

Biographical Sketch of Sharad Mehrotra
Department of Computer Science
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EDUCATION

Ph.D. (Computer Sciences), University of Texas at Austin 1993

M.S. (Computer Sciences), University of Texas at Austin 1990

B.S. (Computer Science and Engineering) I. I. T., Kanpur, India 1988

PH.D. DISSERTATION

Failure-Resilient Transaction Management in Multidatabase Systems

SUPERVISING PROFESSORS

Dr. Henry F. Korth and Dr. Abraham Silberschatz

PROFESSIONAL SOCIETIES

- Association for Computing Machinery, Fellow
- IEEE Computer Society, Fellow

EMPLOYMENT HISTORY

University of California, Irvine

- **July 2023 – to present** Distinguished Professor of Computer Science.
- **April 2021 – July 2023** Chancellor's Professor of Computer Science.
- **June 2004 – present:** Professor of Computer Science.
- **2008-2016:** Director for Center of Emergency Response Technologies
- **2003-2010:** Director and Principal Investigator, ITR-Rescue Project, (2003-2010)*Spearheaded the team consisting of 25 researchers from 5 universities and industry to establish a research agenda on crisis response*
- **July 2000-June 2004** Associate Professor
- **July 1998-June 2000** Assistant Professor

(graduated over 25 Ph.D. students, designed and taught several graduate and undergraduate courses on data management systems).

University of Illinois at Urbana Champaign

- **Aug. 1995 - Aug. 1998** Assistant Professor of Beckman Institute (image formation group)
- **August 1994 – July 1998** Assistant Professor of Computer Science,

(Recipient of the C. W. Gear Outstanding Junior Faculty Award for excellence in research and service, 1998, Graduated 4 MS students, and 6 Ph.D. students. Developed and taught both undergraduate and graduate courses on database management systems. Developed and taught specialized seminar courses on (1) transaction processing, (2) multimedia database systems, and (3) data mining)

Matsushita Information Technology Laboratory, Princeton, NJ

- July 1993 - July 1994, Scientist
- Student Intern. Summer 1992 - July 1993

(Designed and developed the Gold Search Engine that supported full-text index over mail documents. The developed system was deployed internally in the laboratory since 1993 and used by approximately 20 users on a daily basis. Designed and developed an office workflow management system to support the concept of "paper-less" office and mobile computing within the laboratory)

CURRENT RESEARCH INTERESTS

IoT Data Management, ML in databases, Privacy, Security, Outsourced Data Management, Data quality

PROFESSIONAL AWARDS AND HONORS

- **MCD Fellowship**, University of Texas at Austin, 1988-1990.
- S. Mehrotra, H. F. Korth, and A. Silberschatz. *Concurrency Control in Hierarchical Multidatabase Systems*". **Selected by Program Committee of the VLDB International Conference, 1994 as one of the best papers submitted to the conference.** Invited to submit to the *VLDB Journal*.
- **Best Paper Award Nomination**, J. Kothari, and S. Mehrotra *Neighborhoods: A framework for enabling web-based synchronous collaboration and hierarchical Navigation*. Proceedings of the 29th Hawaiian International Conference in System Sciences 1996.
- **CAREER Award**, NSF Information and Data Management Program, Information and Intelligent Systems Division, 1998.
- **C. W. Gear Outstanding Junior Faculty Award** based on *Research Contributions*, Department of Computer Science, University of Illinois at Urbana-Champaign, 1998.
- **Most cited paper from T-CSVT 1998.** Seventh most cited paper in the history of the journal. (over 1500 citations in Google Scholar) Yong Rui, Thomas S. Huang, Michael Ortega, and Sharad Mehrotra, *Relevance Feedback: A Power Tool in Interactive Content-Based Image Retrieval*, *IEEE Trans. on Circuits and Systems for Video Technology* , Special Issue on Segmentation, Description, and Retrieval of Video Content, pp. 644-655, Vol. 8, No. 5, Sept, 1998.
- **Best Paper Award** for the paper entitled *Locally Adaptive Dimensionality Reduction for Indexing Large Time Series Databases*, **SIGMOD Conference, 2001**. Paper selected from 290 submissions of which 44 were selected for publication. Invited to submit to *Transactions on Database Systems*.
- **Best Paper Award** for the paper entitled *Efficient Execution of Aggregation Queries over Encrypted Databases*, DASFAA Conference, 2004.
- **Outstanding Graduate Student Mentor Award**, School of Information & Computer Science, UCI, 2005
- **Best Student Paper Award**, IEEE Workshop on Multimodal Sentient Computing: Sensors, Algorithms and Systems (WMSC 2007) held in conjunction with IEEE CVPR (Computer Vision and Pattern Recognition) 2007
- **SIGMOD Test of Time Award 2012** for the paper entitled *Executing SQL over Encrypted Data in the Database-Service-Provider Model*
- **H-Index of 69** with citation count approx. 29000 (Google Scholar).
- **Best Paper Award for the paper** A Unified Framework for Context Assisted Face Clustering." ACM International Conference on Multimedia Retrieval, 2013.

- **DASFAA 10 year best paper award, 2013** for the paper entitled: "Efficient Record Linkage in Large Data Sets" that appeared in DASFAA 2003.
- **DASFAA 10 year best paper award, 2014** for the paper entitled: "Efficient Execution of Aggregation Queries over Encrypted Relational Databases" that appeared in DASFAA 2004.
- **2014 Mention in OC Register.** (<http://www.ocregister.com/articles/award-604025-psychoanalytic-irvine.html>)
- **Board of Trustees, VLDB Endowment, 2016 – 2022.**
- **Dean's award for excellence in Research, School of Computer Science, UCI, 2016**
- **Listed amongst Most Influential Scholar on Aminer** (<https://aminer.org>), 2016
- **Dean's award for Graduate Student Mentoring, School of Computer Science, UCI, 2018**
- **Best Paper Award, in 37th IEEE International Symposium on Reliable Distributed Systems (SRDS)** for a paper entitled: "Enabling State Estimation for Fault Identification in Water Distribution Systems under Large Disasters".
- **Distinguished Poster Award, ACM Codaspy, 2019.**
- **Best Paper Award, IEEE NCA** for the paper entitle "'IoT Notary:Sensor Data Attestation in Smart Environments" was awarded Best Paper Award in IEEE NCA 2019
- **Best Paper Award, in IEEE International Conference on Smart Computing (SMARTCOMP), 2020** for the paper entitled: "REAM: Resource Efficient Adaptive Monitoring of Community Spaces at the Edge Using Reinforcement Learning". 2020
- **Fellow of the IEEE, 2021**
- **Distinguished Member of ACM, 2021**
- **Fellow of the AAIA, 2021**
- **Chancellor Professor of Computer Science, 2021**
- **Key Architect of the TIPPERS software that won the Naval Information Warfare Systems Command (NAVWAR) Innovation Award, 2021**
- **Best Paper Award IEEE PERCOM 2022** for the paper entitled. SmartSPEC: Customizable Smart Space Datasets via Event-Driven Simulations Andrew Chio, Daokun Jiang, Peeyush Gupta, Georgios Bouloukakis, Roberto Yus, Sharad Mehrotra and Nalini Venkatasubramanian
- **Fellow of the ACM, 2023**
- **Distinguished Professor of Computer Science, 2024**

