Nan Zhang

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Appointments

University of Florida	08/2022 – Present

Professor
Department of Management, Warrington College of Business

National Science Foundation	02/2024 – Present

Expert (*Part-Time Program Director*)
Division of Computer & Network Systems
Program responsibility: Secure and Trustworthy Cyberspace (SaTC), machine learning/data science portfolio

American University	07/2018 – 08/2022

Professor
Department of Information Technology and Analytics, Kogod School of Business

Pennsylvania State University	08/2017 – 06/2018

Professor
College of Information Sciences and Technology

National Science Foundation	01/2016 – 08/2017

Program Director
Division of Information & Intelligent Systems
Program responsibilities:
- Information Integration and Informatics (III)
    - managing research projects in database systems, data management, and data analytics
- Secure and Trustworthy Cyberspace (SaTC)
    - serving as the liaison of the Division of Information & Intelligent Systems (IIS) in SaTC
    - managing research projects in privacy and data science
- Critical Techniques, Technologies and Methodologies for Advancing Foundations and Applications of Big Data Sciences and Engineering (BIGDATA)
    - managing research projects in the areas of data management and data analytics

George Washington University	09/2008 – 08/2017

Professor, Associate Professor, and Assistant Professor
Department of Computer Science, School of Engineering and Applied Science

University of Texas at Arlington	08/2006 – 08/2008

Assistant Professor
Department of Computer Science and Engineering, College of Engineering

Education

Ph.D., Computer Science   2006
Texas A&M University, College Station, Texas

B.S., Computer Science   2001
Peking University, Beijing, China

Honors and Awards

INFORMS ISS Bapna-Ghose Social Justice Best Paper Award   2024
for *"Fairness of Ratemaking for Catastrophe Insurance: Lessons from Machine Learning"*

CACM Research Highlight   2020
nominated by SIGMOD and selected by the *Communications of the ACM* as one of the "outstanding research
articles selected from the broad spectrum of computing research"

ACM SIGMOD Research Highlight Award   2019
from ACM SIGMOD, paper "Leveraging Similarity Joins for Signal Reconstruction" selected as one of the
best research papers published in 2018 that exemplify core database research

Best Paper Award   2019
From American Marketing Association (AMA) Summer Academic Conference, Consumer 360 Track

Best Paper Nomination   2019
from Hawaii International Conference on System Sciences

Best Paper Nomination   2018
from Hawaii International Conference on System Sciences

Distinguished Member of the TPC   2017
from IEEE International Conference on Computer Communications (INFOCOM)

Best Paper Nomination   2015
from IEEE International Conference on Intelligence and Security Informatics (ISI), 1 of 5 nominated

Advisor for Third Prize, Graduate Theoretical Award   2015
from 2015 SEAS Student R&D Showcase, The George Washington University

Distinguished Young Lecturer   2014
from The International Conference on Web-Age Information Management (WAIM 2014).

Best Student Paper Award   2013
from ACM International Conference on Information and Knowledge Management (CIKM 2013). One of the
two best papers (along with the best paper award) selected from 1,211 submissions.

Best Paper Award   2013

from IEEE International Conference on Communications (ICC 2013), Communication and Information Systems Security Symposium

GW Technology Transfer Innovation Prize   2012
from the Office of Technology Transfer, The George Washington University (1 per year)

1st Place, GW Business Plan Competition   2012
Team WiseAgg (with Zhuojie Zhou, Ph.D. student), 1st place out of 144 submissions

Faculty Recognition Award   2011
from the School of Engineering and Applied Science, The George Washington University

Outstanding Young Researcher Award   2010
from the School of Engineering and Applied Science, The George Washington University (1 per year)

Best Paper Award   2010
from IEEE International Conference on Networking, Architecture, and Storage (NAS)

CAREER Award   2008
from the National Science Foundation (NSF). According to NSF, this is the most prestigious award in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education, and the integration of education and research.

Selected Research Grants

1.   Co-PI, Use Machine Learning to Model Time and Causality, U.S. Army Research Institute (ARI), Basic Research Program, Recommended for award in FY25, with Heng Xu (PI).

2.   Co-PI, Addressing Biases in Measurement of Self-Reported Privacy Constructs, $100,000, Meta Research, 12/1/2021 - 11/30/2023, with Heng Xu (PI).

3.   PI, FAI: Using Machine Learning to Address Structural Bias in Personnel Selection, $999,177, Fairness in Artificial Intelligence (FAI) Program, jointly sponsored by the National Science Foundation and Amazon, 2/1/2021 - 1/31/2025, with Heng Xu (Co-PI), Mo Wang (Co-PI).

