at Oakridge National Laboratory and now in Amazon)
49. Trevor Bonjor, Towards Novelty-Resilient AI: Learning in Open World, Ph. D (from 2020 - 2024) (Employed at UC-Sandiego)
50. Chang-Lin Chen (from 2020-2025, co-advised with Vaneet Agarwal for two years, ECE/IE) (Employed at Tik-Tok)
51. Shafqat Islam, Security and ML to discover Novelities and adaptation in AI systems (2022-2025) (Employed at Purdue Northwest)
52. L. Li, Large Language Models, (2023-)
53. Z Liu, Collaborative Attacks (2023-) Post Preliminary exam since April 2024
54. M. Kim, Optimization of Adiabatic Quantum Algorithm for Integer Factorization (2023-)
55. S. Mishra, Enhancing the Robustness of ML-based Intrusion Detection Systems in Dynamic Networks, (2025-)
56. K. Han, Making Distributed Storage Systems Reliable: Compatibility, State Reachability, and Observability. (2025-)

Graduate students who completed an independent study in recent years

- Akshay Ramakrishnan (Spring 2024) *Resiliency Analysis of HCP*
- Shreya Sushil Sapale (Spring 2024) *Resiliency of HCP for Space Applications*
- Shreya Sushil Sapale (Summer 2024) *Resiliency of HCP for Space Applications*
- Vijayarajan Janani, (Spring/Fall 2023) Software Diversity
- Mohamed Yilmaz Ibrahim, (Spring/Fall 2023) Real Applications of ML and Heterogeneous Computing in Space Applications for Reliability.

List of PhD committees served on (in 2024)

Chowdhury Mohammad Rakin Haider (CS), Chuqing Gao (CS), Chenzhe Jin (CS), Shige Liu (CS), Xi Pang (CS), Yi Sun (CS), Dipesh Tamboli (ECE), Chang-Lee Chen (ECE)

Research with undergraduates (Various Years, over 40 students some with publications)

1. Mentor for Emerging Leaders Science Scholars program (in College of Science) (2022-2024)
2. Four students in 2024, Involved in Research Project, Capstone Project supervision
3. Independent study by eight undergraduates (in lieu of CS 490 course)
4. Hosted interns from IIT (last few summers) for research

5. Freshman Honors seminar.
6. Active in contacting high school students who are prospects for the freshman class of school of science and served on the awards committee. Meeting students and families of prospective freshman
7. Helping minority students in school of science (voluntarily) in Computer Science courses. Member of the School of Science Minority Affairs Committee. Member of the Horizon program to retain minorities. Member of Undergrad School of Science Research Committee.
8. CS 490 (Independent Study): Have supervised 8 undergraduate students who have mainly worked in Raid laboratory and were funded through NSF and AT&T grants. Three students are currently supported by NSF REU grant.

FUNDING

Research Grants/Contracts

1. Iterative Self Checking LLMS with constraint programming for Robust TSP Optimization, Submitted to SONY Faculty Research Award, \$100,000, 2025
2. World Models for Deployable Reinforcement Learning Agents: Autonomous Driving Across Simulation and Physical Domains, Y. Feng, S. Labi, B. Bhargava, submitted to US department of Transportation, \$110,000 (plus Purdue cost share of \$110,664), 20026
3. Hybrid Autoregressive and Non-Autoregressive Retrieval Architectures for Real-Time Decision Support in Autonomous and Smart Mobility Systems, Submitted to Spark Scheme, Government of India, \$24,000, 20026
4. Building Robust Temporal Reasoning Agents, Submitted to Amazon Faculty Research Program, \$70,000 cash plus \$50,000 AWS credits, 2025
5. CRRSP: Resiliency of Heterogeneous Computing Platforms for Space Systems, Sandia National Laboratory, \$160,000 per year, 2023-2025
6. MTD algorithm and adaptation on an ARINC-825/CAN bus and Space Wire (SpW) bus, Sandia Laboratory, \$150,000 per year, (\$435,000 received) 2019-2023
7. Software Defined Networking in Automotive Environment, Ford Corporation, \$213,054 (2020-2022)
8. Real Applications of Learning Machines (REALM) Consortium, Northrop-Grumman Corporation, 2019-2022 (\$460K per year with MIT, CMU, Stanford), (\$200,000 per year Purdue share for last three years) (Ranked highest in nationwide competition), 2019-2099 (unrestricted research fund)
9. Microsoft Corporation \$19.5K (gift by alumni)
10. Countering Adversarial AI/ML for Protection and Threat Recognition in Intelligent Autonomous Systems, Northrop Grumman Corporation, \$125,000, 2020-2021
11. Generating Novelty in Open-world Multi-agent Environments (GNOME), Darpa (joint with USC-ISI), \$1,245,990 (Purdue share over 42 months) (Total approximately \$3.5 million) 2019-2023
12. Secure Intelligent Autonomous Systems with Cyber Attribution, Northrop-Grumman Corporation, \$125,000, 2018- 2019
13. Secure graph databases, JPL/NASA, \$24,500, 2018