BOOK CHAPTERS & EDITED BOOKS

- [B1] Iosif Lazaridis, Sharad Mehrotra, Kriengkrai Porkaew, R. Winkler. *Database Support for Situational Awareness*. Computer Science Handbook, M.S. Vassilou and T.S. Huang (eds.), Army Research Laboratory, 2001
- [B2] Michael Ortega-Binderberger, Kaushik Chakrabarti, and Sharad Mehrotra, *Database Support for Multimedia Applications*. Vittorio Castelli and Lawrence Bergman (eds.), In Image Databases, Search and Retrieval of Digital Imagery, John Wiley and Sons, 2001.
- [B3] Michael Ortega-Binderberger and Sharad Mehrotra, *Relevance Feedback in Multimedia Databases*, (eds.) Borko Furht and Oge Marquez. In Handbook of Video Databases: Design and Applications, CRC Press, 2003. ISBN 084937006X.
- [B4] Sharad Mehrotra, Daniel Dajun Zeng, Hsinchun Chen, Bhavani M. Thuraisingham, Fei-Yue Wang: *Intelligence and Security Informatics*, IEEE International Conference on Intelligence and Security Informatics, ISI 2006, Proceedings Springer 2006

- [B5] Bijit Hore, Sharad Mehrotra, Hakan Hacigumus. *Managing and Querying Encrypted Data* (In Database Security: Applications and Trends. (eds.) Michael Gertz and Sushil Jajodia, Springer 2007)
- [B6] Bijit Hore, Hojjat Jafarpour, Ramesh Jain, Shengyue Ji, Daniel Massaguer, Sharad Mehrotra, Nalini Venkatasubramanian, Utz Westerman. *SATware: Middleware for Sentient Spaces* In Multimodal Surveillance: Sensors, Algorithms and Systems, (eds.) Zhigang Zhu and Thomas S. Huang 2007
- [B7] Hakan Hacigumus, Bijit Hore, Bala Iyer, Sharad Mehrotra. *Search over Encrypted Data*. In Security in Decentralized Data Management, (eds.) Ting Yu and Sushil Jajodia, Springer 2007
- [B8] Naveen Ashish, Dmitri V. Kalashnikov, Sharad Mehrotra, Nalini Venkatasubramanian, Ron Eguchi, Rajesh Hegde, and Padhraic Smyth. *Situational Awareness Technologies for Disaster Response*. In Terrorism Informatics: Knowledge Management and Data Mining for Homeland Security, Springer, December 2007 (eds.) H. Chen, E. Reid, J. Sinai, A. Silke, and B. Ganoz
- [B9] Sharad Mehrotra, Taieb Znati, Craig W. Thompson: *Crisis Management*. IEEE Internet Computing 12(1): 14-17 (2008)
- [B10] Jehan Wickramasuriya, Sharad Mehrotra and Nalini Venkatasubramanian. *RFID-Enabled Privacy-Preserving Video Surveillance: A Case Study*. RFID Handbook: Applications, Technology, Security and Privacy, CRC Press, Chapter 25, pages 456-466, (eds.) Syed A. Ahson, Mohammad Ilyas 2008.
- [B11] Naveen Ashish and Sharad Mehrotra, *XAR: An Integrated Framework for Semantic Extraction and Annotation Cases on Semantic Interoperability for Information Systems Integration: Practices and Applications*. (eds.) Yannis Kalfoglou
- [B12] Daniel Massaguer, Sharad Mehrotra, Ronen Vaisenberg and Nalini Venkatasubramanian. *SATWARE: A Semantic Approach for Building Sentient Spaces*. In Distributed Video Sensor Networks, Springer, (eds.) Bir Bhanu, China Ravishankar, Amit Roy Chowdhury, Demetri Terzopoulos, and Hamid Aghajan, 2011.
- [B13] Ali Bagherzandi, Bijit Hore, Sharad Mehrotra. Search over Encrypted Data In Encyclopedia of Cryptography and Security, Springer 2011.
- [B14] Hakan Hacigumus, Bijit Hore, Sharad Mehrotra. Privacy of Outsourced Data In Encyclopedia of Cryptography and Security, Springer 2011.
- [B15] Z. Qin, Qi Han, Sharad Mehrotra, Nalini Venkatasubramanian. *Quality Aware Sensor Data Management*. The Art of Wireless Sensor Networks, (eds.) Habib M. Ammari, Springer Verlag. 429-464. Published 2014.
- [B16] Sharad Mehrotra, Nalini Venkatasubramanian, Mark-Oliver Stehr, Carolyn Talcott. *Securing Cyber-Physical Infrastructures: Foundations and Challenges Pervasive Sensing, Event Detection and Situational Awareness*. In Securing Cyber-Physical Infrastructures: Foundations and Challenges, (eds.), Sajal Das, Krishna Kant, Nan Zhang 2011
- [B17] Leila Jalali, Sharad Mehrotra, Nalini Venkatasubramanian. *Multisimulations: Towards Next Generation Integrated Simulation Environments*. Formal Modeling: Actors, Open Systems, Biological Systems 2011: 352-367.
- [B18] Kerim Yasin Oktay, Mahadevan Gomathisankaran, Murat Kantarcioglu, Sharad Mehrotra, Anoop Singhal. *Towards Data Confidentiality and a Vulnerability Analysis Framework for Cloud Computing*. Secure Cloud Computing 2014: 213-238
- [B19] L Zhang, DV Kalashnikov, S Mehrotra, *Context Assisted Person Identification for Images and Videos* Handbook Pattern Recognition and Computer Vision, 197-216 , 2016

