

## Jaideep S. Vaidya

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### RESEARCH INTERESTS

My primary research interests lie in the fields of privacy, security, data analytics, data management, and especially at their intersection. As such, I am very interested in the field of secure information sharing and the application of secure computation technologies to diverse fields such as biomedical informatics, supply chain management and optimization, among others. I am also very interested in the problems and issues in big data analytics applied to different domains such as biomedical informatics, healthcare management, digital government, and information security.

### EDUCATION

#### **Purdue University**

*West Lafayette, Indiana, USA*

Ph.D., Computer Science, August 2004

Advisor: Chris Clifton

- Dissertation Topic: "Privacy Preserving Data Mining over Vertically Partitioned Data"

M.S., Computer Science, May 2001

#### **University of Mumbai**

*Mumbai, Maharashtra, India*

B.S., Computer Engineering, May, 1999

### PROFESSIONAL EXPERIENCE

#### **Rutgers, the State University of New Jersey**

Director, Rutgers Institute of Data Science, Learning, and Applications

January, 2020 – present

Vice Chair, MSIS Department

July, 2020 – June, 2023

RBS Dean's Research Professor

September 2016 – June 2019

Professor of Computer Information Systems

July 2015 – present

Interim Vice Chair, MSIS Department

July, 2014 – Jan, 2015

Associate Professor of Computer Information Systems

July, 2010 – June, 2015

Assistant Professor of Computer Information Systems

August, 2004 – June, 2010

#### **Princeton University**

Visiting Fellow, Electrical & Computer Engineering Department

September, 2015 – July, 2016

#### **NEC C&C Research Labs**

May, 2002 – August, 2002

Summer Intern as part of the Content Aware Networks group. Work on security issues in content aware networks. Mentor: Wen-Syan Li

#### **Microsoft Corporation**

May, 2000 – August, 2000

Summer Intern as part of the Trident Team in the Internet Explorer Group. Core responsibility was to add W3C Document Object Model (DOM) Level 1 support to IE 6.0.

### HONORS AND AWARDS

- NIGMS Outstanding Investigator Award
- IFIP WG 11.3 Outstanding Research Award, 2018
- Dean's Meritorious Research Award, Rutgers Business School, 2016
- ACM Distinguished Scientist, 2015
- IEEE Senior Member, 2014
- Rutgers Board of Trustees Research Fellowship for Scholarly Excellence, 2010
- Junior Faculty Research Award (One Per School), Rutgers Business School, 2009

- NSF Career Award, 2008
- University Nominee (One Per University), Microsoft New Faculty Fellowship, Rutgers University, 2005
- Best/Outstanding Paper Awards
  1. IDRBT Best Practice Paper, 15th International Conference on Information Systems Security (ICISS 2019)
  2. Best Research Paper (Runner Up), 18th Annual International Conference on Digital Government Research (dg.o 2017)
  3. Honourable mention paper, COMSNETS 2017 Social Networking Workshop
  4. Best Student Paper Award, 30th Annual IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy (DBSec '16)
  5. 12th International Conference on Security and Cryptography (SECRYPT), 2015
  6. The Clinical Research Informatics (CRI) Distinguished Paper Award (CRI 2013)
  7. Nominated, 14th Annual International Conference on Digital Government Research (dg.o 2013)
  8. Literati Network Award for the article “Resource Sharing using DHS-UICDS Framework for Incident Management”, published in Transforming Government: People, Process and Policy, 2013
  9. Runner up, Best Student Paper Award, 27th Annual IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy (DBSec '13)
  10. Best Poster or Demo Award, 12th Annual International Conference on Digital Government Research (dg.o 2011)
  11. 21st IEEE International Conference on Data Engineering, 2005
  12. Runner Up for Best Paper Award, 9th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2003

#### RESEARCH FUNDING

- Principal Investigator, “Workshop: Establishing the Vision and Creating a Roadmap for Security, Privacy and Ethics Research in Healthcare”, \$87,982, NSF, October 1, 2020 - September 30, 2021.
- Principal Investigator, “RAPID: Privacy-Preserving Crowdsensing of COVID-19 and its Sociological and Epidemiological Implications”, \$199,597, NSF, May 1, 2020 - April 31, 2021.
- Principal Investigator, “Developing Novel Technologies That Ensure Privacy And Security In Biomedical Data Science Research”, \$1,918,740, NIH, January 1, 2020 - December 31, 2024. Outstanding Investigator Award. (No Co-PI or Co-Is.)
- Principal Investigator, “Codec - Composition and Management of e-Government Processes in the Cloud of Public Services”, \$187,905, National Academies of Sciences, Engineering, and Medicine, September 15, 2015 - September 14, 2018. (Nabil Adam, Former PI)
- Co-Principal Investigator, “IUCRC Phase I Rutgers, Newark: Center for Accelerated Real Time Analytics (CARTA)”, \$750,000, NSF, June 1, 2018 - May 31, 2023. (Vijayalakshmi Atluri, PI)
- Principal Investigator, “Secure and PrivAte Collaborative EnvironmentS (SPACES) for biomedical analytics”, \$1,072,401, NIH, January 1, 2017 - December 31, 2020.
- Principal Investigator, “TWC SBE: Medium: Collaborative: Building a Privacy-Preserving Social Networking Platform from a Technological and Sociological Perspective”, \$323,504, NSF, September 1, 2016 - August 31, 2019.
- Co-Principal Investigator, “I/UCRC: Center for Hybrid Multicore Productivity Research (CHMPR) - Rutgers Site”, \$300,000, NSF, August 1, 2016 - July 31, 2021. (Nabil Adam, PI)
- Co-Principal Investigator, “I/UCRC: Center for Hybrid Multicore Productivity Research (CHMPR) - Rutgers Site”, Supplement, \$50,000, NSF, August 21, 2017 - July 31, 2021. (Nabil Adam, PI)

- Internal Grant: Principal Investigator, “Addressing the cardiovascular disease challenge: building personalized network oriented models for understanding and predicting cardiovascular diseases”, Chancellors’s Seed Grant Program, \$75,000, July 2015 - June 2016.
- Principal Investigator, “TWC: Small: Privacy Preserving Outlier Detection and Recognition”, \$508,474, NSF, September 15, 2014 – September 14, 2016. (No Co-PIs).
- Principal Investigator, “TUES: Type 1: INSPIRE: INStructional materials for PrIvacy Research and Education”, \$199,681, NSF, August 15, 2012 – July 31, 2014. (No Co-PIs).
- Co-Principal Investigator, “Homeland Defense Research & Development Effort”, \$498,430, Department of Homeland Security, January 2010 - December 2011. (Vijayalakshmi Atluri, PI).
- Principal Investigator, “TC: Small: Collaborative Research: Formal Security Analysis of Access Control Models and Extensions”, \$329,958, NSF, August 15, 2010 - July 31, 2015. (Vijayalakshmi Atluri, Former PI)
- Co-Principal Investigator, “DG: Secure Agency Interoperation for Effective Data Mining in Border Control and Homeland Security Applications”, Supplement, \$50,000, NSF, October 2008 - September 2009. (Nabil R. Adam, PI).
- Principal Investigator, “Collaborative Optimization with Limited Information Disclosure”, \$450,000, NSF Career Award 2008, February 2008 - January 2013 (No Co-PIs).
- Co-Principal Investigator, “Improving Business Knowledge Management & Analysis Through the use of the RFID Technology and Semantic Web Services”, \$566,000, SAP Corporation, August 2007 - June 2009.
- Co-Principal Investigator, “Improving Business Knowledge Management and Analysis Through the use of Semantic Web Services and RFID Technology”, SAP Research Labs, \$420,000, June 2004 - June 2007. (Nabil R. Adam, PI).
- Internal Grant: Co-Principal Investigator, “The Rutgers University Research Initiative on Cybersecurity Economics (RICE)”, \$60,000, Rutgers Academic Excellence Fund, 2008-2009. (Rebecca Wright, PI).
- Internal Grant: Co-Principal Investigator, “Information Technology for Emergency Management (iTeam)”, \$40,000, Rutgers Academic Excellence Fund, 2007-2008. (Nabil R. Adam, PI).
- Internal Grant: Principal Investigator, “Privacy Preserving Optimization”, Rutgers FOM Research Grant, \$1,500, July 2006 - June 2007.
- Internal Grant: Principal Investigator, “Privacy Preserving Data Analysis”, Rutgers FOM Research Grant, \$9,500, July 2005 - June 2006.