14. Secure Intelligent Autonomous Systems with Cyber Attribution, Northrup Grumman Corporation, \$125,000, 2018-2019
15. Intelligent Autonomous Systems, Northrop-Grumman Corporation, \$150,000, 2017-2018
16. Privacy Preserving Data Dissemination and Data leakage, Purdue Computer Science Corporate Partner Award, Support of one graduate student and travel 2017-2018, \$50,000
17. Engineering Security and Performance Aware Vehicular Applications for Safe and Smarter Roads, funded by Qatar Foundation (with Ala Al-Fuqaha and Elyes Ben Hamida), \$1,000,000, 2015-2018 (Purdue share \$135,000)
18. Secure/Resilient Systems and Data Dissemination/Provenance, Northrop-Grumman Corporation, \$200,000, 2016-2017
19. Privacy-Preserving Data Dissemination and Adaptable Service Compositions in Trusted & Untrusted Cloud, Northrop-Grumman Corporation, \$210,000 (additional \$40,000 for MIT collaboration), 2015-2016
20. Monitoring-Based System for E2E Security Auditing and Enforcement in Trusted and Untrusted SOA, Northrop-Grumman Corporation, \$199,992, 2014-2015
21. End to End Security in Mobile Cloud, AFRL, \$11,000, 2013
22. End to End Security Policy Auditing and Enforcement in Service Oriented Architecture, Northrop-Grumman Corporation, \$200,000, 2013-2014
23. Planning Grant: I/UCRC for Net-Centric Software and Systems Center Research Center, NSF, \$24,123, 2013-2015
24. Protecting and Securing Supply Chain Data throughout its Lifecycle and CERIAS security center, \$15,000, 2012-2013
25. Protecting and Securing Supply Chain Data throughout its Lifecycle, PLM center of Excellence, \$30,000, 2012-2013
26. Opportunistic Resource Utilization Networks for UAV Ad-Hoc Networking, Navy STTR (with Andrew DeCarlo and Leszek Lilien), Amount: \$70,000, 2010-2011
27. Security in Service-Oriented Architecture, Air Force, Amount: \$295,000, 2010-2011
28. Context based Adaptable Defense against Collaborative Attacks in Service Oriented Architecture, Northrop-Grumman Corporation, Amount: \$105,000, 2009-2010
29. "ITR: Scalable Edge Router for Differentiated Services Networks," NSF, Amount: \$364,828, (2002-2008).
30. "Vulnerability Analysis and Threat Assessment," NSF REU grant, Amount \$5,000, (2008-2009)
31. "Workshop on Pervasive Systems", Funding obtained from CRA-W, Air Force, and proposal submitted to NSF (with Sanjay Madria), 2008
32. Event-order based model for Collaborative Attack, PRF, 2008-2010
33. "Collaborative Attacks on Wireless Networks", Institute for Information Infrastructure Protection (I3P) Through Homeland Security and Dartmouth College, Amount \$150,000 (2007-2009)

34. ``Supplement to Secure Mobile Systems', NSF, Amount: \$52,000 (2006-2007).
35. ``The Regenstrief Institute for Healthcare Engineering: Applying the Principles of Engineering and Management for the Improvement of Healthcare," Regenstrief Foundation, Amount: \$1,000,000 per year (with Joe Pekny and Charles Rutledge and others), (2004-2014).
36. ``Secure Private Communication in Mobile Ad Hoc Networks," Institute for Information Infrastructure Protection (I3P) Through Homeland Security and Dartmouth College, Amount: \$149,081, (2004-2006).
37. ``Supplement: ITR: Scalable Edge Router for Differentiated Services Networks," NSF, Amount: \$45,000, (2006-2008).
38. ``REU Supplement: ITR: Scalable Edge Router for Differentiated Services Networks," NSF, Amount: \$15,000 (2006-2008).
39. ``Cellular Assisted Mobile Ad hoc (CAMA) Networks," funded by Motorola, Amount: \$30,000, (2003).
40. ``Vulnerability Analysis and Threat Assessment/Avoidance," NSF, Amount: \$212,473, (2003-2009).
41. ``Trusted Routing and Intruder Identification in Mobile Ad Hoc Networks," CERIAS and Lilly Foundation, Amount: \$22,000, (2002-2003).
42. ``Trusted Route Recovery in Ad Hoc networks," CISCO, Amount: \$85,000, (2002-).
43. ``ITR: Scalable Edge Router for Differentiated Services Networks," NSF, Amount: \$364,828, (2002-2008).
44. ``Formalizing Evidence and Trust for User Authorization," NSF, Amount: \$335,593, (2002-2007).
45. ``Experiments in Security and QoS in Mobile Systems," NSF, Amount: \$109,000, (2001-2003).
46. ``Behavior Based Artificial Agents for Information Security," CERIAS and Lilly Foundation, Amount: \$62,500, (with A. Chaturvedi and S. Mehta), (2001-2002).
47. ``Secure, Survivable, Jam Resistant Communications and Network Management," CERIAS and Lilly Foundation, Amount: \$75,000, (with M. Zoltowski's), (2001-2002).
48. ``Consortium for E-commerce Center," Indiana 21st Century Research and Technology Fund, Amount: \$1,000,000. (PI: Professor S. Mehta in Krannert), (2001-2003).
49. ``Time Based Coordination of Network Embedded Nodes," DARPA, Amount: \$1,900,000. (PI: Professor Kim at UC Irvine), (2001-2004).
50. ``Secure Mobile Systems," NSF, Amount: \$279,172 (2000-2006).
51. ``Static and Dynamic Security in Web Data warehouses," CERIAS and Lilly Foundation, (with Madria and Mohania) Amount: \$70,000 (2000-2002).
52. ``MSI: A Research Infrastructure for Integrated Quality of Service in Multimedia Computing Environments," NSF, (with seven Co-PIs), Infrastructure Grant, Amount: \$2,600,000 (1999-2004).
53. ``Distributed System Architecture and Services for Multimedia Systems," IBM, Amount: \$35,000 (1999-2003).