- [B20] Sharad Mehrotra, Kerim Yasin Oktay, Shantanu Sharma: Exploiting Data Sensitivity on Partitioned Data. *From Database to Cyber Security 2018*: 274-29
- [B21] Hakan Hacigiümüş, Bijit Hore, Sharad Mehrotra, Shantanu Sharma: Privacy of Outsourced Data, *Encyclopedia of Cryptography, Security and Privacy*, 2021
- [B22] Sharad Mehrotra, Shantanu Sharma: Search over Ciphertext Datasets using Partition Computation, *Encyclopedia of Cryptography, Security and Privacy*. 2021
- [B23] Ali Bagherzandi, Bijit Hore, Sharad Mehrotra, Shantanu Sharma: Search over Encrypted Data *Encyclopedia of Cryptography, Security and Privacy*, 2021
- [B24] Sharad Mehrotra, Shantanu Sharma: Search over Secret Shared Datasets *Encyclopedia of Cryptography, Security and Privacy*, 2021
- [B25] Bagherzandi, Ali; Hore, Bijit; Mehrotra, Sharad; Sharma, Shantanu Search over Encrypted Data, 2025.

PATENTS

- [P1] Method for Proximity Searching with Range Testing and Range Adjustment, with Daniel Barbarà, Stephen Johnson, Sharad Mehrotra, Walid Aref US Patent 5,499,360
- [P2] Selection of a set of optimal n-grams for indexing string data in a DBMS system under space constraints, Vahit Hakan Hacigumus, Balakrishna Raghavendra Iyer, Sharad Mehrotra, Patent Issued: Jan 2009, Patent number 7478081
- [P3] Selection of a set of optimal n-grams for indexing string data in a DBMS system under space constraints introduced by the system VH Hacigumus, BR Iyer, S Mehrotra US Patent, 2011, US Patent 8,001,128
- [P4] Querying encrypted data in a relational database system VH Hacigumus, BR Iyer, S Mehrotra, 2009 US Patent 7,500,111
- [P5] Querying encrypted data in a relational database system, Vahit Hakan Hacigumus, Balakrishna Raghavendra Iyer, Sharad Mehrotra, Patent Issued: Aug. 2010, Patent number: 7783900
- [P6] Query optimization in encrypted database systems, Vahit Hakan Hacigumus, Balakrishna Raghavendra Iyer, Sharad Mehrotra, Patent Issued: March 2010, Patent number: 7685437
- [P7] Apparatus and method for privacy protection of data collection in pervasive spaces, Sharad Mehrotra, Mohammed Alhazzazi, Mahesh Datt, Nalini Venkatasubramanian, Jehan Wickramasuriya, Patent Issued: May 2011, Patent number: 7940302

JOURNAL PAPERS

- [J1] R. Rastogi, S. Mehrotra, H. Korth, and A. Silberschatz. *Transcending the Serializability Requirement*. Data Engineering Bulletin, Vol. 16, No.2, pp. 8-11, June 1993.
- [J2] D. Barbarà, S. Mehrotra, and M. Rusinkiewicz. *INCAS: A Computation Model for Dynamic Workflows in Autonomous Distributed Environments*. Journal for Database Management, Special Issue on Multidatabases, Vol 7 (1), 1996 Winter Issue.
- [J3] S. Mehrotra, H. F. Korth and A. Silberschatz, *Concurrency Control in Hierarchical Multidatabase Systems*. VLDB Journal, Vol. 6, No. 2, 1997, Springer-Verlag.

- [J4] S. Mehrotra, R. Rastogi, Y. Breitbart, H. Korth, and A. Silberschatz, *Ensuring Consistency in Multidatabases by Preserving Two-Level Serializability*, ACM Transactions on Database Systems, 23 (2), 199-230 pages Sept. 1998.
- [J5] R. Rastogi, S. Mehrotra, Y. Breitbart, H. Korth, and A. Silberschatz, *On Correctness of Non-serializable Executions*. Journal of Computer and Systems Science, Academic Press, v. 56, n. 1, pp. 68-92, Feb. 1998.
- [J6] Y. Rui, T. Huang, and S. Mehrotra, *Relevance Feedback: A Power Tool in Interactive Content-Based Image Retrieval*. IEEE Trans. on Circuits and Systems for Video Technology, Vol. 8, No. 5, Pages 644-655, September, 1998.
- [J7] M. Ortega, Y. Rui, K. Chakrabarti, S. Mehrotra, T. Huang, *Supporting Ranked Boolean Similarity Queries in MARS*. IEEE Transactions on Knowledge and Data Engineering. Vol. 10, n. 6, Nov.-Dec. 1998.
- [J8] Y. Rui, T. Huang, and S. Mehrotra, *Constructing Table of Content Analysis in Videos*. ACM Multimedia Journal, Special Issue on Video Libraries, Sept. 1999.
- [J9] Y. Rui, M. Ortega, T. Huang, and S. Mehrotra, *Information Retrieval beyond Text Documents*. Library Trends, July 1999.
- [J10] S. Mehrotra, R. Rastogi, Y. Breitbart, H. Korth, and A. Silberschatz. *Overcoming Heterogeneity and Autonomy in Multidatabase Systems*, Information and Computation, Vol. 167, No.2, June 15, 2001, pp. 137-172.
- [J11] E. Keogh, K. Chakrabarti, S. Mehrotra, M. Pazzani. *Dimensionality Reduction for Fast Similarity Search in of Large Time Series Datasets*, Knowledge and Information Systems Journal, Volume 3, Number 3, August 2001.
- [J12] K. Chakrabarti, M. Ortega, K. Porkaew and S. Mehrotra. *Query Refinement in Similarity Retrieval Systems*, IEEE Data Engineering Bulletin, Special Issue on Imprecise Queries in Databases” (invited paper), Volume 24, Number 3, September, 2001.
- [J13] K. Chakrabarti, E. Keogh, M. Pazzani and S. Mehrotra. *Locally Adaptive Dimensionality Reduction for Indexing Large Time Series Database*. ACM Transactions on Database Systems. TODS 27(2): 188-228 (2002)
- [J14] K. Chakrabarti, K. Porkaew, M. Ortega and S. Mehrotra. *Evaluating Refined Queries in Top-k Retrieval Systems*. IEEE Transactions on Knowledge and Data Engineering. (TKDE), Vol. 15, No. 5, September/October, 2003
- [J15] I. Lazaridis, Q. Han, X. Yu, S. Mehrotra, N. Venkatasubramanian, Dmitri V. Kalashnikov, Weiwen Yang. *QUASAR: Quality-Aware Sensing Architecture*. SIGMOD Record, March, 2004.
- [J16] M. Ortega and S. Mehrotra. *Relevance Feedback Techniques in the MARS Image Retrieval System*. ACM Multimedia Systems Journal. (January/March 2004).
- [J17] X. Yu, K. Niyogi, S. Mehrotra, and N. Venkatasubramanian. *Adaptive Middleware for Distributed Sensor Environments*. IEEE DS Online, May 2003, Vol. 4, No.5.
- [J18] K. Chakrabarti, M. Ortega-Binderberger, S. Mehrotra, and K. Porkaew. *Evaluating Refined Queries in Top-k Retrieval Systems*. Transactions on Knowledge and Data Engineering, 2004.
- [J19] Michael Ortega-Binderberger and Sharad Mehrotra. *Relevance feedback techniques in the MARS image retrieval system*. Multimedia Systems Journal, 2004.
- [J20] I. Lazaridis, Q. Han, X. Yu, S. Mehrotra, N. Venkatasubramanian, D. Kalashnikov, and W. Yang. *QUASAR: Quality Aware Sensing Architecture*. ACM SIGMOD Record, March 2004, 2004-03.