#### MONOGRAPH

1. “Privacy Preserving Data Mining”. **Jaideep Vaidya**, Michael Zhu and Chris Clifton, Monograph, Series on Advances in Information Security, Springer-Verlag, November 2005, ISBN: 0-387-25886-8.

#### JOURNAL ARTICLES (AUTHORS LISTED IN ORDER OF CONTRIBUTION)

1. “A Framework for Dynamic Composition and Management of Emergency Response Processes”, Abeer Elahraf, Ayesha Afzal, Ahmed Akhtar, Basit Shafiq, **Jaideep Vaidya**, Shafay Shamail, Nabil Adam, IEEE Transactions on Services Computing, accepted, 2020.
2. “Optimal Employee Recruitment in Organizations under Attribute Based Access Control”, Arindam Roy, Shamik Sural, Arun Majumdar, **Jaideep Vaidya**, Vijayalakshmi Atluri, ACM Transactions on Management Information Systems, accepted, 2020.
3. “Enabling Workforce Optimization in Constrained Attribute Based Access Control Systems”, Arindam Roy, Shamik Sural, Arun Majumdar, **Jaideep Vaidya**, Vijayalakshmi Atluri, IEEE Transactions on Emerging Technologies in Computing, accepted, 2019.

4. "ASSEMBLE: Attribute and Structure based Service Mapping Approach for Collaborative Business Process Development", Ayesha Afzal, Basit Shafiq, Shafay Shamail, Abeer Elahraf, **Jaideep Vaidya**, Nabil Adam, IEEE Transactions on Services Computing, accepted, 2018.
5. "Efficient Determination of Equivalence for Encrypted Data", Jason Doctor, **Jaideep Vaidya**, Xiaoqian Jiang, Shuang Wang, Lisa M. Schilling, Toan Ong, Michael E. Matheny, Lucila Ohno-Machado, Daniella Meeker, Elsevier Computers and Security, 97, pp 101939, October, 2020.
6. "A guide for private outlier analysis", Hafiz Asif , Periklis Papakonstantinou, **Jaideep Vaidya**, in IEEE Letters of the Computer Society, 3(1), pp. 29-33, 1 Jan.-June 2020.
7. "Algorithms and Applications to Weighted Rank-One Binary Matrix Factorization", Haibing Lu, Xi Chen, Junmin Shi **Jaideep Vaidya**, Vijayalakshmi Atluri, Yuan Hong, Wei Huang, ACM Transactions on Management Information Systems, 11(2), Article 7 (May 2020), 33 pages.
8. "Location-based Sentiment Analyses and Visualization of Twitter Election Data", Ussama Yaqub, Nitesh Sharma, Rachit Pabreja, Soon Ae Chun, Vijayalakshmi Atluri and **Jaideep Vaidya**, Digital Government: Research and Practice (DGOV), 1(2), Article 14 (April 2020), 19 pages.
9. "Managing Attribute-Based Access Control Policies in a Unified Framework using Data Warehousing and In-Memory Database", Mahendra Singh, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, Computers & Security, 86, pp. 183-205, September 2019.
10. "Deploying ABAC policies using RBAC Systems", Gunjan Batra, Vijayalakshmi Atluri, **Jaideep Vaidya**, Shamik Sural, Journal of Computer Security, vol. 27, no. 4, pp. 483-506, 2019.
11. "Policy Adaptation in Hierarchical Attribute-Based Access Control Systems", Saptarshi Das, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, ACM Transactions on Internet Technology, Volume 19 Issue 3, September 2019.
12. "Security Analysis of ABAC under an Administrative Model", Sadhana Jha, Shamik Sural, Vijayalakshmi Atluri, **Jaideep Vaidya**, IET Information Security, 13(2): 96-103, 2019.
13. "HyPE: A Hybrid Approach toward Policy Engineering in Attribute-Based Access Control", Saptarshi Das, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, IEEE Letters of the Computer Society, 1(2), pp. 25-29, 2018.
14. "Towards Designing Robust CAPTCHAs", David Lorenzi, Emre Uzun, **Jaideep Vaidya**, Shamik Sural, Vijayalakshmi Atluri, Journal of Computer Security, 26(6), 731-760, 2018.
15. "Differentially Private Outlier Detection in a Collaborative Environment", Hafiz Asif, Tanay Talukdar, **Jaideep Vaidya**, Basit Shafiq, Nabil Adam, International Journal of Cooperative Information Systems, 27(3), September 2018.
16. "Perfectly Secure and Efficient Two-party Electronic Health Record Linkage", Feng Chen, Xiaoqian Jiang, Shuang Wang, Lisa Schilling, Daniella Meeker, Toan Ong, Michael E. Matheny, Jason N. Doctor, Lucila Ohno-Machado, **Jaideep Vaidya (Senior Author)**, IEEE Internet Computing, 22(2), Mar/April 2018.
17. "Specification and Verification of Separation of Duty Constraints in Attribute based Access Control", Sadhana Jha, Shamik Sural, Vijayalakshmi Atluri, **Jaideep Vaidya**, IEEE Transactions on Information Forensics and Security, 13(4), April 2018, pp. 897-911.
18. "A Side-channel Attack on Smartphones: Deciphering Key Taps using Built-in Microphones", Haritabh Gupta, Shamik Sural, Vijayalakshmi Atluri, **Jaideep Vaidya**, Journal of Computer Security, 26(2), January 2018, pp. 255-281.
19. "Analysis of Political Discourse on Twitter in the Context of the 2016 US Presidential Elections", Ussama Yakub, Soon Chun, Vijayalakshmi Atluri, **Jaideep Vaidya**, Government Information Quarterly, 34(4), December 2017, pp. 613-626.
20. "Migrating from RBAC to Temporal RBAC", Barsha Mitra, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, IET Information Security, 11(5), September 2017, pp. 294 – 300.