4.   PI, Theore: Theory-Driven Curation and Reusable Robustness Calculus of Social and Behavioral Sciences (SBS) Claims, $249,683, Defense Advanced Research Projects Agency (DARPA), Defense Sciences Office (DSO) Next Generation Social Science (NGS2) Program, 6/17/2019 - 7/16/2020, with Heng Xu (Co-PI).

5.   Co-I, The Center for Innovation in Intensive Longitudinal Studies, $1,896,924, National Institute of Health, 9/20/2018 - 8/31/2022, with Sy-miin Chow (PI), Nilam Ram et al. (Co-Is).

6.   Co-PI, SaTC: CORE: Medium: Situation-Aware Identification and Rectification of Regrettable Privacy Decisions, $904,133, National Science Foundation, Secure and Trustworthy Cyberspace (SaTC) Program, 8/1/2018 – 7/31/2022, with Heng Xu (PI).

7. Co-PI, RR: Establishing & Boosting Confidence Levels for Empirical Research Using Twitter Data, $400,000, National Science Foundation, Science of Science and Innovation Policy (SciSIP) Program, 3/15/2018 – 3/14/2021, with Heng Xu (PI).

8. PI, Intergovernmental Personnel Act (IPA) Assignment, National Science Foundation, $390,506, 1/11/2016 – 1/10/2018.

9. PI, Analytics-based Interface Transformation for Web Databases, $899,958.00 (GW Portion: $156,568), Qatar National Research Fund, 4/1/2015 – 3/31/2018, with Ali Jaoua (Qatar University), Gautam Das (The University of Texas at Arlington).

10. Co-PI, US-Korea Workshop on Security and Privacy for Internet of Things, $30,000, National Science Foundation, Catalyzing New International Collaborations (CNIC) Program, 3/15/2015 – 2/29/2016, with Hyeong-Ah Choi (PI) and Xiuzhen Cheng (co-PI).

11. Co-PI (PI at GW), Efficient Analytics over Hidden Online Social Networks, $449,890 (GW Portion: $208,745), Army Research Office, 12/1/2014 – 11/30/2017, with Gautam Das (PI, The University of Texas at Arlington).

12. Co-PI, Multi-Input Multi-Output (MIMO) Aware Cooperative Dynamic Spectrum Access, $749,374 (GW Portion: $300,000), National Science Foundation, Enhancing Access to the Radio Spectrum (EARS) Program, 9/1/2014 – 8/31/2017, with Xiuzhen Cheng (PI, GWU) and Hyeong-Ah Choi (co-PI, GWU).

13. PI, Privacy-Preserving Framework for Publishing Electronic Healthcare Records, $754,911 (GW Portion: $269,505), National Science Foundation, Smart and Connected Health (SCH) Program, 1/1/2014-12/31/2016, with Heng Huang (The University of Texas at Arlington), Liam O'Neill (University of North Texas Health Science Center).

14. PI, Real-Time Data Analytics Over The Deep Web, $148,625, National Science Foundation, SBIR Program Phase I, 1/1/2013 – 6/30/2013.

15. PI, Membership Inference in a Differentially Private World and Beyond, $495,254 (GW Portion: $165,091), National Science Foundation, Trustworthy Computing Program, 9/1/2011 - 8/31/2015, with Xinwen Fu (UMass Lowell) and Wei Yu (Towson University).

16. PI, Commercialization Feasibility Research and Demonstration Preparation for Privacy-Preserving Location Based Services, $50,000, National Science Foundation, I-Corps Program, 10/1/2011 – 3/31/2012.

17. PI, Suppressing Sensitive Aggregates Over Hidden Web Databases: a Novel and Urgent Challenge, $481,981 (GW Portion: $230,795), National Science Foundation, Trustworthy Computing Program, 7/15/2009 - 7/14/2012, with Gautam Das (The University of Texas at Arlington).

18. PI, CAREER: A Theoretical Foundation for Achievability and Optimization in Privacy-Preserving Data Mining, $440,926, National Science Foundation, Division of Computing and Communication Foundations, 1/1/2008 - 12/31/2012.

19. PI, Proper Location Identification in Wireless Networks, $598,122 (GW Portion: $212,664), National Science Foundation, Division of Computer and Network Systems, 9/1/2007 - 8/31/2011.

20. Co-PI, Data Analytics over Hidden Databases, $136,001, National Science Foundation, Division of Information & Intelligent Systems, 9/1/2008 - 8/31/2010, with Gautam Das (PI, The University of Texas at Arlington). Project Website: http://dbxlab.uta.edu/dataAnalytics.html.