54. ``Experiments in Adaptable Distributed Systems," NSF, (1999-2003), Amount: \$251,500.
55. ``Experiments in Adaptable Communication Systems," NS, (1999-2001), Amount: \$66,000.
56. ``Security Issues in Mobile Networks with Movable Base Stations," CERIAS and Lilly Foundation, Amount: \$80,000, (1999-2001).
57. ``Multimedia Traffic Control using Active Networks," PRF, Amount: \$23,332, (1999-2001).
58. ``Adaptable Video Conferencing," (collaboration with EPFL, Lausanne), Purdue Office of International Programs, Amount: \$2,500.
59. ``Experiments in Adaptable Communication Services," NSF, (1999-2001), Amount \$66,000.
60. ``Integrated Analysis & Testing of Distributed Software," IBM, (1997-1998), Amount: \$49,998.
61. ``REU Supplement to Communication Experiments for Widely Distributed Environments," NSF, (1996-1998), Amount: \$10,000.
62. ``Adaptable Video Conferencing," AT&T Foundation, (October 1995-September 1996), Amount: \$23,000.
63. ``Distributed System Control," Air Force Rome Laboratory (via Lockheed Martin), (1995-1996), Amount: \$75,000.
64. ``REU Supplement to Communication Experiments for Widely Distributed Environments," NSF, (1997-1998), Amount: \$10,000.
65. ``Consistency and Transaction Management in Mobile Computing Environment," Purdue Research Fellowship grants, (February 1994), Amount: \$20,400.
66. ``Communication Experiments for Widely Distributed Environments," National Science Foundation, Amount: \$314,641, (July 1995-December 1999).
67. ``Characterization of Architecture Framework and Replication," Defense Information System Agency (DISA), Amount \$75,000, (August 1994-January 1995). (Through Army Research Laboratory Contract).
68. ``Information Retrieval for a Large Repository of Complex Data," NASA, (July 1994-June 1997), Amount: \$66,000.
69. ``Six International Travel grants," Purdue Research Foundation and MUCIA.
70. ``Experiments in Large Scale Distributed Systems," AT&T Foundation, (November 1993-October 1994), Amount: \$25,000 (with Michael Young).
71. ``Experiments in Transition to Large Scale Open System Environment," Army Research Laboratory (Software Technology Branch), (January 1993-1995), Amount: \$812,000 (joint funding with DISA).
72. ``Experiments in Adaptability to Failures in Distributed Systems," NASA, (July 1991-June 1994), Student Fellowship, Amount: \$22,000 per year.
73. ``Communications Software for Reliable Distributed Systems," AT&T Foundation, (November 1990), Amount: \$30,000.

74. ``Distributed Object Database System," NASA, (July 1990-June 1993), Student Fellowship, Amount: \$22,000 per year.
75. ``Reliable Processing in Distributed Database Systems," National Science Foundation (REU supplement), (May 1990-July 1991), Amount: \$8,000.
76. ``Adaptability to Failures in Distributed Systems," Purdue Research Foundation, (August 1990 -August 1992), Amount: \$24,000.
77. ``Design and Implementation of an Adaptable Distributed System," U.S. Army Institute for Research in Management Information, Communication, and Computer Sciences (AIRMICS), (January 1992-December 1992), Amount: \$101,832.
78. ``Design and Implementation of an Adaptable Distributed System," U.S. Army Institute for Research in Management Information, Communication, and Computer Sciences (AIRMICS), (April 1990-December 1991), Amount: \$98,554.
79. ``Reliable Processing in Distributed Database," National Science Foundation, (August 1989-July 1991), Amount: \$57,027.
80. ``Checkpointing in Distributed Systems," Purdue Research Foundation, (August 1988-August 1990), Amount: \$14,400.
81. ``Replication Copy Control," Unisys, (August 1988-August 1989), Amount: \$30,000.
82. ``Experiments in Communications and Distributed Systems," AT&T, (November 1988-December 1989), Amount: \$30,000.
83. ``Design of an Adaptable Distributed System: Phase IV," AIRMICS (grant via NASA), (May 1989-April 1990), Amount: \$120,281.
84. ``Design of an Adaptable Distributed System: Phases III," AIRMICS (grant via NASA), (March 1988-April 1989), Amount: \$115,600.
85. ``Design of an Adaptable Distributed System: Phase II," AIRMICS (grant via NASA), (May 1987-February 1988), Amount: \$122,391.
86. ``Design of an Adaptable Distributed System," AIRMICS (grant via NASA), (June 1986-May 1987), Amount: \$83,473.
87. ``Design of an Adaptable Distributed System," NASA, (June 1986-May 1987), Amount: \$31,075.
88. ``Site Failure/Network Partition Recovery," SPERRY Corporation, (June 1, 1986-March 1988) (with Mike Atallah), Amount: \$60,000.
89. ``Design of an Adaptable Distributed System," Purdue Research Foundation (August 1986-July 1988), Amount: \$14,100.
90. ``Reliability and Integrity in Distributed Database Systems," SPERRY Corporation, (June 1, 1985-May 31, 1986) (with Mike Atallah), Amount: \$60,000.
91. ``An Integrated Approach to Software Reliability," U.S. Dept. of Transportation, (1985-1988): up to \$200,000, based on task-order contracts.
92. ``Systems Structures for Software Reliability in Enroute Air Traffic Control Systems," (Phases 2 and 3) U.S. Dept. of Transportation, (March 1983-February 1985), Amount: \$64,000.
93. ``Systems Structures for Software Reliability in Enroute Air Traffic Control Systems," U.S. Dept. of Transportation, (September 1980-March 1983), Amount: \$56,000.

94. "Software Reliability in Air Traffic Control Systems," U.S. Dept. of Transportation, (September 1979-August 1980), Amount: \$47,000.