21. "Privacy-Preserving Item-based Recommendations over Partitioned Data with Overlaps", Ibrahim Yakut and **Jaideep Vaidya**, *International Journal of Business Information Systems*, 25(3), pp. 336-351, 2017.
22. "On Optimal Employee Assignment in Constrained Role Based Access Control Systems", Arindam Roy, Shamik Sural, Arun Majumdar, **Jaideep Vaidya**, Vijayalakshmi Atluri, *ACM Transactions on Management Information Systems*, 7(4), pp. 10:1–10:24, January 2017.
23. "Mining Temporal Roles using Many-Valued Concepts", Barsha Mitra, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, *Computers & Security*, 60, pp. 79 – 94, July, 2016.
24. "A Survey of Role Mining", Barsha Mitra, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, *ACM Computing Surveys*, 48(4), pp. 50:1–50:37, 2016.
25. "Accurate and Efficient Query Clustering via Top Ranked Search Results", Yuan Hong, **Jaideep Vaidya**, Haibing Lu, Wen Ming Liu, *Web Intelligence*, 14(2), pp. 119–138, 2016.
26. "Using classification for role-based access control management", Nazia Badar, **Jaideep Vaidya**, Vijayalakshmi Atluri, Nino Verde, Janice Warner, *International Journal of Technology, Policy and Management*, 16(1), pp. 45-78, 2016.
27. "Minimizing Organizational User Requirement while Meeting Security Constraints", Arindam Roy, Shamik Sural, Arun Kumar Majumdar, **Jaideep Vaidya**, Vijayalakshmi Atluri, *ACM Transactions on Management Information Systems*, 6(3), pp. 12:1-12:25, October, 2015.
28. "PEER: A Framework for Public Engagement in Emergency Response", David Lorenzi, Soon Chun, **Jaideep Vaidya**, Vijayalakshmi Atluri, Nabil Adam, *International Journal of E-Planning Research*, 4(3) pp. 29-46, 2015.
29. "Collaborative Search Log Sanitization: Toward Differential Privacy and Boosted Utility", Yuan Hong, **Jaideep Vaidya**, Haibing Lu, Panagiotis Karras, Sanjay Goel, *IEEE Transactions on Dependable and Secure Computing*, 12(5), pp. 504-518, 2015.
30. "The Generalized Temporal Role Mining Problem", Barsha Mitra, Shamik Sural, Vijayalakshmi Atluri, **Jaideep Vaidya**, *Journal of Computer Security*, 23(1), pp. 31-58, 2015.
31. "Security Analysis for Temporal Role Based Access Control", Emre Uzun, Vijayalakshmi Atluri, **Jaideep Vaidya**, Shamik Sural, Anna Lisa Ferrara, Gennaro Parlato, P. Madhusudan, *Journal of Computer Security*, 22(6), pp. 961 - 996, 2014.
32. "Statistical Database Auditing Without Query Denial Threat", Haibing Lu, **Jaideep Vaidya**, Vijayalakshmi Atluri, Yingjiu Li, *INFORMS Journal on Computing*, 27(1), pp. 20-34, 2015.
33. "Meeting Cardinality Constraints in Role Mining", Pullamsetty Harika, Marreddy Nagajyothi, John C. John, Shamik Sural, **Jaideep Vaidya**, and Vijayalakshmi Atluri, *IEEE Transactions on Dependable and Secure Computing*, 12(1), pp. 71 - 84, 2015.
34. "Opinions of People: Factoring in Privacy and Trust", Anirban Basu, **Jaideep Vaidya**, Juan Camilo Corena, Shinsaky Kiyomoto, Stephen Marsh, Guibing Guo, Jie Zhang, Yutaka Miyake, *ACM SIGAPP Applied Computing Review*, 14(3), pp. 7-21, September, 2014.
35. "A Random Decision Tree Framework for Privacy-preserving Data Mining", **Jaideep Vaidya**, Basit Shafiq, Wei Fan, Danish Mehmood, David Lorenzi, *IEEE Transactions on Dependable and Secure Computing*, 11(5), pp. 399-411, 2014.
36. "Security Analysis of Temporal RBAC under an Administrative Model", Sadhana Jha, Shamik Sural, **Jaideep Vaidya**, and Vijayalakshmi Atluri, *Computers & Security*, 46, pp. 154-172, October 2014.
37. "A Survey of Privacy-aware Supply Chain Collaboration: From Theory to Applications", Yuan Hong, **Jaideep Vaidya**, Shengbin Wang, *American Accounting Association Journal of Information Systems*, Spring 2014, 28(1), pp. 243-268.

38. "Private Searching on Streaming Data Based on Keyword Frequency", Xun Yi, Elisa Bertino, **Jaideep Vaidya**, Chaoping Xing, *IEEE Transactions on Dependable and Secure Computing*, 11(2), pp. 155-167, March, 2014.
39. "Inappropriate Access Detection for Electronic Health Records Using Collaborative Filtering", Aditya Menon, Xiaoqian Jiang, Jihoon Kim, **Jaideep Vaidya**, Lucila Ohno-Machado, *Machine Learning Journal special issue: Machine Learning for Science and Society*, 95(1), pp. 87-101, 2014.
40. "An Optimization Framework for Role Mining", Haibing Lu, **Jaideep Vaidya**, and Vijayalakshmi Atluri, *Journal of Computer Security*, 22(1), pp. 1-31, January, 2014.
41. "Enhancing the Government Service Experience through QR Codes on Mobile Platforms", David Lorenzi, **Jaideep Vaidya**, Soon Chun, Basit Shafiq, Ghulam Nabi, and Vijayalakshmi Atluri, *Government Information Quarterly*, 31(1), pp. 6-16, January, 2014.
42. "An Inference-proof Approach to Privacy-preserving Horizontally Partitioned Linear Program", Yuan Hong and **Jaideep Vaidya**, *Optimization Letters*, 8(1), pp. 267-277, January, 2014.
43. "AMTRAC: An Administrative Model for Temporal Role-based Access Control", Manisha Sharma, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, *Computers & Security*, Volume 39 Part B, pp. 201-218, 2013.
44. "Privacy preserving collaborative filtering for SaaS enabling PaaS clouds", Anirban Basu, **Jaideep Vaidya**, Hiroaki Kikuchi, Theo Dimitrakos, and Srijith Nair, *Journal of Cloud Computing: Advances, Systems and Applications*, 1:8, 2012.
45. "Secure and Efficient Distributed Linear Programming", Yuan Hong, **Jaideep Vaidya**, and Haibing Lu, in *Journal of Computer Security*, 20(5), pp. 583-634, 2012, IOS Press, NL.
46. "Constraint-Aware Role Mining Via Extended Boolean Matrix Decomposition", Haibing Lu, **Jaideep Vaidya**, Vijayalakshmi Atluri, and Yuan Hong, *IEEE Transactions on Dependable and Secure Computing*, Special Issue on Data & Application Security (DAS), 9(5), pp. 655-669, 2012, IEEE Computer Society, Los Alamitos, CA.
47. "Semantics Based Automated Service Discovery", Aabhas Paliwal, Basit Shafiq, **Jaideep Vaidya**, Hui Xiong, and Nabil Adam, in *IEEE Transactions on Services Computing*, 5(2), 2012, pp. 260-275, IEEE Computer Society, Los Alamitos, CA.
48. "Structure-Aware Graph Anonymization", Xiaoyun He, **Jaideep Vaidya**, Basit Shafiq, Nabil Adam, and Vijay Atluri, *Web Intelligence and Agent Systems*, 10(2), pp. 193-208, April, 2012, IOS Press, NL.
49. "Resource Sharing using DHS-UICDS Framework for Incident Management", Vijayalakshmi Atluri, Basit Shafiq, Soon Chun, Ghulam Nabi, and **Jaideep Vaidya**, *Transforming Government: People, Process and Policy*, 6(1), March, 2012, pp. 41-61, Emerald Group Publishing.
50. "Efficient Privacy-Preserving Collaborative Filtering Based on the Weighted Slope One Predictor", Anirban Basu, **Jaideep Vaidya**, and Hiroaki Kikuchi, in the *Journal of Internet Services and Information Security (JISIS)*, 1(4), November 2011, pp. 26-46.
51. "A Profile Anonymization Model for Location Based Services", Heechang Shin, **Jaideep Vaidya**, and Vijayalakshmi Atluri, *Journal of Computer Security*, 19(5), 2011, pp. 795-833, IOS Press, NL.
52. "Secure Construction and Publication of Contingency Tables from Distributed Data", Xiaoyun He, Haibing Lu, **Jaideep Vaidya**, and Nabil Adam, *Journal of Computer Security*, 19(3), pp. 453-484, May 2011, IOS Press, NL.
53. "Similar Document Detection with Limited Information Disclosure", Mummoorthy Murugesan, Wei Jiang, Chris Clifton, Luo Si, and **Jaideep Vaidya**, *International Journal on Very Large Data Bases (VLDB Journal)*, 19(4), pp. 457-475, August, 2010, VLDB Endowment.