- [J21] Dmitri Kalashnikov and Sharad Mehrotra. *Domain-independent data cleaning via analysis of entity-relationship graph*. In ACM Transactions on Database Systems (ACM TODS) 2006, 2006-06.
- [J22] L. Jin, C. Li, and Sharad Mehrotra. *Supporting Efficient Record Linkage for Large Data Sets Using Mapping Techniques*. World Wide Web Journal.
- [J23] I. Lazaridis, Q. Han, S. Mehrotra and N. Venkatasubramanian. *Fault-Tolerant Evaluation of Continuous Queries over Sensor Data*. International Journal on Distributed Sensor Networks (IJDSN), 2008.
- [J24] D.V. Kalashnikov, Z. Chen, R. Nuray-Turan, and S. Mehrotra. *Web people search via connection analysis*. In IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE).
- [J25] Y. Ma, D. V. Kalashnikov, and S. Mehrotra. *Towards Managing Uncertain Spatial Information for Situational Awareness Applications*. In IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), 20(1), October 2008
- [J26] I. Lazaridis, S. Mehrotra. *Progressive Approximate Aggregate Queries*. Encyclopedia of GIS 2008: 11-16
- [J27] D.Y. Seid, S. Mehrotra. *Processing for Semantic Web Databases: an Algebraic Approach*. Int. J. Semantic Computing 1(4): 479-495 (2007)
- [J28] Q. Han, S. Mehrotra, N. Venkatasubramanian. *Application-aware integration of data collection and power management in wireless sensor networks*. J. Parallel Distrib. Comput. 67(9): 992-1006 (2007)
- [J29] R. Vaisenberg, S. Mehrotra and D. Ramanan. *SEMArtCam scheduler: semantics driven real-time data collection from indoor camera networks to maximize event detection*. Journal of Real-Time Image Processing, Vol. 5, Issue 1 2010.
- [J30] D.V. Kalashnikov, S. Mehrotra, J. Xu, and N. Venkatasubramanian. *A Semantics-Based Approach for Speech Annotation of Images*. In IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), 23(9), September 2011
- [J31] R. Nuray-Turan, D. V. Kalashnikov, S. Mehrotra, and Y. Yu. *Attribute and Object Selection Queries on Objects with Probabilistic Attributes*. In ACM Transactions on Database Systems (ACM TODS), 36(4), 2011
- [J32] H. Jafarpour, B. Hore, S. Mehrotra, and N. Venkatasubramanian. *A Distributed Publish/Subscribe Framework for Rich Content Formats*. In IEEE Transactions on Distributed and Parallel Systems (TPDS) 2011.
- [J33] M. Saini, P.K. Atrey, S. Mehrotra and M. S. Kankanhalli. *Multimedia Communications Technical Committee. Considering Implicit Channels in Privacy Analysis of Video Data*. Multimedia Communications Technical Committee, IEEE Computer Society, E-letter, Vol. 6, No. 11, 27-30, November 2011
- [J34] R. C. Jammalamadaka, S. Mehrotra, N. Venkatasubramanian and K. Seamons. *DataVault: secure mobile access and data sharing*. Elsevier Network Security, Vol. 2011, No. 5, pp. 16-19, 2011.
- [J35] R. C. Jammalamadaka, S. Mehrotra, K. E. Seamons and N. Venkatasubramanian. *Middleware support for protecting personal data from web-based data services*. Network Security 2011(9): 11-16 (2011).
- [J36] M. Saini, P. K. Atrey, S. Mehrotra, and M.S. Kankanhalli. *Privacy aware publication of surveillance video*. Inderscience Int. J. of Trust Management in Computing and Communications. TMCC 2012