Selected Publications

Journal Articles

1. Xu, H., & Zhang, N. (in press). Goal Orientation for Fair Machine Learning Algorithms, *Production and Operations Management.*

2. Xu, H., & Zhang, N. (2024). An Onto-Epistemological Analysis of Information Privacy Research, *Information Systems Research*, 35(3), 1422-1434.

3. Zhang, N., & Xu, H. (2024). Fairness of Ratemaking for Catastrophe Insurance: Lessons from Machine Learning, *Information Systems Research*, 35(2), 469-488.

4. Zhang, N., Wang, M., Xu, H., Koenig, N., Hickman, L., Kuruzovich, J., Ng, V., Arhin, K., Wilson, D., Song, Q. C., Tang, C., Alexander, L., & Kim, Y. (2023). Reducing Subgroup Differences in Personnel Selection through the Application of Machine Learning, *Personnel Psychology*, 76(4), 1125-1159.

5. Xu, H., & Zhang, N. (2022). From Contextualizing to Context-Theorizing: Assessing Context Effects in Privacy Research, *Management Science.* 68(10), 7383-7401.

6. Xu, H., & Zhang, N. (2022). Implications of Data Anonymization on the Statistical Evidence of Disparity, *Management Science*, 68(4), 2600-2618.

7. Zhang, N., Wang, M., & Xu, H. (2022). Disentangling effect size heterogeneity in meta-analysis: A latent mixture approach. *Psychological Methods*, 27(3), 373-399.

8. Asudeh, A., Das, G., Jagadish, H. V., Lu, S., Nazi, A., Tao, Y., Zhang, N., & Zhao, J. (2022). On Finding Rank Regret Representatives, *ACM Transactions on Database Systems*, 47(3), Article 10, 1-37.

9. Asudeh, A., Augustine, J., Thirumuruganathan, S., Nazi, A., Zhang, N., Das, G., & Srivastava, D. (2021). Scalable signal reconstruction for a broad range of applications. *Communications of the ACM*, 64(2), 106-115.

10. Zhang, N., & Xu, H. (2021). Reconciling the Paradoxical Findings of Choice Overload Through an Analytical Lens, *MIS Quarterly*, 45(4), 1893-1920.

11. Xu, H., Zhang, N., & Zhou, L. (2020). Validity concerns in research using organic data. *Journal of Management*, 46(7), 1257-1274.

12.   Asudeh, A., Augustine, J., Nazi, A., Thirumuruganathan, S., Zhang, N., Das, G., & Srivastava, D. (2020). Scalable Algorithms for Signal Reconstruction by Leveraging Similarity Joins. *The VLDB Journal, 29*, 681-707.

13.   Asudeh, A., Augustine, J., Nazi, A., Thirumuruganathan, S., Zhang, N., Das, G., & Srivastava, D. (2019). Efficient Signal Reconstruction for a Broad Range of Applications. *SIGMOD Record, 48*(1), 42-49.

14.   Xu, H., & Zhang, N. (2019). Privacy in Health Disparity Research. *Medical Care, 57*(6), S172-S175.

15.   Asudeh, A., Nazi, A., Augustine, J., Thirumuruganathan, S., Zhang, N., Das, G., & Srivastava, D. (2018). Leveraging Similarity Joins for Signal Reconstruction. *Proceedings of the VLDB Endowment* (PVLDB), *11*(10), 1276-1288. (Selected for the *PVLDB Reproducibility Highlight Award* in 2018 for its zero-effort reproducibility; the *SIGMOD Research Highlight Award* in 2019; and the *Communications of the ACM Research Highlight* in 2020)

16.   O'Neill, L., Dexter, F., & Zhang, N. (2016). The Risks to Patient Privacy from Publishing Data from Clinical Anesthesia Studies. *Anesthesia & Analgesia, 122*(6), 2017–2027.

17.   Asudeh, A., Zhang, N., & Das, G. (2016). Query Reranking As a Service. *Proceedings of the VLDB Endowment* (PVLDB), *9*(11), 888-899.

18.   Asudeh, A., Thirumuruganathan, S., Zhang, N., & Das, G. (2016). Discovering the Skyline of Web Databases. *Proceedings of the VLDB Endowment* (PVLDB), *9*(7), 600-611.

19.   Yan, H., Gong, Z., Zhang, N., Huang, T., Zhong, H., & Wei, J. (2016). Crawling Hidden Objects with *k*NN Queries. *IEEE Transactions on Knowledge and Data Engineering* (TKDE), *28*(4), 912-924.