54. "Privacy Preserving Integration of Health Care Data", Xiaoyun He, **Jaideep Vaidya**, Basit Shafiq, Nabil Adam, Thomas White, International Journal of Computational Models and Algorithms in Medicine, 1(2), special issue on Privacy and Security Issues for Medical Data, 2010, pp. 22-36, IGI Global.
55. "Spatial neighborhood based anomaly detection in sensor datasets", Vandana Janeja, Nabil R. Adam, Vijayalakshmi Atluri and **Jaideep Vaidya**, in Data Mining and Knowledge Discovery, special issue on Outlier Detection, 20(2), March 2010, pp. 221-258, Springer.
56. "A Unified Index Structure for Efficient Enforcement of Spatiotemporal Authorizations", Vijayalakshmi Atluri, Qi Guo, Heechang Shin, and **Jaideep Vaidya**, International Journal of Information and Computer Security, 4(2), August 2010, pp. 118 - 151, Inderscience.
57. "Role Engineering via Prioritized Subset Enumeration", **Jaideep Vaidya**, Vijayalakshmi Atluri, Janice Warner, and Qi Guo, IEEE Transactions on Dependable and Secure Computing, 7(3), pp. 300-314, July-September, 2010, IEEE Computer Society.
58. "The Role Mining Problem: A Formal Perspective", **Jaideep Vaidya**, Vijayalakshmi Atluri, and Qi Guo, ACM Transactions on Information Systems Security, 13(3), pp. 27:1-27:31, July, 2010, ACM. (Invited extension of SACMAT '07 paper).
59. "Anonymization Models for Directional Location Based Service Environments", Heechang Shin, **Jaideep Vaidya**, and Vijayalakshmi Atluri, Computers and Security, 29(1), pp. 59-73, February 2010, Elsevier.
60. "Privacy-Preserving Indexing of Documents on the Network", Mayank Bawa, Roberto J. Bayardo, Rakesh Agrawal, and **Jaideep Vaidya**, The International Journal on Very Large Data Bases (VLDB Journal), 18(4), pp. 837-856, 2009, VLDB Endowment.
61. Edge-RMP: Minimizing administrative assignments for role-based access control, **Jaideep Vaidya**, Vijayalakshmi Atluri, Qi Guo, and Haibing Lu, Journal of Computer Security, 17(2), pp. 211-235, 2009, IOS Press, NL.
62. "Privacy-Preserving Kth Element Score over Vertically Partitioned Data", **Jaideep Vaidya** and Chris Clifton, IEEE Transactions on Knowledge and Data Engineering, 21(2), pp.253-258, 2009, IEEE Computer Society.
63. "Privacy-Preserving Decision Trees over Vertically Partitioned Data", **Jaideep Vaidya**, Chris Clifton, Murat Kantarcioglu and A. Scott Patterson, ACM Transactions on Knowledge Discovery in Data, 2(3), October 2008, ACM.
64. "Efficient Security Policy Enforcement for the Mobile Environment", Vijayalakshmi Atluri, Heechang Shin, and **Jaideep Vaidya**, Journal of Computer Security, 16(4), pp. 439-475, 2008, IOS Press, NL.
65. "Privacy Preserving Naïve Bayes Classification". **Jaideep Vaidya**, Murat Kantarcioglu and Chris Clifton, International Journal on Very Large Data Bases, 17(4), pp. 879-898, July, 2008 Springer-Verlag, GmbH.
66. "Privacy Preserving SVM Classification", **Jaideep Vaidya**, Hwanjo Yu and Xiaoqian Jiang, in Knowledge and Information Systems, Springer-Verlag, 14(2), pp. 161-178, February, 2008.
67. "An Approach to Identifying Beneficial Collaboration Securely in Decentralized Logistics Systems". Chris Clifton, Ananth Iyer, Richard Cho, Wei Jiang, Murat Kantarcioglu and **Jaideep Vaidya**, Manufacturing & Service Operations Management, 10(1), Winter 2008, pp. 108 - 125, INFORMS, Linthicum, Maryland.
68. "Secure Set Intersection Cardinality with Application to Association Rule Mining". **Jaideep Vaidya** and Chris Clifton, Journal of Computer Security, 13(4), IOS Press, November 2005, pp. 593 - 622.
69. "Privacy-Preserving Data Mining: Why, How, and When?". **Jaideep Vaidya** and Chris Clifton, IEEE Security & Privacy, New York, NY, November/December 2004.

70. “Tools for Privacy Preserving Distributed Data Mining”. Chris Clifton, Murat Kantarcioglu, **Jaideep Vaidya**, Xiaodong Lin and Michael Zhu, in ACM SIGKDD Explorations 4(2), December 2002. Invited paper.

REFEREED CONFERENCE AND WORKSHOP PAPERS – AUTHORS LISTED IN ORDER OF CONTRIBUTION  
(Acceptance rate  $\leq 30\%$  listed)

1. “Privacy-Preserving Friend Recommendation in an Integrated Social Environment”, Nitish Uplavikar, **Jaideep Vaidya**, Dan Lin and Wei Jiang, in Proceedings of the 16th International Conference on Information Systems Security, December 16 - 20, 2020, Jammu, India.
2. “Blockchain Based Auditable Access Control for Distributed Business Processes”, Ahmed Akhtar, Basit Shafiq, **Jaideep Vaidya**, Ayesha Afzal, Shafay Shamail, Omer Rana, in Proceedings of the 40th IEEE International Conference on Distributed Computing Systems (ICDCS), July 8 - 10, 2020, Singapore.
3. “Publishing Video Data with Indistinguishable Objects”, Han Wang, Yuan Hong, Yu Kong, **Jaideep Vaidya**, in Proceedings of the 23rd International Conference on Extending Database Technology, 30th March-2nd April, 2020, Copenhagen, Denmark. (Full Paper Acceptance rate =  $31/151 = 20.52\%$ )
4. “Policy Reconciliation and Migration in Attribute Based Access Control”, Gunjan Batra, Vijayalakshmi Atluri, **Jaideep Vaidya**, Shamik Sural, in Proceedings of the 15th International Conference on Information Systems Security (ICISS), December 16-20, 2019, Hyderabad, India. IDRBT Best Practice Paper. (Full Paper Acceptance rate =  $17/63 = 26.98\%$ )
5. “VisMAP: Visual Mining of Attribute-Based Access Control Policies”, Saptarshi Das, Shamik Sural, **Jaideep Vaidya**, Vijayalakshmi Atluri, Gerhard Rigoll, in Proceedings of the 15th International Conference on Information Systems Security (ICISS), December 16-20, 2019, Hyderabad, India. (Full Paper Acceptance rate =  $17/63 = 26.98\%$ )
6. “How to accurately and privately identify anomalies”, Hafiz Asif , Periklis Papakonstantinou, **Jaideep Vaidya**, in Proceedings of the 26th ACM Conference on Computer and Communications Security (CCS), November 11-15, 2019, London, United Kingdom. (Full Paper Acceptance rate =  $149/934 = 15.95\%$ )
7. “Social Media Communication of Public Sector Organizations: A Case Study of Northeast US”, Ussama Yaqub, Soon Chun, Vijayalakshmi Atluri, **Jaideep Vaidya**, in Proceedings of the 20th Annual International Conference on Digital Government Research (dg.o 2019), June 18-20, 2019, Dubai, UAE.
8. “PolTree: A Data Structure for Making Efficient Access Decisions in ABAC”, Ronit Nath, Saptarshi Das, Shamik Sural, **Jaideep Vaidya**, Vijay Atluri, in Proceedings of the 24th ACM Symposium on Access Control Models and Technologies (SACMAT '19), June 3-6, 2019, Toronto, Canada. (Full Paper Acceptance rate =  $12/52 = 23.07\%$ )
9. “Poster: ABACaaS: Attribute-Based Access Control as a Service”, Augustee Meshram, Saptarshi Das, Shamik Sural, **Jaideep Vaidya**, Vijay Atluri, in Proceedings of the 9th ACM Conference on Data and Application Security and Privacy, poster track, March 25 - 27, 2019. Dallas, TX, USA.
10. “Privacy Preserving Probabilistic Record Linkage Without Trusted Third Party ”, Ibrahim Lazrig, Toan Ong, Indrakshi Ray, Indrajit Ray, Xiaoqian Jiang, **Jaideep Vaidya**, in Proceedings of the 16th Annual Conference on Privacy, Security and Trust 16th Annual Conference on Privacy, Security and Trust, August 28-30, 2018, Belfast, Northern Ireland, United Kingdom.
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  99. “Secure Information Sharing and Analysis for Effective Emergency Management”, Nabil Adam, Vijayalakshmi Atluri, Soon Ae Chun, John Ellenberger, Basit Shafiq, **Jaideep Vaidya**, and Hui Xiong, in Proceedings of the 9th Annual International Conference on Digital Government Research, May 18-21, 2008, Montreal, Canada.
  100. “A Profile Anonymization Model for Privacy in a Personalized Location Based Service Environment”, Heechang Shin, Vijayalakshmi Atluri, and **Jaideep Vaidya**, in Proceedings of the 9th International Conference on Mobile Data Management, April 27-30, 2008, Beijing, China. (Acceptance rate =  $26/119 = 21.84\%$ )
  101. “Privacy-preserving Link Discovery”, Xiaoyun He, Basit Shafiq, **Jaideep Vaidya**, and Nabil Adam, in Proceedings of the 23rd Annual ACM Symposium on Applied Computing, Data Mining Track, March 16-20, 2008, Fortaleza, Ceara, Brazil. (Acceptance rate =  $44/627 = 7.01\%$ )
  102. “Optimal Boolean Matrix Decomposition: Application to Role Engineering”, Haibing Lu, **Jaideep Vaidya**, and Vijay Atluri, in Proceedings of the 24th International Conference on Data Engineering, April 7-12, 2008, Cancun, Mexico. (Acceptance rate =  $75/615 = 12.19\%$ )