Submitted Proposals

1. SaTC 2.0: RES: Intelligent Defenses against Collaborative Attacks in Autonomous UAV networks, NSF \$499,999 (2025-2028) Submitted
2. Digital Assurance for High Consequence Systems (DAX) with Sandia Laboratory Submitted by Sandia PI jointly with Purdue.
3. Framework for Ransomware Prevention in Supply Chains through Machine Learning and Risk Analysis, NSF, \$220,000 submitted, under review, 2025-2028
4. Promoting Robust and Safe Operations of CAVs using a Secure and Decentralized Machine Learning Framework, Bhargava (PI), Sam Labi (Co-PI), \$200,000 submitted under review.
5. LLM and UAV for Weed Management, AI-Fusion at Purdue, \$100,000, submitted with Prof. Saraswat as PI (ABE) and Aggarwal (IE)
6. CIRC: New: Open Knowledge Graph-as-a-Service Community Infrastructure for AI-inspired Active Cyber Defense, Senior Personnel, NSF, \$2,000,000 submitted, under review, 2025-2028

TEACHING

CS 592EAI, Spring 2026, Applications of ML and Explainable AI, 25 students

CS 448 Spring 2024, Introduction to Relational Database Systems, 105 students (Course 4.0, Instructor 4.7)

CS 448 Fall 2024, Introduction to Relational Database Systems, 60 students (Course 4.0, Instructor 4.6)

CS 590 and 699 (Thesis research)

Teaching highlights in past years:

1. Advising CS honor students (2022-2026)
2. Independent study by eight undergraduates (in lieu of CS 490 course)
3. Hosting interns from IIT (last few summers)
4. Freshman Honors seminar.
5. Active in contacting high school students who are prospects for the freshman class of school of science and served on the awards committee. Meeting students and families of prospective freshman
6. Helping minority students in school of science (voluntarily) in Computer Science courses. Member of the School of Science Minority Affairs Committee. Member of the Horizon program to retain minorities. Member of Undergrad School of Science Research Committee.
7. CS 490 (Independent Study): Have supervised 8 undergraduate students who have mainly worked in Raid laboratory and were funded through NSF and AT&T grants. Three students are currently supported by NSF REU grant.

College of Science nominee for Murphy award (highest in Purdue for undergrad teaching)

1. CS 590: (Situation Awareness, Adversarial ML and Explainable AI) Develop tools and systems that apply ML to real applications on real data and try to deal with attacks and explain the decisions of AI powered decision making. In addition, the seminar will discuss methods to make these tools more efficient and more accessible. (Fall 2020) (Student Evaluation 3.92/4.0)
2. CS 542: (Distributed Database Systems). Seven new projects have been created on Video Conferencing, Communications, Multi-media, Digital Libraries, and Mobile Databases, Web Caching, Server Less Computing. The course has changed to deal with distributed computing in new emerging applications and technologies. (Started in 1985 and offered many times) (Student evaluation 4.7-4.9/5.0)
3. CS 348: (Information System). I revised the course content and taught it as nuts and bolts of technologies that are needed for building information systems. This included physical and logical design of information systems, data mining, database warehouses, cooperative information systems, interoperability, and commercial systems. I brought outside speakers and arranged a visit to a local company. (Student Evaluations 4.5/5.0)
4. CS 448: (Introduction to Database Systems). Updated the course by introducing concepts of Object-Oriented, Client-Server, and multi-media databases. (Student Evaluations 4.8/5.0)
5. CS 490 (Emerging Technologies and Fundamental of Computer Science), Seminar for Minorities in non-CS majors, offered for three semesters (Student Evaluations 4.9/5.0)
6. CS 690B: (Research Seminar on Cloud Systems for Blind and Hearing Impaired). Fall 2010, first offering.
7. CS 641: (Multimedia Database Systems). Fall, 2008 first offering. Covers topics such as Digital Libraries, Video Conferencing, Mobile MM Support (3G, 4G systems), QoS, Media Streaming
8. Seminars at other Universities and Thesis Committees: I have served on Ph.D. Committees, offered Ph.D. seminars and helped graduate students in EPFL, Lausanne, ETH, Zurich, and Rutgers University, Queens and James Cook University, South Africa, I.I.T Delhi, Humboldt University, Berlin, and University of Berlin, Germany, India

2. Tutorials at International Conferences and Institutes

9. I have organized tutorial notes on several topics (a) Configurable Distributed Database Systems: Living with Failures and Surviving Catastrophes, (b) Reliability and Performance Evaluation of Distributed Database Systems, (c) Communication Facilities for Transaction Processing, and (d) Privacy and Security (Recently offered in Fall 2020 to 300 students/faculty in Internationally organized seminars)
10. These have been published by IEEE and EPFL, Lausanne and have been presented to various industry groups and conference attendees. (Presentations 40-hour course to 250 faculty in India and another 40-hour course in a major university in China)
11. MHRD Scheme on Global Initiative on Academic Network (GIAN): Course Title: Advanced Topics in Cybersecurity: Emerging Threats and Defense Strategies at NIT India

3. Undergraduate (extra activities, Various Years)

12. Advising CS honor students (2025-2026)
13. Independent study by eight undergraduates (in lieu of CS 490 course)
14. Hosting interns from IIT (last few summers)

15. Freshman Honors seminar.
16. Active in contacting high school students who are prospects for the freshman class of school of science and served on the awards committee. Meeting students and families of prospective freshman
17. Helping minority students in school of science (voluntarily) in Computer Science courses. Member of the School of Science Minority Affairs Committee. Member of the Horizon program to retain minorities. Member of Undergrad School of Science Research Committee.
18. CS 490 (Independent Study): Have supervised 8 undergraduate students who have mainly worked in Raid laboratory and were funded through NSF and AT&T grants. Three students are currently supported by NSF REU grant.