20.   Zhou, Z., Zhang, N., Gong, Z., & Das, G. (2016). Faster Random Walks By Rewiring Online Social Networks On-The-Fly. *ACM Transactions on Database Systems* (TODS), *40*(4), Article No. 26.

21.   Pan, X., Ling, Z., Pingley, A., Yu, W., Zhang, N., Ren, K., & Fu, X. (2016). Password Extraction via Reconstructed Wireless Mouse Trajectory. *IEEE Transactions on Dependable and Secure Computing* (TDSC), *13*(4), 461-473.

22.   Lu, Y., Thirumuruganathan, S., Zhang, N., Das, G. (2015). Hidden Database Research and Analytics (HYDRA) System. *IEEE Data Engineering Bulletin, 38*(3), 84-102.

23.   Liu, W., Rahman, M. F., Thirumuruganathan, S., Zhang, N., Das, G. (2015). Aggregate Estimations over Location Based Services. *Proceedings of the VLDB Endowment* (PVLDB), *8*(12), 1334-1345.

24.   Rahman, M. F., Liu, W., Thirumuruganathan, S., Zhang, N., Das, G. (2015). Privacy Implications of Database Ranking. *Proceedings of the VLDB Endowment* (PVLDB), *8*(10), 1106-1117.

25.   Zhou, Z., Zhang, N., Das, G. (2015). Leveraging History for Faster Sampling of Online Social Networks. *Proceedings of the VLDB Endowment* (PVLDB), *8*(10), 1034-1045.

26. Nazi, A., Zhou, Z., Thirumuruganathan, S., Zhang, N., Das, G. (2015). Walk, Not Wait: Faster Sampling Over Online Social Networks. *Proceedings of the VLDB Endowment* (PVLDB), *8*(6), 678-689.

27. Yan, H., Gong, Z., Zhang, N., Huang, T., Zhong, H., Wei, J. (2015). Aggregate Estimation in Hidden Databases with Checkbox Interfaces. *IEEE Transactions on Knowledge and Data Engineering* (TKDE), *27*(5), 1192-1204.

28. Huang, H., Chiang, R. C., Rajasekaran, S., Zhang, N. (2015). Swiper: Exploiting Virtual Machine Vulnerability in Third-Party Clouds with Competition for I/O Resources. *IEEE Transactions on Parallel and Distributed Systems* (TPDS), *26*(6), 1732-1742.

29. Liu, W., Thirumuruganathan, S., Zhang, N., Das, G. (2014). Aggregate Estimation Over Dynamic Hidden Web Databases. *Proceedings of the VLDB Endowment* (PVLDB), *7*(12), 1107-1118.

30. Zhang, N., Li, C., Hassan, N., Rajasekaran, S., & Das, G. (2014). On Skyline Groups. *IEEE Transactions on Knowledge and Data Engineering* (TKDE), *26*(4), 942-956.

31. Yang, Q., Yang, J., Yu, W., An, D., Zhang, N., & Zhao, W. (2014). On False Data Injection Attacks against Power System State Estimation: Modeling and Countermeasures. *IEEE Transactions on Parallel and Distributed Systems* (TPDS), *25*(3), 717-729.

32. Thirumuruganathan, S., Zhang, N., & Das, G. (2013). Rank Discovery From Web Databases. *Proceedings of the VLDB Endowment* (PVLDB), *6*(13), 1582-1693.

33. Cheng, W., Zhang, N., Cheng, X., Song, M., & Chen, D. (2013). Time-Bounded Essential Localization for Wireless Sensor Networks. *IEEE/ACM Transactions on Networking*, *21*(2), 400-412.

34. Sheng, C., Zhang, N., Tao, Y., & Jin, X. (2012). Optimal Algorithms for Crawling a Hidden Database in the Web. *Proceedings of the VLDB Endowment* (PVLDB), *5*(11), 1112-1123.

35. Huang, H. H., Zhang, N., Wang, W., Das, G., & Szalay, A. (2012). Just-In-Time Analytics on Large File Systems. *IEEE Transactions on Computers* (TC), *61*(11), 1651-1664.

36. Fu, X., Zhang, N., Pingley, A., Yu, W., Wang, J., & Zhao, W. (2012). The Digital Marauder's Map: a WiFi Forensic Positioning Tool. *IEEE Transactions on Mobile Computing* (TMC), *11*(3), 377-389.

37. Jin, X., Zhang, N., Mone, A., & Das, G. (2011). Randomized Generalization for Aggregate Suppression Over Hidden Web Databases. *Proceedings of the VLDB Endowment* (PVLDB), *4*(11), 1099-1110.