103. "Privacy Preserving Integration of Health Care Data", Nabil Adam, Thomas White, Basit Shafiq, **Jaideep Vaidya**, and Xiaoyun He, American Medical Informatics Association 2007 Annual Symposium, November 10-14, 2007, Chicago, Illinois.
104. "Enabling better Medical Image Classification through Secure Collaboration", **Jaideep Vaidya**, and Bhakti Tulpule, in Proceedings of the 14th IEEE International Conference on Image Processing, September 16-19, 2007, San Antonio, Texas.
105. "The Role Mining Problem: Finding a Minimal Descriptive Set of Roles", **Jaideep Vaidya**, Vijay Atluri, and Qi Guo, in Proceedings of the 12th ACM Symposium on Access Control Models and Technologies, June 20-June 22, 2007, Sophia Antipolis, France.
106. "Using Semantics for Automatic Enforcement of Access Control Policies among Dynamic Coalitions", Janice Warner, Vijay Atluri, Ravi Mukkamala and **Jaideep Vaidya**, in Proceedings of the 12th ACM Symposium on Access Control Models and Technologies, June 20-June 22, 2007, Sophia Antipolis, France.
107. "RoleMiner: Finding Roles using Subset Enumeration", **Jaideep Vaidya**, Vijay Atluri, and Janice Warner, in Proceedings of the 13th ACM Conference on Computer and Communications Security, October 30-November 3, Alexandria, VA, USA. (Acceptance rate =  $38/256 = 14.84\%$ )
108. "Privacy-Preserving SVM Classification on Vertically Partitioned Data", Hwanjo Yu, **Jaideep Vaidya**, and Xiaoqian Jiang, in Proceedings of the 10th Pacific-Asia conference on Knowledge Discovery and Data Mining, April 9-12, Singapore. (Acceptance rate =  $100/501 = 19.96\%$ )
109. "Privacy-Preserving SVM using Nonlinear Kernels on Horizontally Partitioned Data", Hwanjo Yu, Xiaoqian Jiang and **Jaideep Vaidya**, in the 21st Annual ACM Symposium on Applied Computing, Data Mining Track, April 23-27, 2006, Dijon, France.
110. "Privacy Preserving Decision Tree Classification for vertically partitioned data", **Jaideep Vaidya**, and Chris Clifton, in the proceedings of the Nineteenth Annual IFIP WG 11.3 Working Conference on Data and Applications Security, August 7-10, 2005, Storrs, CT.
111. "Collusion Set Detection through Outlier Discovery", Vandana Janeja, Vijay Atluri, **Jaideep Vaidya**, and Nabil R. Adam, IEEE International Conference on Intelligence and Security Informatics, May 19-20, 2005, Atlanta, GA.
112. "Knowledge Discovery from Transportation Network Data". Wei Jiang, **Jaideep Vaidya**, Zahir Balaporia, Chris Clifton, and Brett Banich, in proceedings of the Twenty First IEEE International Conference on Data Engineering, April 5-8, 2005, Tokyo, Japan. Best Industrial Paper award.
113. "Privacy Preserving Top-K Queries". **Jaideep Vaidya**, and Chris Clifton, in proceedings of the Twenty First IEEE International Conference on Data Engineering, April 5-8, 2005, Tokyo, Japan. (Acceptance rate =  $100/521 = 19.19\%$ )
114. "Privacy Preserving Outlier Detection". **Jaideep Vaidya**, and Chris Clifton, in proceedings of the Fourth IEEE International Conference on Data Mining, November 1-4, 2004, Brighton, UK. (Acceptance rate =  $39/445 = 8.76\%$ )
115. "Privacy Preserving Data Integration and Sharing". Chris Clifton, AnHai Doan, Ahmed Elmagarmid, Murat Kantarcioglu, Gunther Schadow, Dan Suci, and **Jaideep Vaidya**, The 9th ACM SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery (DMKD'2004) June 13, 2004, Paris, France.
116. "Privacy Preserving Naïve Bayes Classifier for Vertically Partitioned Data". **Jaideep Vaidya**, and Chris Clifton, in the Proceedings of the 2004 SIAM International Conference on Data Mining, April 22-24, 2004, Lake Buena Vista, Florida, USA.
117. "Privacy Preserving Naive Bayes Classifier for Horizontally Partitioned Data". Murat Kantarcioglu and **Jaideep Vaidya**, in the 2<sup>nd</sup> Workshop on Privacy Preserving Data Mining held in association with The Third IEEE International Conference on Data Mining, November 19 - 22, 2003, Melbourne, FL.



118. “Leveraging the ”Multi” in Secure Multi-Party Computation”. **Jaideep Vaidya**, and Chris Clifton, in the Workshop on Privacy in the Electronic Society held in association with The Tenth ACM Conference on Computer and Communications Security, October 27 - 31, 2003, Washington, D.C.
119. “Privacy-Preserving K-Means Clustering over Vertically Partitioned Data”. **Jaideep Vaidya**, and Chris Clifton, The Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, August 24 - 27, 2003, Washington, D.C. Honorable mention (runner up), best research paper.  
(Revised paper invited for submission at Interface ’04). (Acceptance rate =  $46/298 = 15.43\%$ )
120. “Privacy Preserving Association Rule Mining in Vertically Partitioned Data”. **Jaideep Vaidya**, and Chris Clifton, The Eighth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, July 23 - 26, 2002, Edmonton, Alberta, Canada. (Acceptance rate =  $88/308 = 28.57\%$ )
121. “An architecture for Privacy-preserving Mining of Client Information”. Murat Kantarcioglu and **Jaideep Vaidya**, in Volume 14 - Privacy, Security and Data Mining of the ACS Series Conferences in Research and Practice in Information Technology.

#### EDITOR REFEREED ARTICLES

1. “Using Secure-coprocessor for creating efficient Privacy-Preserving Distributed Data Mining Tool-box”. Murat Kantarcioglu, Jaideep Vaidya and Chris Clifton, in International Workshop on Privacy and Security Issues in Data Mining held in conjunction with ECML/PKDD 2004, September 20, 2004, Italy. Invited paper.
2. “Defining Privacy for Data Mining”. Chris Clifton, Murat Kantarcioglu and Jaideep Vaidya, in Proceedings of the National Science Foundation Workshop on Next Generation Data Mining, November 1-3, 2002, Baltimore, MD. Invited paper.