SERVICE

Editorial Boards (Some are in past)

1. Editor-in-Chief: International Journal of Security and Its Applications (ISSN: 1738-9976)
2. Editor-in-Chief of International Journal of Multimedia Technology (IJMT)
3. Editor-in-Chief of Journal of Advanced Computer Science & Technology (ISSN: 2227-4332)
4. Editor of IEEE Transactions on Cloud Computing, (2016- 2020)
5. Editor of IEEE Transactions on Knowledge and Data Engineering, (1996-2000)
6. World Wide Web Journal (Guest Editor), Special Issue on Information Management on Internet, (2002).
7. Editor of Journal of System Integration, (1999-2012).
8. Editor of International Journal of Advance Innovations, Thoughts & Ideas (ISSN: 2277-1891)
9. Editor of International Journal of Multi-Media Systems' Tools and Applications, (1998-2020).
10. Editor of International Journal of Cooperative Information Systems, (1999-2012).
11. Editor of IEEE Transactions on Mobile Computing, (2004-2008).
12. Member of Advisory Board International Journal on Systems, Cybernetics, and Informatics (Indian publication), (2012-)
13. Editor of International Journal of Communication Networks and Distributed Systems, (IJCNDS) (2011-)
14. Editor of Recent Patents On Computer Science, Bentham Science Publishers (2011-)
15. Member of Advisory Board for the Journal of Science, Technology and Management, India
16. Associate editor of International Journal on Digital Library Systems, (2010- 2014)
17. Editor of Journal of Advances in Multimedia, (2011-)
18. Advisory Board of FTRA - Future Technology Research Association International
19. Editor of *Journal of Information Security (JIS)*, (2010-)
20. Editor of International Journal of Information and Telecommunication Technology, (2010-)
21. International Journal of Next-Generation Computing (IJNGC), (2010-)

22. Journal of Immune Computation, ISSN : 2234-4306 (Print), ISSN : 2234-4314 (Online)

NATIONAL PROFESSIONAL COMMITTEES

Major Role

87. Editor-in-chief, International Journal of Communications and Network, ISSN Print: 1949-2421, ISSN Online: 1947-3826, www.scirp.org/journal/cn
88. Member-International Advisory Committee for *Second International Conference on Pioneering Developments in Computer Science & Digital Technology, New Delhi, 2025*.
89. Chairman, International Workshop on Secure and Reliable Microservices and Containers, Vienna, 2022.
90. Chairman of Workshop on Novelties in Open World, ISIC, 2021
91. Chairman, ML4SeC: Workshop on Machine Learning for Security and Cryptography, Istanbul, September, 2019, in conjunction with IEEE International Symposium on Personal, Indoor and Mobile Radio Communications
92. Award Committee in honor of C. V. Ramamoorthy, committee member in IEEE Artificial Intelligence and Knowledge Engineering (AIKE) conference.
93. Best paper C.V. Ramamoorthy award chair, IEEE Symposium on Reliable Distributed Systems, 2018, Brazil
94. Best paper award chair, IEEE Cloud Conference, 2018, San Francisco
95. Organizing Committee, International Conference on Satellite and Telecommunication, September 2018, Stockholm, Sweden
96. Co-chair, International Symposium on Multi-media Security and Digital Forensic Conference, December 2017, Guangzhou, China
97. Co-chair, NSF conference on Network and Security (CanSec), October 2017, Rolla, Missouri
98. General Conference Chair, Third International Symposium on Security in Computing and Communications (SSCC-15), August 2015, India
99. Conference chair, 2016 the 6th International Conference on Power and Energy Systems, Paris, France.
100. Co-chair, International Conference on Advances in Computing, Communications and Informatics (ICACCI-2012), August 3-5, 2012, Chennai
101. Steering Committee for IEEE International Symposium on Wireless Pervasive Computing (ISWPC 2011), Hong Kong, 2011
102. Co-chair, Second IEEE International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2010), Minneapolis, June 2011
103. Advisory Committee, International Conference on Advanced Computing, Networking and Security (ADCONS 2011), NIT Karnataka, Surathkal
104. Advisory Committee, International Conference on Advances in Computing and Communication at NIT (Himachal)-India, 2011
105. Advisory Committee, International Conference on High Performance and Grid Computing, 2011, Chitkara University, India

106. Chair of Steering committee of IEEE Symposium on Reliable Distributed Systems (SRDS)
107. General Chair of the ACM/IET/ICST International Workshop on Performance and analysis of Wireless Networks, to be held in conjunction with The International Conference on Mobile Technology, Applications, and Systems (Mobility 2008), September, 2008, Ilan, Taiwan.
108. Co-Chair of the 2nd IEEE International Workshop on Broadband Wireless Internet Access, to be held in conjunction with the 4th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications(WiMob 2008) October 12, 2008, Avignon, France
109. Co-chair of CRA-W sponsored workshop on Pervasive Computing, St Louis
110. Co-chair, First IEEE International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2007), Toronto, Canada, June 29, 2007
111. IEEE Fellow Committee, 2004, 2005, 2006
112. PolyU's Distinguished Scholar, Hong Kong Polytechnic University 70th Anniversary
113. NSF PI workshop, Area Chair for Privacy & Trust Management, 2003 and 2004.
114. IEEE Computer Society' Technical Achievement Award Committee, 2003.
115. Chairman, IEEE workshop on Secure Mobile Systems, New Orleans, October 2001.
116. Chairman of 18th IEEE Symposium on Reliable Distributed Systems and Three Workshops on Multimedia, Security and Parallel and Dist. Systems, October 1998, Purdue University (156 attendees).
117. Chairman of the Steering Committee of the IEEE Symposium on Reliable Distributed Systems, 1995-1999. (Also, Liaisons of the Technical Committee of Distributed Processing).
118. Keynote Speaker, Sixth International Conference on Databases and Expert Systems (DEXA-95), London, UK, September 1995.
119. Chairman of Workshop on Research Issues in Digital Libraries, in association with DEXA-95, London, September 1995.
120. Co-Chair of the NASA International Conference and Forum on Advances in Digital Libraries, Washington DC. (Jointly funded by NASA, ARPA, AT&T, BellCore and NSF), May 1995.
121. Co-Chair of the Rutgers-Purdue Workshop on Digital Libraries, Newark (jointly sponsored by funding from AT&T and BellCore), May 1994.
122. General Chair of the International Conference on Information and Knowledge Management, Gaithersburg, Maryland, November 1994.
123. Vice-chair of ISMM Conference on Parallel and Distributed Systems, Las Vegas, October 1994.
124. Program Chair of the IEEE Workshop on Parallel and Distributed Systems, Princeton, October 1993.