38. Jin, X., Zhang, N., & Das, G. (2011). ASAP: Eliminating Algorithm-based Disclosure in Privacy-Preserving Data Publishing. *Information Systems*, *36*(5), 859-880.

39. Zhang, N., & Zhao, W. (2011). Privacy-Preserving OLAP: An Information-Theoretic Approach. *IEEE Transactions on Knowledge and Data Engineering* (TKDE), *23*(1), 122-138.

40. Yu, W., Zhang, N., Fu, X., Bettati, R., & Zhao, W. (2010). Localization Attacks to Internet Threat Monitors: Modeling and Countermeasures. *IEEE Transactions on Computers* (TC), *59*(12), 1655-1668.

41.   Yu, W., Zhang, N., Fu, X., & Zhao, W. (2010). Self-Disciplinary Worms and Countermeasures: Modeling and Analysis. *IEEE Transactions on Parallel and Distributed Systems* (TPDS), *21*(10), 1501-1514.

42.   Zhang, N., & Zhao, W. (2008). Privacy Protection Against Malicious Adversaries in Distributed Information Sharing Systems. *IEEE Transactions on Knowledge and Data Engineering* (TKDE), *20*(8), 1028-1033.

43.   Zhang, N., & Zhao, W. (2007). Privacy-Preserving Data-Mining Systems. *IEEE Computer, 40*(4), 52-58.

Conference Publications

44.   Augustine, J., Shetiya, S., Asudeh, A., Thirumuruganathan, S., Nazi, A., Zhang, N., Das, G., & Srivastava, D. (2020). Orca-SR: A Real-Time Traffic Engineering Framework leveraging Similarity Joins. *International Conference on Very Large Data Bases* (VLDB), Demo Paper.

45.   Asudeh, A., Nazi, A., Zhang, N., Das, G., & Jagadish, H. V. (2019). RRR: Rank-Regret Representative. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

46.   Alsarkal, Y., Zhang, N., & Xu, H. (2019). Protecting Privacy on Social Media: Is Consumer Privacy Self-Management Sufficient? *Proceedings of the 52nd Hawaii International Conference on System Sciences* (HICSS), nominated for the Best Paper Award.

47.   Gunasekaran, Y. D., Rahman, M. F., Hasani, S., Zhang, N., & Das, G. (2018). DBLOC: Density Based Clustering over LOCation Based Services. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD), Demo Paper.

48.   Gunasekaran, Y., Asudeh, A., Hasani, S., Zhang, N., Jaoua, A., & Das, G. (2018). QR2: A Third-party Query Reranking Service Over Web Databases. *Proceedings of the IEEE International Conference on Data Engineering* (ICDE) (Demo Paper).

49.   Peguero, K., Zhang, N., & Cheng, X. (2018). *An Empirical Study of the Framework Impact on the Security of JavaScript Web Applications. Proceedings of the Web Conference* (WWW) (Developers' Track).

50.   Alsarkal, Y., Zhang, N., & Xu, H. (2018). Your Privacy Is Your Friend's Privacy: Examining Interdependent Information Disclosure on Online Social Networks. *Proceedings of the 51st Hawaii International Conference on System Sciences* (nominated for the Best Paper Award).

51.   Rahman, M. F., Liu, W., Suhaim, S. B., Thirumuruganathan, S., Zhang, N., & Das, G. (2017). HDBSCAN: Density based Clustering over Location Based Services. *Proceedings of the IEEE International Conference on Data Engineering* (ICDE).

52.   Suhaim, S. B., Zhang, N., Das, G., & Jaoua, A. (2017). *HDBExpDetector: Aggregate Sudden-Change Detector over Dynamic Web Databases*. Proceedings of the IEEE International Conference on Data Engineering (ICDE) (Demo Paper).

53. Asudeh, A., Nazi, A., Zhang, N., & Das, G. (2017). Efficient Computation of Regret-ratio Minimizing Set: A Compact Maxima Representative. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

54. Rahman, M. F., Suhaim, S. B., Liu, W., Thirumuruganathan, S., Zhang, N., & Das, G. (2016). ANALOC: Efficient ANAlytics over LOCation Based Services. *Proceedings of the IEEE International Conference on Data Engineering* (ICDE) (Demo Paper).

55. Nazi, A., Thirumuruganathan, S., Hristidis, V., Zhang, N., & Das, G. (2015). Answering Complex Queries in an Online Community Network. *Proceedings of the International AAAI Conference on Web and Social Media* (ICWSM).

56. Alsarkal, Y., Zhou, Y., & Zhang, N. (2015). Linking Virtual and Real-World Identities. *Proceedings of the IEEE International Conference on Intelligence and Security Informatics* (ISI) (nominated for the Best Paper Award).