#### BOOK CHAPTERS

1. “Statistical Databases”, Nabil Adam, Haibing Lu, Jaideep Vaidya, Basit Shafiq in *Encyclopedia of Cryptography and Security*, van Tilborg, Henk; Jajodia, Sushil (Eds.), Springer, 2011.
2. “Vertically Partitioned data”, Jaideep Vaidya in *Encyclopedia of Database Systems*, Özsu, M. Tamer; Liu, Ling (Eds.), Springer, December 2009.
3. “Secure Multiparty Computation Methods”, Murat Kantarcioglu and Jaideep Vaidya in *Encyclopedia of Database Systems*, Özsu, M. Tamer; Liu, Ling (Eds.), Springer, December 2009.
4. “A Survey of Privacy-Preserving Methods across Vertically Partitioned Data”, Jaideep Vaidya in *Privacy-Preserving Data Mining: Models and Algorithms*, Charu Aggarwal, Philip S. Yu, eds., Springer, 2008.
5. “Privacy, Profiling, Targeted Marketing, and Data Mining”, Jaideep Vaidya and Vijay Atluri in *Digital Privacy: Theory, Technologies, and Practices*, A. Acquisti, S. Gritzalis, C. Lambri-noudakis, S. di Vimercati, eds., Taylor and Francis, December 18, 2007.
6. “Defining Privacy for Data Mining”. Book Chapter. Chris Clifton, Murat Kantarcioglu and Jaideep Vaidya in *Data Mining: Next Generation Challenges and Future Directions*, AAAI/MIT Press, October 1, 2004.
7. “Privacy-Preserving Data Mining”. Chris Clifton, Murat Kantarcioglu and Jaideep Vaidya, invited chapter in *Foundations and Advances in Data Mining Computing*, T.Y. Lin and Wesley Chu, eds., Springer-Verlag, October 2005.

## PROFESSIONAL ACTIVITIES

### Editor-in-Chief

- IEEE Transactions on Dependable and Secure Computing, January 1, 2018 - December 31, 2020.

### Program Chair/Co-Chair

- Blue Sky/Vision Track, ACM Symposium on Access Control Models and Technologies (SACMAT), 2021.
- 34th Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC '20), June 24-26, 2020, Regensburg, Germany.
- 1st IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications (TPS), December 12 - 14, 2019, Los Angeles, California, USA.
- 11th International Symposium on Cyberspace Safety and Security, December 1-3, 2019, Guangzhou, China.
- 18th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP), November 15-17, 2018, Guangzhou, China.
- 4th IEEE International Conference on Collaboration and Internet Computing (CIC '18), October 18-20, 2018, Philadelphia, PA, USA.
- 13th International Conference on Information Systems Security (ICISS-2017), December 16-20, 2017, Mumbai, India.
- 19th European Symposium on Research in Computer Security (ESORICS '14), September 7-11, 2014, Wroclaw, PL.
- 18th ACM Symposium on Access Control Models and Technologies (SACMAT '13), June 12-14, 2013, Amsterdam, NL.
- 10th Annual Workshop on Privacy in Electronic Society (WPES), October 17th, 2011, Chicago, IL, USA.
- 23rd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC '09), July 12-15, 2009, Montreal, Canada.
- 6th International Workshop on Privacy Aspects of Data Mining, held in conjunction with the 2007 IEEE International Conference on Data Mining, October 28, 2007, Omaha, NE, USA.

### General Chair/Co-Chair

- 2nd IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications (TPS), December 12 - 14, 2020, Washington, D.C., USA.
- 9th International Conference on Security of Information and Networks (SIN 2016), July 20-22, 2016, Newark, NJ, USA.
- 27th Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC '13), July 15-17, 2013, Newark, NJ, USA.
- 17th ACM Symposium on Access Control Models and Technologies (SACMAT '12), June 20-22, 2012, Newark, NJ, USA.

### Associate Editor (Editorial Board)

- IEEE Transactions on Dependable and Secure Computing (TDSC), 2011 - 2016.
- Journal of Computer Security (JCS), 2013 - present.
- Computers & Security (COSE), 2015 - 2018.
- International Journal of Security and Networks (IJSN), 2011 - present.
- Journal of Healthcare Informatics Research, 2018 - present.

IFIP WG 11.3 Working Group on Data and Applications Security and Privacy, Vice-chair, Jan 1, 2019 – present.

SIAM Data Mining & Analytics Activity Group, Vice-chair, Jan 1, 2016 – Dec. 31, 2017.

Member, ACM US Public Policy Council, Privacy, Security, Digital Governance Committees, March, 2017 – present

Member, IEEE P7002 – Data Privacy Process Standard

External Reviewer, Italian Research and University Evaluation Agency (ANVUR)

Foreign Faculty, JEC Jabalpur, under auspices of the GIAN Program, Ministry of Human Resource Development, Government of India, June 20, 2016 – July 1, 2016.

SIGKDD Doctoral Dissertation Awards Committee, 2009–2014.

Proceedings Chair

- The 21st ACM Conference on Computer and Communications Security (CCS '14), November 3-7, 2014, Arizona, USA.
- The 16th ACM Symposium on Access Control Models and Technologies (SACMAT '11), June 9-11, 2011, Innsbruck, Austria.
- The Eleventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, August 21-24, 2005, Chicago, IL.

Publicity Chair

- 2008 Workshop on Secure Knowledge Management, November 3-4, 2008, Richardson, TX, USA.
- International Conference and Workshop on Cyber Security, Cyber Crime and Cyber Forensics, August 19-21, 2009, Cochin, India .

Registrations Chair

- 14th ACM Symposium on Access Control Models and Technologies (SACMAT '09), June 3-5, 2009, Stresa, Italy.

Book Donations Chair

- ACM SIGMOD/PODS 2005 Conference, June 14-16, 2005, Baltimore, MD.

Special Issue Editor

- Journal of Computer Security, Selected papers from IFIP DBSEC '09 Conference (co-edited with Ehud Gudes).
- International Journal of Computational Models and Algorithms in Medicine, Special Issue on Privacy in Health Informatics (co-edited with Soon Chun).

Session Chair

- The IEEE CIC/CogMI/TPS Joint Conferences, December 12-14, 2019, Los Angeles, CA, USA.
- The 4th IEEE International Conference on Collaboration and Internet Computing (CIC), October 18-20, 2018, Philadelphia, PA, USA.
- The Second ACM Conference on Data and Application Security and Privacy (CODASPY), February 8-10, 2012, San Antonio, TX, USA.
- 25th Annual IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy (DBSEC '11), July 11-13, 2011, Richmond, VA, USA.

- The 15th ACM Symposium on Access Control Models and Technologies (SACMAT '10), June 9-11, 2010, Pittsburgh, PA, USA.
- 23rd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSEC '09), July 12-15, 2009, Montreal, Canada.
- 24th Annual ACM Symposium on Applied Computing, Security Track, March 8-12, 2009, Honolulu, Hawaii, USA.

#### Panel Participant

- The IEEE CIC/CogMI/TPS Joint Conferences, December 12-14, 2019, Los Angeles, CA, USA.
- The Twenty-Third ACM Symposium on Access Control Models and Technologies (SACMAT), June 13-15, 2018, Indianapolis, IN, USA.
- Challenge Workshop on Record Linkage Challenges in Distributed Data Networks, Concordium 2016, September 12-13, 2016, Washington, DC, USA.
- Moderator, The Fourth ACM Conference on Data and Application Security and Privacy (CODASPY), March 3-5, 2014, San Antonio, TX, USA.
- The Second ACM Conference on Data and Application Security and Privacy (CODASPY), February 8-10, 2012, San Antonio, TX, USA.
- The Twenty-First Conference on Computers, Freedom, and Privacy, June 14-16, 2011, Washington, DC.
- 2009 IEEE/WIC/ACM International Conference on Web Intelligence, September 15-18, Milan, Italy.