125. Tutorial Speaker in IEEE Symposium on Reliable Distributed Systems, Princeton, NJ, October 1993.
126. Program Chairman of the International Conference on Information and Knowledge Management, Washington DC, November 1993.
127. Co-Guest Editor of IEEE Computer (special issue on Object-Oriented Systems and Applications), October 1992.
128. Co-Program Chairman (with Nabil Adam) of the Rutgers-Purdue Workshop on Current Issues in Database Systems and Applications, Newark, October 1992.
129. Tutorial Speaker in IEEE Symposium on Reliable Distributed Systems, Houston, October 1993.
130. General Vice Chair of the IEEE Technical Committee on Distributed Processing, January 1992-December 1993.
131. Program Chairman of IEEE Computer Society's Workshop on Design Principles for Experimental Distributed Systems, October 1986, Purdue University, West Lafayette. (A special issue of IEEE Transactions on Software Engineering in June 1989 published selected papers that were presented at the workshop.)
132. Vice Chairman of Program Committee for Ninth IEEE Computer Society's Conference on Distributed Computing Systems, Newport Beach 1989. (Distributed Systems Architecture Track.)
133. American Liaison of Tenth IEEE Computer Society's Conference on Distributed Computing Systems, Paris, 1990.
134. Program Chairman of the IEEE Workshop on Experimental Distributed Systems, October 1990, Huntsville, Alabama.
135. Founding member of IEEE Data Engineering Conference Committee, 1985
136. Vice Program Chairman of IEEE Computer Society's Sixth International Conference on Distributed Computing Systems Conference, May 1986, Cambridge.
137. Vice Chairman of IEEE Computer Society's Technical Committee on Distributed Processing, (1982-1984).
138. Founder of IEEE Computer Society's Symposium on Reliability in Distributed Software and Database Systems. (Renamed Reliability in Distributed Systems). Program Chairman (July 1981), General Chairman (July 1982), and Program Committee Member (1983-1986, 1988-1989, 2004-2008) for IEEE Computer Society's Symposia on Reliability in Distributed Software and Database Systems.
139. Member of IEEE computer society Education Activity Board, (1982-1983)
140. Member of IEEE computer society Publication Board, (1981-1984)

Member of Program Committee of over two hundred international conferences over the years (not listed in detail). Including IEEE Data Engineering Conference (2023-2024)

Panel and review memberships: Review panel for DoD, Air Force, Conference panels.

Other professional service and activities:

Purdue:

Recent: Served on Senate, Member of Diversity, Equity and Inclusion committee, Military Education committee of Senate)

University Wide Committee (Various Years in the past)

1. Senator for Purdue faculty, 2016- 2022
2. Member of Purdue Select Senate Committee regarding sexual assault and misconduct on campus, 2023
3. Member of Equity and Diversity committee of Purdue Senate, 2016- 2022
4. Member of Education and Policy committee of Purdue Senate, 2017-2019
5. Member of Military Education committee of Purdue Senate, 2015-2022
6. CoS council (2023-now)
7. Mentor for Emerging Leaders Science Scholars program 2022-2024.
8. Disability center subcommittee to mentor students in CS 2022
9. Member of the University International Education Committee for three years, Chairman.
10. School of Science representative for the University Advisory Committee on International Programs.
11. School of Science Committee for evaluating PRF XL grants
12. Participant in Mentor Program for minority students (Horizon) 1992- 2024.
13. Member Faculty of the Interdisciplinary Program on Geographical Information. Systems and Remote Sensing, 1984- now.
14. Participant in the Aviation Safety Center Planning Group, (with Ernest Agee of EAS and Warren Stevenson of EE and faculty from technology, Engineering).
15. Participant in the proposal to NSF for Multimedia Technology for Education, 1994-(with Ed Coyle of EE and faculty from Agriculture, Education schools).
16. Reviewer of Global Initiative Faculty Grants
17. Indiana Partnership for Statewide Peer Review Committee on Computer Science (Coordinator Dr. Clinton Fueling at Ball State and Prof. Phil Swain).
18. School of Science (Grievance Committee)
19. School of Science (PRF grants for Faculty review Committee)
20. School of Science (Undergraduate Research Day Committee)
21. Member of Asia Studies Program Taskforce.
22. Evaluation Committee of Lilly Foundation Awards/Proposal under the Executive Vice President's office.
23. Horizon Program (For retaining brilliant minority students).
24. GE Fellowship Evaluation Committee for Minorities and Women.
25. Distant Learning Committee of the University.

26. School of Science (Minority Affairs Committee), 1996-2003.
27. School of Science Council, 2001-2005.
28. School of Science (Minority Faculty Recruiting), 2004-2006.
29. Proposal Writing and Presentation for Regenstrief Health Care Engineering Center (RCHE) establishment
30. School of Science Area Committee for Promotions

COS/CS department:

Recent: Helped four students to apply to CS graduate program from overseas and US undergraduates

Evaluated 9 Ph. D thesis from around the world.