57. Liu, W., Suhaim, S. B., Thirumuruganathan, S., Zhang, N., Das, G., & Jaoua, A. (2014). HDBTracker: Aggregate Tracking and Monitoring Over Dynamic Web Databases. *40th International Conference on Very Large Data Bases* (VLDB) (Demo Paper).

58. Zhang, M., Zhang, N., & Das, G. (2013). Mining a search engine's corpus without a query pool. *Proceedings of the 22nd ACM International Conference on Information & Knowledge Management* (CIKM). (Best Student Paper Award).

59. Thirumuruganathan, S., Zhang, N., & Das, G. (2013). Breaking the Top-k Barrier of Hidden Web Databases. *Proceedings of the IEEE International Conference on Data Engineering* (ICDE).

60. Zhou, Z., Zhang, N., Gong, Z., & Das, G. (2013). Faster Random Walks By Rewiring Online Social Networks On-The-Fly. *Proceedings of the IEEE International Conference on Data Engineering* (ICDE).

61. Yu, W., Wei, S., Ma, G., Fu, X., & Zhang, N. (2013). On Effective Localization Attacks Against Internet Threat Monitors. *Proceedings of the IEEE International Conference on Communications* (Best Paper Award, Communication and Information Systems Security Symposium).

62. Li, C., Zhang, N., Hassan, N., Rajasekaran, S., & Das, G. (2012). On Skyline Groups. *Proceedings of the ACM International Conference on Information and Knowledge Management* (CIKM).

63. Zhang, N., & Das, G. (2012). Mining Deep Web Repositories. *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases* (ECML-PKDD), Tutorial.

64. Zhang, M., Zhang, N., & Das, G. (2012). Aggregate Suppression for Enterprise Search Engines. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

65. Pan, X., Ling, Z., Pingley, A., Yu, W., Zhang, N., & Fu, X. (2012). How Privacy Leaks From Bluetooth Mouse? *Proceedings of ACM Conference on Computer and Communications Security* (CCS), Demo Paper.

66.   Zhang, N., & Das, G. (2011). Exploration of Deep Web Repositories. *37th International Conference on Very Large Data Bases* (VLDB), Tutorial.

67.   Jin, X., Zhang, N., & Das, G. (2011). Attribute Domain Discovery for Hidden Web Databases. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

68.   Zhang, M., Zhang, N., & Das, G. (2011). Mining Enterprise Search Engine's Corpus: Efficient Yet Unbiased Sampling and Aggregate Estimation. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

69.   Jin, X., Mone, A., Zhang, N., & Das, G. (2011). MOBIES: Mobile-Interface Enhancement Service for Hidden Web Database. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD), Demo Paper.

70.   Pingley, A., Zhang, N., Fu, X., Choi, H., Subramaniam, S., & Zhao, W. (2011). Protection of Query Privacy for Continuous Location Based Services. *Proceedings of the IEEE International Conference on Computer Communications* (INFOCOM).

71.   Zhang, B., Cheng, X., Zhang, N., Cui, Y., Li, Y., & Liang, Q. (2011). Sparse Target Counting and Localization in Sensor Networks Based on Compressive Sensing. *Proceedings of the IEEE International Conference on Computer Communications* (INFOCOM).

72.   Huang, H. H., Zhang, N., Wang, W., Das, G., & Szalay, A. (2011). Just-In-Time Analytics on Large File Systems. *Proceedings of the USENIX Conference on File and Storage Technologies* (FAST).

73.   Zhang, N., Yu, W., Fu, X., & Das, S. K. (2010). gPath: A Game-Theoretic Path Selection Algorithm to Protect Tor's Anonymity. *Proceedings of the Conference on Game Theory for Security* (GameSec).

74.   Jin, X., Zhang, M., Zhang, N., & Das, G. (2010). Versatile Publishing for Privacy Preservation. *Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD).

75.   Dasgupta, A., Jin, X., Jewell, B., Zhang, N., & Das, G. (2010). Unbiased estimation of size and other aggregates over hidden web databases. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

76.   Wang, J., Chen, Y., Fu, X., Wang, J., Yu, W., & Zhang, N. (2010). 3DLoc: Three Dimensional Wireless Localization Toolkit. *Proceedings of the 30th IEEE International Conference on Distributed Computing Systems* (ICDCS).

77.   Jin, X., Zhang, N., & Das, G. (2010). Algorithm-safe Privacy Preserving Data Publishing. *Proceedings of the International Conference on Extending Database Technology* (EDBT).