#### Program Committee

- The ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) – '17, '16, '15, '14, '13, '12, '11, '10.
- The IEEE International Conference on Data Mining (ICDM) – '18, '16, '15, '13, '12, '10, '09, '08, '06.
- The ACM Symposium on Access Control Models and Technologies (SACMAT) – '20, '19, '18, '17, '15, '14, '12, '11, '10, '09.
- The European Symposium on Research in Computer Security (ESORICS) – '19, '18, '17, '16, '15, '13, '12, '11.
- The Annual WG 11.3 Conference on Data and Applications Security and Privacy (DBSec) – '19, '18, '17, '16, '15, '14, '13, '12, '11, '10, '08.
- The Annual International Conference on Digital Government Research (dg.o) – '18, '17, '16, '15, '14, '13, '12, '11, '10, '09.
- The International Conference on Very Large Data Bases (VLDB) – '18, '16, '12 (Ph.D. Program Track)
- The ACM SIGMOD International Conference on Management of Data – '18, '14 (Demo Track), '13 (Demo Track).
- The ACM Conference on Data and Application Security and Privacy (CODASPY) – '19, '13, '12.
- The IEEE International Conference on Distributed Computing Systems (ICDCS) – '19, '20.
- The International Conference on World Wide Web (WWW) Posters Track – '12, '11.
- The ACM International Conference on Information and Knowledge Management (CIKM) – '13.
- International Conference on Data Warehousing and Knowledge Discovery (DaWaK) – '08, '07, '06.
- The IEEE International Conference on Granular Computing (GRC) – '09, '08, '06.
- The International Conference on Applied Cryptography and Network Security (ACNS) – '12.

- The International Conference on Security and Cryptography (SECRYPT) – '18, '17, '16, '15, '14, '13.
- Workshop on Privacy in the Electronic Society (WPES), in conjunction with the ACM Conference on Computer and Communications Security (CCS) – '16, '12, '10, '09.
- International Workshop on Privacy Aspects of Data Mining (PADM) – '11, '06, '04.
- The IEEE International Conference on Privacy, Security, Risk and Trust (PASSAT) – '12, '11.
- The International Conference on Network and System Security (NSS) – '16, '15, '14, '13, '12, '11.
- The IEEE Conference on Communications and Network Security (CNS) – '20, '18, '17, '15.
- The International workshop on Trust and Privacy in Distributed Information Sharing 2011 (TP-DIS 2011) colocated with IFIPTM 2011, 28 June 2011, Copenhagen, Denmark.
- The 2nd International Symposium on Data, Privacy, and E-Commerce (ISDPE '10), September 13-14, 2010, Buffalo/Niagara Falls, NY, USA.
- The 5th International Conference on Information Technology (FutureTech 2010), Security and Trust Computing Track, May 21-23, 2010, Busan, Korea.
- The IEEE International Conference on Data Engineering (ICDE) – '16, '10.
- The Symposium on Configuration Analytics and Automation (SafeConfig) – '12, '11.
- The 2009 Information Security Conference (ISC '09), September 7-9, 2009, Pisa, Italy.
- The First Workshop on Management and mining of UNcertain Data (MOUNDS 2009), March 29, 2009, Shanghai, China.
- 2008 Workshop on Secure Knowledge Management, November 3-4, 2008, Richardson, TX, USA.
- The Second International Workshop on Privacy-Aware Location-based Mobile Services (PALMS), April 27, 2008, Beijing, China.
- The Eleventh IEEE International Conference on Computational Science and Engineering, July 16-18, 2008, Sao Paulo, Brazil.
- The First Workshop on Data Mining of Uncertain Data (DUNE 2007), October 28, 2007, Omaha, NE, USA.
- The First Ph.D. Workshop in CIKM (PIKM), November 5, 2007, Lisboa, Portugal.
- The Third International Conference on Information Systems Security (ICISS 2007), December 16-20, 2007, Delhi, India.
- The Third International Workshop on Data Mining and Knowledge Discovery (ADMKD 2007), October 2, 2007, Varna, Bulgaria.
- The Twenty-Second National Conference on Artificial Intelligence, July 22-26, 2007, Vancouver, British Columbia, Canada.
- Second International Conference on Information Systems Security, December 17-21, 2006, Kolkata, India.
- 2nd ADBIS Workshop on Data Mining and Knowledge Discovery, September 6, 2006, Thessaloniki, Greece.
- 2005 ACM Symposium on Applied Computing Special Track on Data Mining (DM), March 13-17, 2005, Santa Fe, New Mexico.

#### Proposal Review Panel

- National Institutes of Health (Oct '19, Jun '19, Nov' 17, Feb '16, Apr '14).
- National Science Foundation (Jan '20, Nov '18, Oct' 17, Apr '17, Nov '13, May '12, May '11, Apr '08).
- The Marsden Fund, New Zealand, July 2016

- Kentucky Science & Engineering Foundation, November 2006.
- NASA Intelligent Systems Project, January 2004.

Reviewer (only journals listed)

- ACM Transactions on Knowledge Discovery from Data.
- Knowledge and Information Systems, Springer-Verlag, London.
- Journal of Artificial Intelligence Research.
- IEEE Transactions of Knowledge and Data Engineering.
- IEEE Transactions on Systems, Man, and Cybernetics.
- IEEE Transactions on Dependable and Secure Computing.
- IEEE Transactions on Neural Networks.
- Journal of Database Management, Idea Group Inc.
- Journal of Official Statistics, Statistics Sweden.
- Journal of Computing and Information Technology, University Computing Centre, Croatia.
- Journal of Computer Security, IOS Press, The Netherlands.
- International Journal on Digital Libraries, Springer-Verlag.
- International Journal on Very Large Data Bases, Springer-Verlag.
- Data and Knowledge Engineering, Elsevier.
- Data Mining and Knowledge Discovery, Springer.
- International Journal of Information and Computer Security, Inderscience.

#### UNIVERSITY SERVICE

1. Chair, Technology Policy Committee, 2012-2013, 2017-2018
2. Member, Appointments and Promotions (A & P) Committee, 2018 – present
3. Ph.D. Coordinator for Information Technology, 2016 – present
4. Member, RU-N Research Advisory Committee (RAC), 2017 – present
5. Member, RU-N Research Office Staffing and Recruiting Committee, 2017 – 2018
6. Member, Teaching Methods Innovations Committee, 2005 – 2006
7. Member, Undergraduate - NB Curriculum Committee, 2005 – 2006
8. Member, Undergraduate - NWK Curriculum Committee, 2005 – 2006
9. Member, Graduate Admissions Committee, 2005 – present
10. Member, Policy Committee for the Master of Information Technology Program, 2006 – 2007
11. Member, Search Committee for Director of Information Technology, Rutgers Business School, 2008
12. Member, Search Committee for Senior Director of Office of Technology and Instructional Services (OTIS), Rutgers Business School, 2016
13. Member, Technology Policy Committee, 2010-2011, 2015-2017
14. Member, Masters in Information Technology Coordinating Committee, 2010-2011
15. Member, Newark Undergraduate Scholastic Standing Committee, 2010-2011
16. Member, MSIS Hiring Committee, 2011-2012, 2016-2017
17. Member, MSIS Department Executive Committee, 2011-2012
18. Member, RBS Undergraduate Program - Newark Admissions Committee, 2012-2013

19. Member, RBS Undergraduate Program - Newark Policy Committee, 2014-2018
20. Member, Newark Undergraduate Admissions Committee, 2013-2015
21. Member, Information Technology Task Force, 2013-2014
22. Member, RBS Service Awards Committee, 2014-2015
23. Member, Public Scholarship Task Force, 2014-2015
24. Member, Undergraduate Rankings Task Force, 2014-2015
25. Member, Ad-Hoc Administration Evaluation Advisory Committee, 2016-2017