Guided over 4 high school students with research activities and projects. Students were in local high school and from other states. Mentored Horizon students. Mentored one faculty with stress and mental issues in ECE. Mentored faculty with revising proposals or exploring research opportunities.

COS and Departmental Committee (Previous Years)

22. Diversity Committee 2022-now
23. MS admission Committee (2020-2022)
24. Advisor ACM student chapter
25. Captain United Way (2017-2020)
26. Internal Advisory Board of Purdue Center for Educational & Research in Information Assurance & Security (CERIAS)
27. Chairman of Diversity Committee
28. Space Management Committee
29. Graduate Committee
30. Department Head Advisory Committee-Elected by faculty.
31. Colloquia Chairman
32. Faculty Advisor to Association of Computing Machinery (ACM)
33. Faculty Advisor to Indian Students Association
34. Awards Committee.
35. Undergraduate Committee.
36. Promotion Committee.
37. EE Liaison.
38. Industrial Affiliate Committee.
39. CS690S Seminar for New Graduate Students.
40. CS 195 Freshman Honors Seminar.

41. Senate Committee to Prevent Sexual Assault
42. Mentor Emerging Leaders Science Scholars

Outreach activities:

Made phone calls to 40 parents of admitted undergraduate students in CS at the request of Dean and Provost. Encouraged them to join Purdue. Met students and parents during visit to Purdue.

Others

43. West Lafayette High School (Book selection Committee).
44. Happy Hollow School (Organizer of International Night).
45. Five-year review of Computer Science department, Western Michigan University, November
46. Establishing Information Assurance program at Monmouth College.

Government Service (Various Years)

1. Committee for NASA (USRA) for Evaluating Architecture of Embedded Distributed Network Systems
2. Providing Consulting Services to NIST for the Remote Data Access (RDA) protocol for integrating commercial databases over wide area networks
3. Committee to write guidelines and specifications for Data Integration and Distribution with Mr. Bill Wong member from DISA (Defense Information Systems Architecture), Department of Defense.
4. Panel Member: National Science Foundation
5. Panel Member: NASA CAN for Public Use of Earth and Space Science Data over the Internet work
6. Reviewer of proposals from Army Research Lab, NASA
7. Invited Participant at ARPA meeting in St. Louis.
8. AFRL/Navy faculty fellow
9. Special Projects for NSF (Large projects)
10. Reviewer, US State Department (Russia program)

International Activities (Various Years not in chronological order)

1. Reviewer for twenty Ph. D thesis from various countries
2. Hosted a Ph.D student (additional support for faculty exchange) from IIT under the SERB program of India-Purdue collaboration <https://globalpartners.purdue.edu/global-partnerships/india/overseas-visiting-doctoral-fellowship/>

3. Participation in Vaibhav program for India-US exchange of ideas among scientists (organized by Indian Ministry of Science and Technology) (attended by 350 scientists from India and US for 6 sessions)
4. Contributed to funded proposals that were funded for collaborating with Ph.D students and their advisors in India (under the Anubhuti program)
5. Offered a series of lecture on security/privacy in networks, database systems in India (attended by 300 persons) and China (attended by 30 students)
6. Hosting faculty, Ph. D students and Undergraduate from Switzerland, India, China
7. International Conference on High Performance and Grid Computing, Chitkara University, India
8. Chair, 4th International Workshop on Dependable Network Computing and Mobile Systems (DNCMS 2010) held in conjunction with SRDS 2010, India
9. Invited speaker at International Conference on System Integration, Brasilia, November 2008
10. Seminars in Universities of Karlstad, Stockholm, Uppsala, Pierre and Madam Curie, EPFL (2008)
11. Visiting Professor in ETH and EPFL and University of Bern in Switzerland (several summers from 1991-2006).
12. Seminars in Cambridge, ETH, Technical University of Vienna, University of Klagenfurt, HIIT, Technical University of Berlin, Humboldt University. (2006-2008)
13. Chairman of the University's International Education Committee, June 1990-June 1991.
14. Invited Speaker, Computer Society of India, DEXA conference, ICDCI conference 1991, 1995, and 1999.
15. Member of University Advisory Committee on International Programs, September 1990-June 1991.
16. Consultant to University of Indonesia, November 1988-December 1988.
17. Invited Professor at Ecole Polytechnique Federal De Lausanne (EPFL), Various years (1989-2006)
18. Invited Professor at ETH, Zurich, June -August 1991.
19. One Day Seminar to Swiss Industry Consortium, Lausanne, 1993.
20. Invited Speaker in the International Conference on Intelligent and Cooperative Information Systems, Rotterdam, Netherlands, May 1993.
21. One Day seminar at EPFL for Industry and Academics, June 1994.
22. Invited Speaker in the International Conference on System Integration, San Paulo, Brazil, August 1994.
23. Keynote Speaker in the Sixth International Conference on Databases and Expert Systems, London, September 1995.
24. Organizer of a Workshop on Advances in Digital Libraries in the Sixth International Conference on Database and Expert Systems, London, September 1995.
25. Invited Professor, University of Klagenfurt, Austria, 1999.

26. Establishing Collaborative Program with ETH and EPFL, Switzerland, 2001.
27. Seminar in University of Bern and EPFL, 2003.
28. Keynote Speaker, International Workshop on Distributed Computing and Internet Technology, Bhubaneswar, India, 2004.
29. Keynote speaker, DEXA Workshop on Security and Privacy, Krakow, 2006
30. Tutorials on Privacy, Helsinki University and HIIT, 2006
31. Colloquia in Humboldt University and ETH, Zurich, 2007
32. PolyU's Distinguished Scholar, Hong Kong Polytechnic University 70th Anniversary
33. Hosted Ph. D students from University of Bern, Universities in Korea, and Humboldt University, 2008

-----**END of INFORMATION NEEDED by Department**-----

All recent published papers have a pdf file attached on my home page or dblp.