78.   Dasgupta, A., Zhang, N., & Das, G. (2010). Turbo-Charging Hidden Database Samplers with Overflowing Queries and Skew Reduction. *Proceedings of the International Conference on Extending Database Technology* (EDBT).

79.   Cheng, W., Zhang, N., Chen, D., Lu, X., & Lu, Z. (2010). Time-Bounded Essential Localization for Wireless Sensor Networks. *Proceedings of the IEEE International Conference on Networking, Architecture, and Storage* (NAS). (Best Paper Award)

80.   Dasgupta, A., Zhang, N., Das, G., & Chaudhuri, S. (2009). Privacy Preservation of Aggregates in Hidden Databases: Why and How? *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD).

81.   Maiti, A., Dasgupta, A., Zhang, N., & Das, G. (2009). HDSampler: Revealing data behind web form interfaces. *Proceedings of the ACM SIGMOD International Conference on Management of Data* (SIGMOD), Demo Paper.

82.   Fu, X., Zhang, N., Pingley, A., Yu, W., Wang, J., & Zhao, W. (2009). The Digital Marauder's Map: A New Threat to Location Privacy in Wireless Networks. *Proceedings of the 29th IEEE International Conference on Distributed Computing Systems* (ICDCS).

83.   Pingley, A., Yu, W., Zhang, N., Fu, X., & Zhao, W. (2009). CAP: A Context-Aware Privacy Protection System for Location-Based Services. *Proceedings of the 29th IEEE International Conference on Distributed Computing Systems* (ICDCS).

84.   Dasgupta, A., Zhang, N., & Das, G. (2009). Leveraging COUNT Information in Sampling Hidden Databases. *Proceedings of the 25th IEEE International Conference on Data Engineering* (ICDE).

85.   Yu, W., Zhang, N., Fu, X., Bettati, R., & Zhao, W. (2008). On Localization Attacks to Internet Threat Monitors: An Information-Theoretic Framework. *Proceedings of the 38th IEEE/IFIP International Conference on Dependable Systems and Networks* (DSN).

86.   Zhang, N., & Zhao, W. (2005). Distributed privacy-preserving information sharing. *Proceedings of the 31st International Conference on Very Large Data Bases* (VLDB) (pp. 889-900).

87.   Zhang, N., Wang, S., & Zhao, W. (2005). A new scheme on privacy-preserving data classification. *Proceedings of the 11th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD).

Professional Activities

Government Services
-    Co-Chair for Federal Interagency Working Group on Privacy R&D, 2016 – 2017

Selected Editorial/Conference Services
-    Associate Editor for MIS Quarterly - Special Issue on Institutional Press in Digital Age, 2024 – 2026
-    Associate Editor for ACM SIGMOD, 2023
-    Guest Associate Editor for MIS Quarterly, 2021 – 2023
-    Associate Editor for IEEE Transactions on Knowledge and Data Engineering (TKDE), 2016 – 2021
-    Co-Editor for EPJ Data Science Special Issue on Integrating Survey and Non-Survey Data to Measure Behavior and Public Opinions
-    Faculty Mentor for International Conference on Information Systems (ICIS), 2018

- Finance Chair for ACM SIGMOD 2018
- Mentorship Co-Chair for ACM SIGMOD 2012

Tenure or Promotion Dossier Review for
- College of Engineering, University of Texas at Arlington, 2024
- College of Business, West Virginia University, 2024
- Department of Information Technology and Management, Illinois Institute of Technology, 2023
- Smeal College of Business, Pennsylvania State University, 2022
- Department of Computer Science and Engineering, Chinese University of Hong Kong, 2018
- School of Computing and Information, University of Pittsburgh, 2017
- Department of Computer Science, Denison University, 2015, 2023

Patents

Nan Zhang, Gautam Das, Just-in-time analytics on large file systems and hidden databases, USPTO patent 9,244,976, January 26, 2016.

H. Howie Huang, Nan Zhang, Gautam Das, Alex Szalay, Just-In-Time Analytics on Large File Systems, USPTO patent 9,244,975, January 26, 2016.