- [J37] M. Saini, P. Atrey, S. Mehrotra, M. Kankanhalli. *Adaptive Transformation for Robust Privacy Protection in Video Surveillance*. Advances in Multimedia, 1-14, 2012.
- [J38] M. Deshpande, K. Kim, B. Hore, S. Mehrotra, and N. Venkatasubramanian. *ReCREW: A Reliable Flash Dissemination System*. IEEE Transactions on Computers, 2012.
- [J39] R. Nuray-Turan, D.V. Kalashnikov, and S. Mehrotra. *Exploiting web querying for Web People Search in WePS2*. ACM Transactions on Database Systems (ACM TODS), 2012. 37(1):7(2012).
- [J40] G. Denker, N. Dutt, S. Mehrotra, M. O.Stehr, C. Talcott and N. Venkatasubramanian. *Resilient dependable cyber-physical systems: A Middleware Perspective*. Journal of Internet Systems and Applications, Volume 3, No.1, pages 41-49, 2012,
- [J41] B. Hore, S. Mehrotra, M. Canim and M. Kantarcioglu. *Secure Multidimensional Range Queries over Outsourced Data*. VLDB Journal 2012.
- [J42] R. Nuray-Turan, D. V. Kalashnikov, and S. Mehrotra. *Adaptive connection strength models for relationship-based entity resolution*. Submitted to ACM Journal of Data and Information Quality (ACM JDIQ), 2013
- [J43] M. Saini, P. K. Atrey, S. Mehrotra and M. Kankanhalli. *W3-Privacy: Understanding What, When, and Where Inference Channels in Multi-Camera Surveillance Video*. Multimedia Tools and Applications (MTAP) Journal 68(1), 135-158, 2014.
- [J44] R.C. Jammalamadaka, R. Gamboni, S. Mehrotra, K.E. Seamons and N.Venkatasubramanian. *A Middleware approach for outsourcing data securely*. Computers and Security 32: 252-266. 2013.
- [J45] N. Adam, R. Stiles, A. Zimdars, R. Timmons, J. Leung, G. Stachnick, J. Merrick, R. Coop, V.A. Slavin, T. Kruglikov, J. Galmiche and S. Mehrotra. *Consequence analysis of complex events on critical U.S. infrastructure*. Commun. ACM 56(6): 83-91. 2013.
- [J46] V. Khadilkar, K. Y. Oktay, M. Kantarcioglu, and S. Mehrotra. *Secure Data Processing over Hybrid Clouds*. IEEE Data Eng. Bull. 35(4): 46-54 (2012).
- [J47] L. Zhang, D. V. Kalashnikov, S. Mehrotra, and R. Vaisenberg. *Context-based person identification framework for smart video surveillance*. Machine Vision and Applications, 2013.
- [J48] J. Xu, D. V. Kalashnikov, and S. Mehrotra. *Query Aware Determinization of Uncertain Objects*. IEEE Transactions on Knowledge and Data Engineering 27(1): 207-221, 2015.
- [J49] H. Altwaijry, D.V. Kalashnikov and S. Mehrotra. *Query-Driven Approach to Entity Resolution*. PVLDB 6(14): 1846-1857, 2014 (presented at the 40th VLDB conference 2014; Hangzhou, China).
- [J50] K. Kim, N. Venkatasubramanian and S. Mehrotra. *Efficient and Reliable Application Layer Multicast for Flash Dissemination*. IEEE Transactions on Parallel and Distributed Systems. 2013.
- [J51] Y. Altowim, D.V. Kalashnikov and S. Mehrotra. *Progressive Approach to Relational Entity Resolution*. PVLDB 7(11): 999-1010. 2014 (presented at the 40th VLDB conference 2014; Hangzhou, China).
- [J52] R. Vaisenberg, A. Della Motta, S. Mehrotra and D. Ramanan. *Scheduling Sensors for Monitoring Sentient Spaces using an Approximate POMDP Policy*. Pervasive and Mobile Computing 10: 83-103 (2014)
- [J53] L. Zhang, D. V. Kalashnikov and S. Mehrotra. *Context Assisted Face Clustering Framework with Human-in-the-Loop*. In International Journal of Multimedia Information Retrieval (MMIR 2014) 3:69-88 (2014).

- [J54] Z. Wang, L. Shou, K.I. Chen, G. Chen and S. Mehrotra. *On Summarization and Timeline Generation for Evolutionary Tweet Streams*. IEEE Transactions on Knowledge and Data Engineering, 27(5): 1301-1315, 2015.
- [J55] L. Jalali, S. Mehrotra and N. Venkatasubramanian. *Simulation Integration: Using Multi-Database Systems Concepts*, Transactions of the Society for Modeling and Simulation, 90(11): 1268-1289, 2014.
- [J56] H. Altwaijry, S. Mehrotra and D. V. Kalashnikov: *QuERy: A Framework for Integrating Entity Resolution with Query Processing*. PVLDB 9(3): 120-131 (2015)
- [J57] L Zhang, X Wang, DV Kalashnikov, S Mehrotra and D Ramanan, *Query-Driven Approach to Face Clustering and Tagging*, IEEE Transactions on Image Processing 25 (10), 4504-4513, 2016
- [J58] D. Abadi, R. Agrawal, A. Ailamaki, M. Balazinska, P. A. Bernstein, M. J. Carey, S. Chaudhuri, J. Dean, AnHai Doan, M. J. Franklin, J. Gehrke, L. M. Haas, A. Y. Halevy, J. M. Hellerstein, Y. E. Ioannidis, H. V. Jagadish, D. Kossmann, S. Madden, S. Mehrotra, T. Milo, J. F. Naughton, R. Ramakrishnan, V. Markl, C. Olston, Beng Chin Ooi, C. Ré, D. Suciu, M. Stonebraker, T. Walter and J. Widom. *The Beckman Report on Database Research*. Commun. ACM 59(2): 92-99 (2016)
- [J59] M. Reza Rahimi, N. Venkatasubramanian, S. Mehrotra and A. V. Vasilakos. *On Optimal and Fair Service Allocation in Mobile Cloud Computing*, IEEE Transactions on Cloud Computing, 1-13, 2017
- [J60] H. Altwaijry, D.V. Kalashnikov and S. Mehrotra, *QDA: A Query-Driven Approach to Entity Resolution*, IEEE Transactions on Knowledge and Data Engineering 29 (2), 402-417, 2017
- [J61] Y. Altowin, D.Kalashnikov, S Mehrotra ProgressER: Adaptive Progressive Approach to Relational Entity Resolution, ACM Transactions of Knowledge Discovery from Data,33:1-33:45 (2018)
- [J62] M. Reza Rahimi, Nalini Venkatasubramanian, Sharad Mehrotra, Athanasios V. Vasilakos: **On Optimal and Fair Service Allocation in Mobile Cloud Computing**. IEEE Trans. Cloud Computing 6(3): 815-828 (2018)
- [J63] Peeyush Gupta, Yin Li, Sharad Mehrotra, Nisha Panwar, Shantanu Sharma, Sumaya Almanee: *Obscure: Information-Theoretic Oblivious and Verifiable Aggregation Queries*. PVLDB 12(9): 1030-1043 (2019)
- [J64] Shlomi Dolev, Peeyush Gupta, Yin Li, Sharad Mehrotra, and Shantanu Sharma *Privacy-Preserving Secret Shared Computations using MapReduce*. IEEE Trans. Dependable Secur. Comput. 18(4): 1645-1666 (2021).
- [J65] Panda: Partitioned Data Security on Outsourced Sensitive and Non-sensitive Data [Paper/PDF], Sharad Mehrotra, Shantanu Sharma, Jeffrey D. Ullman, Dhruvajyoti Ghosh, and Peeyush Gupta ACM Transactions on Management Information Systems (ACM TMIS), 11(4):1--41, 2020.
- [J66] Canopy: A Verifiable Privacy-Preserving Token Ring based Communication Protocol for Smart Homes, Nisha Panwar, Shantanu Sharma, Guoxi Wang, Sharad Mehrotra, and Nalini Venkatasubramanian ACM Transactions on Cyber-Physical Systems (ACM TCPS), 5(1): 3:1-3:34 (2021)
- [J67] Privacy-Preserving Secret Shared Computations using MapReduce
http://www.ics.uci.edu/~shantas/publications/16-Private_and_Secure_Secret_Shared_MapReduce.pptx Shlomi Dolev, Peeyush Gupta, Yin Li, Sharad Mehrotra, and Shantanu Sharma IEEE Transactions on Dependable and Secure Computing (IEEE TDSC), 18(4): 1645-1666 (2021)
- [J68] SmartBench: A Benchmark For Data Management In Smart Spaces, P. Gupta, MJ Carey, S. Mehrotra, R. Yus, PVLDB 2020.