<https://www.cs.purdue.edu/homes/bb/>

and

<https://dblp.org/pid/b/BKBhargava.html>

Additional Information for inclusion in my full resume but NOT REQUESTED by the department.

HONORS AND AWARDS

1. Award for two Ph.D students/alumni: Amber Johnson (Purdue College of Science Early Career Alumni Award for 2024), and Shafkat Islam (One-time employee recognition award for 2023. John Riedl was also a Distinguished alumni of CS department at Purdue in 2011)
2. Distinguished alumnae award from Indian Institute of Science, Bengaluru, India, 2022
3. Fulbright Specialist 2019-2024
4. EAI FELLOW, European Alliance for Innovation
5. Fellow of CERIAS Security Center, Purdue University
6. First and Second Place Awards among all posters in CERIAS security Symposium, Purdue University, April 2019 (Voted by industrial partners)
7. Distinguished Alumnae of D.A.V. College in Jalandhar, India, <http://davjalandhar.com/index.php/campus-watch/alumni/1030-distinguished-alumni>
8. Computer Science Department Corporate Partner's Research Award (voted by industrial partners), April 2017
9. Helen Schleman Gold Medallion award for Advocating and Advancing Women students and Women issues, Mortar Board, Purdue University, 2017
<https://www.cs.purdue.edu/homes/bb/Awards2017/Board-of-Trustee-letter-SchlemanBhargava.pdf>

10. Focus Faculty Award for Outstanding Contributions to Disability Accessibility and Diversity, Purdue University, 2017, <https://www.cs.purdue.edu/news/Bhargava-Wins-Focus-Award.html>
https://www.cs.purdue.edu/homes/bb/focus_award_2017.pdf
11. Best Research Poster award, 6th International conference on Cloud Computing and Service Science (CLOSER), Rome, Italy, 2016
12. Diversity award by College of Science and CS, 2016
13. Best paper award, 6th International IEEE workshop on Dependable Network Computing and Mobile Systems held in conjunction with 34th Symposium on Reliable Distributed Systems (SRDS), Montreal, 2015
14. Best research poster award (voted by corporate partners), Purdue CERIAS security center symposium, March 2015
15. Hind Rattan award, India NRI welfare society, 2015
16. Bharat Gaurav award, India Friendship Society, 2014
17. Guest of Honor at Convocation of Chitkara University, Chandigarh, February 2012
18. Best paper award in International Conference on Advances in Computing Communication – (ICACC), 2011, (Identity Management in Cloud)
<http://www.cs.purdue.edu/news/5-4-11ICACC.html>
19. Engagement award by College of Science and CS, 2011
20. Graduate mentoring award by College of Science and CS, 2009
21. Co-best paper award in Secure Knowledge Management Conference, Buffalo, 2005
22. Seed for Success award by Provost at Purdue, 2005.
23. Inducted in The Book of Great Teachers at Purdue, 2003.
24. Best idea paper, International Conference on Data Warehouse and Knowledge Management Conference, 2000.
25. Technical Achievement Award from IEEE Computer Society, 1999.
26. Outstanding Instructor Award (Purdue ACM Student Chapter), 1998.
27. Golden Core Member of IEEE Computer Society.
28. Outstanding Instructor Award (Purdue ACM Student Chapter), 1996.
29. Fellow of Institution of Electronics and Telecommunications Engineers (IETE).
30. Meritorious Service Certificate from IEEE Computer Society.
31. Fellow of Institute of Electrical and Electronics Engineers (IEEE).
32. Best Research Paper Award, IEEE Data Engineering Conference, 1988.
33. WHO'S WHO in Frontiers of Science and Technology.
34. SHELL fellowship, 1969 (Highest award to the best graduate student at Indian Institute of Technology, New Delhi).
35. Indian National Merit Scholarship, 1963-1969.

36. Merit List: Ranked 2nd out of 3500 students in Punjab University state wide examination, 1966.
37. Merit List: Ranked 13th out of 17000 students in Delhi Higher Secondary examination, 1963.

MEMBER OF PROFESSIONAL ORGANIZATIONS

1. Fellow of IEEE (Institute of Electrical and Electronics Engineers), Steering Committee of Technical Committee on Distributed Processing for Symposium on Reliable Distributed Systems.
2. Fellow of Institute of Electronics and Telecommunications Engineering (IETE)
3. Fellow of the European Alliance for Innovation (EAI)
4. Association of Computing Machinery.
5. Upsilon Pi Epsilon.
6. Fellow of CERIAS security center, Purdue University
7. Fulbright Specialist by Fulbright Foundation, (2019-2025)

PATENT

Method and System for Providing Cellular Assisted Secure Communication of a Plurality of Ad hoc Devices (With Motorola), US7817986 B2
http://www.cs.purdue.edu/news/10-31-11_Bhargava.html

RECENT Software and Demos

WaxedPrune System developed for demo in NGC Tech Fest 2016 and for deployment with NGC customers. (Joint work with MIT W3C.org)
Surveillance Video Querying - [VIDEO], HILDA/SIGMOD, 2020.
 Situation Knowledge on Demand System Demo, NGC Tech Fest, 2020

Following Demos are available on link <https://www.cs.purdue.edu/homes/bb>

Moving Target Defense (MTD) Demo Video
 Data Dissemination Demo Video
 Secure Data Dissemination/Provenance Demo video
 Secure/Resilient Systems Demo video
 Find Them Demo Video

Google Scholar Citations (dated March, 2026)

ALL Since 2020

Citations 18865 3518

h-index 67 27

i10-index 281 87