#### PRESENTATIONS

1. Keynote: "Quality of Service aware Security and Privacy for Cloud and Edge Computing Environments", 14th International Conference on Network and System Security, Melbourne, Australia, November 26, 2020.
2. "How to identify anomalies accurately and privately", Dartmouth College, Hanover, NH, October 30, 2020.
3. "How to identify anomalies accurately and privately", Montclair State University, Montclair, NJ, October 28, 2020.
4. Keynote: "Quality of Service aware Security and Privacy for Cloud and Edge Computing Environments", IEEE/ACM International Symposium on Quality of Service, Hangzhou, China, June 16, 2020.
5. Keynote: "Privacy-preserving Analytics in the Big Data environment", The International Conference on Cyberspace Data and Intelligence (CyberDI 2019), Beijing, China, December 17, 2019.
6. "How to identify anomalies accurately and privately", Peking University, Beijing, China, December 16, 2019.
7. Keynote: "Automating Security Configuration and Administration: A Machine Learning Perspective", The 2nd International Conference on Machine Learning for Cyber Security (ML4CS), Xi'an, China, September 20, 2019.
8. "Engineering Secure and Privacy-preserving Systems for the Big Data Environment", Marathwada Mitra Mandal's College of Engineering, Pune, August 28, 2019.
9. Keynote: "Ensuring privacy in social network analysis", 5th International Symposium on Security and Privacy in Social Networks and Big Data (SocialSec 2019), Copenhagen, Denmark, July 15 2019.
10. "Engineering Secure and Privacy-preserving Systems", Washington University of St. Louis, St. Louis, MO, March 8, 2019.
11. "Engineering Secure and Privacy-preserving Systems", University of Connecticut, Storrs, CT, February 27, 2019.
12. Keynote: "Security in the edge computing environment: Challenges and Opportunities", 12th International Conference on Network and System Security (NSS-2018), Hong Kong, China, August 27, 2018.
13. "Privacy-preserving Analytics: the next frontier", Guangzhou University, Guangzhou, China, August 25, 2018.
14. Keynote: "Security in the edge computing environment: Challenges and Opportunities", 32nd Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy, Bergamo, Italy, July 17, 2018.
15. "Analytics Driven Security Configuration and Management", U.S. Air Force Science and Technology 2030 Workshop, Indiana University, Bloomington, IN, USA, May 10, 2018.

16. "Inculcating the research mindset: Why, How, and When", SNDT Women's University, Pune, India, January 11, 2018.
17. "Ensuring Confidentiality and Integrity for Outsourced Collaborative Filtering", IBM T. J. Watson Research Center, Yorktown, NY, March 23, 2016.
18. "Enabling Security, Privacy, and Analytics in Big Data: A Biomedical Perspective", University of California at San Diego, San Diego, CA, March 11, 2016.
19. "Ensuring Confidentiality and Integrity for Outsourced Collaborative Filtering", Princeton University, Princeton, NJ, October 12, 2015.
20. "Inculcating the research mindset", SNDT Women's University, Pune, India, August 25, 2015.
21. "Ensuring Confidentiality and Integrity for Outsourced Collaborative Filtering", University at Albany, SUNY, Albany, NY, USA, March 30, 2015.
22. "Ensuring Confidentiality and Integrity for Outsourced Collaborative Filtering", New Jersey Institute of Technology, Newark, NJ, USA, November 19, 2014.
23. "Ensuring Confidentiality and Integrity for Outsourced Collaborative Filtering", IIT Kharagpur, Kharagpur, West Bengal, India, July 21, 2014.
24. Keynote: "Privacy Preserving Collaborative Optimization", The 7th International Conference on Security of Information and Networks (SIN 2014), Glasgow, UK, September 10, 2014.
25. "Automating Security Configuration and Administration - An access control perspective", Department of Computer Science and Automation, Indian Institute of Science, August 14, 2013.
26. "Automating Security Configuration and Administration - An access control perspective", EMC Center of Excellence, Bangalore, India, August 14, 2013.
27. "Privacy-preserving Analytics and Collaboration", Department of Economics, Fergusson College, Pune, India, August 12, 2013.
28. Tutorial: "Privacy in the context of digital government", Tutorial at the 13th Annual International Conference on Digital Government Research (dg.o 2012), June 4-7, 2012, University of Maryland, College Park, MD.
29. The Role Mining Problem - A formal perspective, University of Texas at Austin, February 9, 2012.
30. "Automating Security Configuration and Administration: An Access Control Perspective", Winter 2011 Security and Privacy Day, New Jersey Institute of Technology, December 2, 2011.
31. The Role Mining Problem - A formal perspective, University of Maryland, Baltimore County, June 15, 2011.
32. The Role Mining Problem - A formal perspective, Arizona State University, April 28, 2011.
33. Privacy-preserving Graph Analysis, Tokai University, Tokyo, Japan, November 26, 2010.
34. Keynote: Automated Security Configuration and Administration - An Access Control Perspective, 5th International Workshop on Security (IWSEC' 2010), November 22-24, 2010, Kobe, Japan.
35. Tutorial: Role Engineering and Role Mining, 5th International Conference on Information Systems Security (ICISS 2009), 14-18 December 2009, Eastern Zone Cultural Center, Kolkata, India.
36. The Role Mining Problem - A Formal Perspective, University of Pittsburgh, Pittsburgh, PA, February 13, 2009.
37. Effective Query Log Anonymization, Google, Inc., Mountain View, CA, December 8, 2008.
38. The Role Mining Problem - A Formal Perspective, Syracuse University, Syracuse, NY, December 3, 2008.
39. The Role Mining Problem - A Formal Perspective, University of Texas at San Antonio, San Antonio, TX, November 5, 2008.



40. The Role Mining Problem – A Formal Perspective, Stevens Institute of Technology, Hoboken, NJ, October 20, 2008.
41. Role Engineering and the Role Mining Problem, University of Texas at Dallas, Dallas, TX, September 17, 2007.
42. Role Engineering and the Role Mining Problem, Tata Research Design & Development Center, August 1, 2007, Pune, India.
43. “RoleMiner: Role Mining via Subset Enumeration”, at the 13th ACM Conference on Computer and Communications Security, November 1, 2006.
44. “Privacy-Preserving Data Mining”, at the Tata Research Design & Development Center, Pune, India, June 21, 2005.
45. “Privacy-Preserving Outlier Detection”, at the Stevens Institute of Technology, Hoboken, NJ, May 2, 2005.
46. “Privacy Preserving Collaboration – Supply Chain, Transportation Logistics and Other problems”, Supply Chain Management Research Seminar Series, Rutgers Business School, April 28, 2005.
47. “Privacy Preserving K-Means Clustering on Vertically Partitioned Data”, invited talk at Interface ’04, the best of data mining at KDD session, Baltimore, Maryland, May 27, 2004.
48. “Privacy Preserving Data Mining over Vertically Partitioned Data” at the CSIS Seminar at the Department of Information and Software Engineering, George Mason University, May 25, 2004.
49. “Privacy Preserving Data Mining on Vertically Partitioned Data” at the CERIAS Security Seminar, Purdue University, January 14, 2004.
50. “Privacy Preserving Data Mining over Vertically Partitioned Data” at the DAIS Seminar at the CS Department at University of Illinois at Urbana-Champaign, October 24, 2003.
51. “Leveraging the ”Multi” in Secure Multi-Party Computation” at the Workshop on Privacy in Electronic Society held in conjunction with ACM CCS, October 30, 2003.
52. “Privacy Preserving K-Means Clustering over Vertically Partitioned Data” at the Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, August 25, 2003.
53. “A new architecture for Privacy Preserving Data Mining” at the Workshop on Privacy, Security and Data Mining held in conjunction with ICDM, December 9, 2002.
54. “Privacy Preserving Data Mining” with Chris Clifton in CERIAS Security Seminar, February 27, 2002.
55. “A new architecture for Privacy Preserving Data Mining” in Indiana Center for Database Systems seminar, December 4, 2002.

#### PH.D. STUDENTS SUPERVISED

1. Qi Guo, A Formal Approach To The Role Mining Problem, co-advised with V. Atluri, August 2010. Employed at: Bed, Bath, and Beyond, Inc.
2. Heechang Shin, Security and Privacy in Personalized Mobile Service Environments, co-advised with V. Atluri, August 2010. Employed at: Associate Professor at Iona College.
3. Haibing Lu, Boolean Matrix Decomposition with Extensions: Application to Role Mining, co-advised with V. Atluri, October 2011. Employed at: Associate Professor at Santa Clara University
4. Xiaoyun He, Privacy-Preserving Analysis of Graph-Structured Data, co-advised with N. Adam, October 2011. Employed at: Associate Professor at Auburn University - Montgomery
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10. Hafiz Salman Asif (Expected Graduation: Fall '19)
11. Yueqing Zhang (Expected Graduation: Fall '19)
12. Saptarshi Das, co-advised with S. Sural (Expected Graduation: Fall '19)
13. Xinyue Wang (Expected Graduation: Fall '21)