- [J69] SIEVE: A Middleware Approach to Scalable Access Control for Database Management Systems . Primal Pappachan, Roberto Yus, Sharad Mehrotra, Johann-Christoph Freytag . Proceedings of the VLDB Endowment, 2020
- [J70] Georgios Bouloukakis, Kyle Benson, Luca Scalzotto, Paolo Bellavista, Casey Grant, Valerie Issarny, Sharad Mehrotra, Ioannis Moscholios, Nalini Venkatasubramanian (2020). PrioDeX: a Data Exchange Middleware for Efficient Event Prioritization in SDN-based IoT systems. ACM Transactions on Internet of Things – TIOT, 19:1-19:32 (2021)
- [J71] Peeyush Gupta, Yin Li, Sharad Mehrotra, Nisha Panwar, Shantanu Sharma, and Sumaya Almanee. Obscure: Information-Theoretically Secure, Oblivious, and Verifiable Aggregation Queries on Secret-Shared Outsourced Data, IEEE Transactions on Knowledge and Data Engineering}, TKDE, Accepted, March 2020.
- [J72] Nisha Panwar, Shantanu Sharma, Guoxi Wang, Sharad Mehrotra, Nalini Venkatasubramanian, Mamadou Diallo and Ardalan Amiri Sani. IoT Notary: Attestable Sensor Data Capture in IoT Environments. ACM Transactions on Internet of Things}, TIOT, 2021.
- [J73] Dave Archer, Michael A August, Georgios Bouloukakis, Christopher Davison, Mamadou H Diallo, Dhrubajyoti Ghosh, Christopher T Graves, Michael Hay, Xi He, Peeter Laud, Steve Lu, Ashwin Machanavajhala, Sharad Mehrotra, Gerome Miklau, Alisa Pankova, Shantanu Sharma, Nalini Venkatasubramanian, Guoxi Wang, and Roberto Yus. Transitioning from testbeds to ships: an experience study in deploying the TIPPERS Internet of Things platform to the US Navy The Journal of Defense Modeling and Simulation: Applications, Methodology, Technology}, 2020.
- [J74] LOCATER: Cleaning WiFi Connectivity Datasets for Semantic Localization. Yiming Lin, Daokun Jiang, Roberto Yus, Georgios Bouloukakis, Andrew Chio, Sharad Mehrotra, Nalini Venkatasubramanian. Accepted in Proceedings of the VLDB Endowment, 2021
- [J75] Visualizing complex networks by leveraging community structures, Z Huang, J Wu, W Zhu, Z Wang, S Mehrotra, Y Zhao, Physica A: Statistical Mechanics and its Applications, 125506
- [J76] TQEL: Framework for Query-Driven Linking of Top-K Entities in Social Media Blogs , Abdulrahman Alsoudi, Yasser Altowim, Sharad Mehrotra, Yaming Yu, Accepted in Proceedings of the VLDB Endowment, 2021
- [J77] A Case for Enrichment in Data Management Systems Dhrubajyoti Ghosh, Peeyush Gupta, Sharad Mehrotra, Shantanu Sharma SIGMOD Records, 2022
- [J78] The SemIoTic Ecosystem: A Semantic Bridge between IoT Devices and Smart Spaces Roberto Yus, Georgios Bouloukakis, Sharad Mehrotra, Nalini Venkatasubramania IACM Transactions on Internet Technology (TOIT) 2022
- [J79] JENNER: Just-in-time Enrichment in Query Processing Dhrubajyoti Ghosh Peeyush Gupta, Sharad Mehrotra, Roberto Yus, Yasser Altowim, PVLDB 2022.
- [J80] MIDE: Accuracy Aware Minimally Invasive Data Exploration For Decision Support, Sameera Ghayyur, Dhrubjyothi Ghosh, Xi He, Sharad Mehrotra, PVLDB 2022
- [J81] Don't Be a Tattle-Tale: Preventing Leakages through Data Dependencies on Access Control Protected Data, Primal Pappachan, Shufan Zhang, Xi He, Sharad Mehrotra, PVLDB 2022
- [J82].Prism: Privacy-Preserving and Verifiable Set Computation over Multi-Owner Secret Shared Outsourced Databases Shantanu Sharma, Yin Li, Sharad Mehrotra, Nisha Panwar, Peeyush Gupta, and

Dhrubajyoti Ghosh, IEEE Transactions on Dependable and Secure Computing (IEEE TDSC), Accepted 2023

[J83] Federated Analytics: A survey [Paper/PDF] Ahmed Roushdy Elkordy, Yahya H. Ezzeldin, Shanshan Han, Shantanu Sharma, Chaoyang He, Sharad Mehrotra, and Salman Avestimehr
APSIPA Transactions on Signal and Information Processing: Vol. 12: No. 1, e4, 2023.