Teaching

[Numbers in parentheses are mean scores of teaching evaluation; NA means the evaluation was not administered or recorded due to administrative reasons]

UF: Machine Learning Methods
- Ph.D.-level course, introducing the key concepts and ideas in statistical machine learning and the paradigm shift it induces on evidence-based decision making
UF: Human Capital Analysis
- Graduate-level course, introducing analytics methods for human resource management
- Spring 2023 (4.74/5), Spring 2024 (4.67/5)
AU: Analytics Practicum II
- Graduate-level course, using machine learning and analytics to solve a real-world business problem
- Summer 2020 (5.00/5), Winter 2020 (5.00/5), Summer 2021 (4.70/5), Winter 2021 (4.30/5), Summer 2022 (NA).
AU: Analytics Practicum I
- Graduate-level course, using machine learning and analytics to solve a real-world business problem
- Spring 2020 (NA), Fall 2020 (5.00/5), Spring 2021 (NA), Fall 2021 (4.80/5), Spring 2022 (NA).
AU: Cybersecurity Analytics
- Graduate-level special topics, discussing machine learning and data analytics for cybersecurity
- Fall 2019 (NA), 2020 (NA), 2022 (4.67/5).
AU: Edge of Information Technology
- Undergraduate-level course, an introductory course to information technology
- Spring 2019 (5.63/7)
PSU: Web Data Analytics
- Graduate-level course, covering machine learning and data analytics over web data
- Spring 2018 (7.00/7).

PSU: Data Privacy and Security
- Graduate-level course, covering the security and privacy issues in data analytics and management
- Fall 2017 (6.67/7).

GWU: Data Management and Exploration on the Web
- Cross-listed course, covering machine learning and data analytics over web data
- Fall 2011 (NA), 2013 (4.70/5), 2014 (5.00/5), 2015 (4.40/5).

GWU: Database Systems and Team Projects
- Undergraduate-level course, covering: 1) data management (e.g., Oracle relational database), 2) social, legal, and ethical impact of computing, 3) team work, and 4) writing in discipline
- Spring 2011 (4.71/5), 2012 (4.60/5), 2014 (4.30/5), 2015 (4.40/5).

GWU: Network Security
- Cross-listed course, an introductory course to cybersecurity
- Spring 2009 (4.79/5), 2010 (4.43/5), 2011 (4.29/5), 2012 (4.60/5), 2014 (4.80/5), 2015 (4.40/5).

GWU: Computer Networks
- Cross-listed course, an introductory course to the technical architecture of the Internet
- Fall 2010 (4.60/5).

GWU: Data Security and Privacy
- Graduate-level course, covering the security and privacy issues in data analytics and management
- Fall 2009 (4.67/5).

GWU: Database Systems I
- Graduate-level course, an introductory course to data management and analytics
- Fall 2008 (4.58/5).

Dissertations and Theses Supervised

Yachao Lu (Ph.D. from GWU)
       Initial position: JD Artificial Intelligence Silicon Valley Research Center
       Ph.D. Dissertation: "Deep Web Data Analytics"
       Defense date: May 3, 2018

Yaqoub Alsarkal (Ph.D. from GWU)
       Current position: Artificial Intelligence Section Head, Abu Dhabi Police
       Ph.D. Dissertation: "Interdependent Information Disclosure and Privacy in Online Social Networks"
       Defense date: May 3, 2018

Saad Bin Suhaim (Ph.D. from GWU)
       Initial position: The Royal Court, Saudi Arabia
       Ph.D. Dissertation: "Discover Aggregate Sudden-Change Over the Deep Web"
       Defense date: May 26, 2017

Weimo Liu (Ph.D. from GWU)
       Current position: Co-founder and CEO, PuppyGraph
       Ph.D. Dissertation: "Aggregate Estimations Over the Deep Web"
       Defense date: May 9, 2016

Zhuojie (Rex) Zhou (Ph.D. from GWU)
       Current position: Co-founder and Chief Engineer, Magic Eden (Series-B valuation: $1.6 billion)

Ph.D. Dissertation: "Faster Sampling Over Online Social Networks"
Defense date: May 13, 2015

Mingyang Zhang (Ph.D. from GWU)
Current position: Senior Manager, Google DeepMind
Ph.D. Dissertation: "Data Analytics Over a Search Engine's Corpus and Aggregate Suppression"
Defense date: June 4, 2013

Xin Jin (Ph.D. from GWU)
Current position: Engineering Manager, Meta
Ph.D. Dissertation: "Privacy Preservation and Data Exploration on Databases"
Defense date: March 1, 2012

Aniket Pingley (Ph.D. from GWU, M.S. from UTA)
Initial position: Intel Corp
Ph.D. Dissertation: "Client-Centric Privacy Protection for Location-based Services"
M.S.: "CAP: A Context-Aware Privacy Protection System for Location-Based Services"
Ph.D. Defense date: August 24, 2011

Mayur Motgi (M.S. from UTA)
Initial position: J.P. Morgan
M.S. Thesis: "Query Auditing Against Partial Disclosure"
Defense date: April 14, 2009