[J84] SmartSPEC: A framework to generate customizable, semantics-based smart space datasets Andrew Chio, Daokun Jiang, Peeyush Gupta, Georgios Bouloukakis, Roberto Yus, Sharad Mehrotra, Nalini Venkatasubramanian Pervasive and Mobile Computing, 1018092023

[J85] SAFE-PASS: Stewardship, Advocacy, Fairness and Empowerment in Privacy, Accountability, Security, and Safety for Vulnerable Groups Indrajit Ray, Bhavani Thuraisingham, Jaideep Vaidya, Sharad Mehrotra, Vijayalakshmi Atluri, Indrakshi Ray, Murat Kantarcioglu, Ramesh Raskar, Babak Salimi, Steve Simske, Nalini Venkatasubramanian, Vivek Singh Proceedings of the 28th ACM Symposium on Access Control Models and Technologies 2023

[J86] Preventing Inferences through Data Dependencies on Sensitive Data Primal Pappachan, Shufan Zhang, Xi He, nd Sharad Mehrotra, IEEE Trans. Knowl. Data Eng. 36(10): 5308-5327 (2024)

[J87] Information-Theoretically Secure and Highly Efficient Search and Row Retrieval, S Sharma, Y Li, S Mehrotra, N Panwar, K Kumari, S Roychoudhury. VLDB 2023

[J88] Proceedings of the VLDB Endowment 16 (10), 2391-2403 ZIP: Lazy Imputation during Query Processing, Yiming Lin & Sharad Mehrotra, Proceedings of the VLDB, Volume 17 (VLDB 2024)

[J89] Yiming Lin, Sharad Mehrotra: **PLAQUE: Automated Predicate Learning at Query Time.** Proc. ACM Manag. Data 2(1): 46:1-46:25 (2024)

[J90] VEIL: A Storage and Communication Efficient Volume-Hiding Algorithm , Shanshan Han, Vishal Chakraborty, Michael Goodrich, Sharad Mehrotra, Shantanu Sharma SIGMOD International Conference on Management of Data

[J91] Hildebrant, Ryan; Bhope, Rahul; Mehrotra, Sharad; Tull, Christopher; Venkatasubramanian, Nalini DIM-SUM: Dynamic IMputation for Smart Utility Management PVLDB, 2025.

[J92] Chakraborty, Vishal; Kaminsky, Youri; Mehrotra, Sharad; Naumann, Felix; Nawab, Faisal; Pappachan, Primal; Sadoghi, Mohammad; Venkatasubramanian, Nalini
Meaningful Data Erasure in the Presence of Dependencies , PVLDB 2025

[J93] Li, Yin; Mehrotra, Sharad; Sharma, Shantanu; Kumari, Komal Access Control for Information-Theoretically Secure Data PVLDB, 2025.

[J94] Zhenhua Huang, Kunhao Li, Shaojie Wang, Zhaohong Jia, Wentao Zhu, Sharad Mehrotra, **Graph structure prompt learning: A novel methodology to improve performance of graph neural networks**, Applied Intelligence, Volume 55, Issue 17, 2025

[J95]] Fu, Jiajie; Tang, Haitong; Khan, Arijit; Mehrotra, Sharad; Ke, Xiangyu; Gao, Yunjun **In-context Clustering-based Entity Resolution with Large Language Models: A Design Space Exploration** ACM PACMOD (journal associated with SIGMOD conference), 2026.

[J96] P. Das, M. Boissier, K. Kim, S. Mehrotra, T. Rabl, **SmartRabbit: An Interactive Query Processor**, ACM PACMOD (journal associated with SIGMOD conference), 2026.

[J96] G.Zhang, Y. Lin, S. Mehrotra, **OctoSelector: Efficient and Effective Batch-Aware Model Selection for Large Language Mo** , ACM PACMOD (journal associated with SIGMOD conference), 2026.

GUEST EDITORIALS

[G1] P. K. Atrey, S. Emmanuel, S. Mehrotra, M. S. Kankanhalli: *Guest editorial: Privacy-aware multimedia surveillance systems*. Multimedia Syst. 18(2): 95-97 (2012)

[G2] S. Mehrotra, *Security and Privacy in Cloud Computing*, Guest Editor, IEEE Data Engineering Bulletin, 2012.

[G3] IEEE Data Eng. Bull.: Sharad Mehrotra. *Letter from the Special Issue Editor*. IEEE Data Eng. Bull. 35(4): 3 (2012)

[G4] IEEE Data Eng. Bull.: Sharad Mehrotra. *Letter from the Special Issue Editor*. Social Media Analytics. IEEE Data Eng. Bull. 36(3): 2-3 (2013).

[G5] S. Mehrotra, X. Qiu, Z. Cao, A. Tate. *Guest Editorial: Technological Challenges in Emergency Response*. IEEE Intelligent Systems 28(4): 5-8 (2013)

[G6] Sharad Mehrotra: Front Matter. PVLDB 7(10): i-xi (2014)

[G7] Jayant R. Haritsa, Shourya Roy, Manish Gupta, Sharad Mehrotra, Balaji Vasan Srinivasan, Yogesh Simmhan: CODS-COMAD 2021: 8th ACM IKDD CODS and 26th COMAD, Virtual Event, Bangalore, India, January 2-4, 2021. ACM 2021, ISBN 978-1-4503-8817-7

CONFERENCE AND WORKSHOP PAPERS

[C1] S. Mehrotra, R. Rastogi, H. F. Korth and A. Silberschatz. *Non-serializable Executions in Heterogeneous Distributed Database Systems*. Proceedings of the 1st IEEE International Conference on Parallel and Distributed Information Systems, Miami Beach, Florida, 1991.

- [C2] S. Mehrotra, R. Rastogi, H. F. Korth and A. Silberschatz. *A Transaction Model for Multidatabase Systems*. Proceedings of the 12th IEEE International Conference on Distributed Computing Systems, Yokohama, Japan, 1992.
- [C3] S. Mehrotra, R. Rastogi, H. F. Korth and A. Silberschatz. *Relaxing Serializability in Multi-database Systems*. Proceedings of the 2nd IEEE International Workshop on Research Issues on Data Engineering: Transaction and Query Processing, Mission Palms, Arizona, 1992.
- [C4] S. Mehrotra, R. Rastogi, Y. Breitbart, H. F. Korth and A. Silberschatz. *The Concurrency Control Problem in Multidatabases: Characteristics and Solutions*. Proceedings of ACM-SIGMOD 1992 International Conference on Management of Data, San Diego, California, 1992.
- [C5] S. Mehrotra, R. Rastogi, Y. Breitbart, H. F. Korth and A. Silberschatz. *Ensuring Transaction Atomicity in Multidatabase Systems*. Proceedings of the 11th ACM SIGACT-SIGMOD-SIGART Symposium on Principles of Database Systems, San Diego, California, 1992.
- [C6] S. Mehrotra, R. Rastogi, Y. Breitbart, H. F. Korth and A. Silberschatz. *Efficient Global Transaction Management in Multidatabase Systems*. Proceedings of the Third International Symposium on Database Systems for Advanced Applications, Daejeon, Korea, 1993.
- [C7] D. Barbarà, Y. Breitbart, H. Garcia-Molina, H. Korth and S. Mehrotra. *Interoperability with Unstructured Data and Services*. Proceedings of the Third IEEE International Workshop on Research Issues on Data Engineering: Interoperability in Multidatabase Systems, Vienna, 1993.
- [C8] R. Rastogi, S. Mehrotra, Y. Breitbart, H. F. Korth and A. Silberschatz. *On Correctness of Non-serializable Executions*. Proceedings of the Eleventh ACM SIGACT-SIGMOD-SIGART Symposium on Principles of Database Systems, Washington D. C., 1993.
- [C9] D. Barbarà, C. Clifton, F. Douglass, H. Garcia-Molina, S. Johnson, B. Kao, S. Mehrotra, J. Tellefsen and R. Walsh. *The Gold Mailer*. Proceedings of the 9th IEEE International Conference on Data Engineering, Vienna, 1993.
- [C10] W. Aref, D. Barbarà, S. Johnson, and S. Mehrotra. *Efficient Processing of Proximity Queries in Large Databases*. Proceedings of the 11th IEEE International Conference on Data Engineering, 1995.
- [C11] D. Barbarà and S. Mehrotra. *Supporting Concurrent Operations over Text Databases*. ACM SIGIR 95 Post Conference Workshop on Information Retrieval and Databases, Seattle, WA, 1995.
- [C12] T. Huang, S. Mehrotra, and K. Ramchandran. *Multimedia Analysis and Retrieval System*. Proceedings of the Data Processing Clinic on Digital Image Access and Retrieval in Libraries, Editors Bryan Heidorn and Beth Sandore, 1996.
- [C13] J. Kothari and S. Mehrotra. *Neighborhoods: A Framework for Enabling Web-based Synchronous Collaboration and Hierarchical Navigation*. Proceedings of the 29th Hawaii International Conference in System Sciences, 1996.
- [C14] D. Barbarà, S. Mehrotra, and P. Vallabhaneni. *The Gold Text Indexing Engine*. Proceedings of the 12th IEEE International Conference on Data Engineering, 1996.
- [C15] Y. Rui, T. Huang, S. Mehrotra, and M. Ortega. *A Relevance Feedback Architecture in Content-based Multimedia Information Retrieval Systems*. IEEE Workshop on Content-Based Access of Image and Video Libraries held in conjunction with IEEE Conference on Computer Vision and Pattern Recognition, 1997.
- [C16] S. Mehrotra, Y. Rui, M. Ortega, and T. Huang. *Supporting Content-based Query in Multi-media Analysis and Retrieval System*. Proceedings of the 4th IEEE International Conference on Multimedia Computing and Systems, Chateau Laurier, Ottawa, Ontario, Canada, June 3-6, 1997.

- [C17] Y. Rui, T. Huang, and S. Mehrotra. *Exploring Video Structure Beyond the Shots*. IEEE International Conference on Multimedia Computing and Systems, Austin, Texas, June 28-July 1, 1998.
- [C18] S. Mehrotra, K. Chakrabarti, M. Ortega, Y. Rui, and T. Huang. *Towards Extending Information Retrieval Techniques for Multimedia Retrieval*. Proceedings of the 3rd International Workshop on Multimedia Information Systems, Como, Italy, 1997.
- [C19] S. Mehrotra, Y. Rui, M. Ortega, and T. Huang. *Supporting Content-based Query in Multi-media Analysis and Retrieval System*. Proceedings of the 4th IEEE International Conference on Multimedia Computing and Systems, Chateau Laurier, Ottawa, Ontario, Canada, June 3-6, 1997.
- [C20] Y. Rui, T. Huang, and S. Mehrotra, *Content-based Image Retrieval with Relevance Feedback in MARS*. IEEE International Conference on Image Processing, Oct 26-29, 1997.
- [C21] S. Mehrotra, K. Hu, and S. Kaplan. *Dealing with partial failures in multiple processor primary-backup systems*. Proceedings of the Sixth ACM International Conference on Information and Knowledge Management, Nov. 1997.
- [C22] Y. Rui, T. Huang, S. Mehrotra, and M. Ortega. *Automatic Matching Tool Selection via Relevance Feedback in MARS*. 2nd Int. Conf. on Visual Information Systems, San Diego, California, December 15-17, 1997.
- [C23] K. Chakrabarti and S. Mehrotra. *Concurrency Control in R-trees*. First Annual Symposium of the ARL Federated Laboratory Display Consortium, 1997.
- [C24] S. Mehrotra, Y. Rui, M. Ortega, and T. Huang. *Supporting Content-based Query in Multi-media Analysis and Retrieval System*. Proceedings of the 4th IEEE International Conference on Multimedia Computing and Systems, Chateau Laurier, Ottawa, Ontario, Canada, June 3-6, 1997.
- [C25] M. Ortega, Y. Rui, S. Mehrotra, and T. Huang. *Supporting Similarity Queries in MARS*. Proceedings of the 5th International ACM Multimedia Conference, 1997.
- [C26] K. Hu, S. Mehrotra, and S. Kaplan. *An optimized two-safe approach to maintaining remote backup systems*. Proceedings of COMAD Conference on Management of Data, 1997.
- [C27] K. Chakrabarti and S. Mehrotra, *Granular locking approach to Phantom Protection over R-trees*. Proceedings of the IEEE Data Engineering Conference, 1998.
- [C28] Y. Zhuang, Y. Rui, T. S. Huang, and S. Mehrotra. *Applying Semantic Association to Support Content-based Video Retrieval*. VLBV International Workshop on Very Low Bitrate Video Coding, 1998.
- [C29] M. Ortega, K. Chakrabarti, K. Porkaew and S. Mehrotra, *Cross media validation in a multimedia retrieval system*. ACM Digital library metrics workshop, 3rd ACM Conference on Digital Libraries, Pittsburgh, PA, June 24-27, 1998.
- [C30] Y. Rui, T. S. Huang, and S. Mehrotra. *Relevance Feedback Techniques in Interactive Content-Based Image Retrieval*. IS&T and SPIE Storage and Retrieval of Image and Video Databases VI, San Jose, CA, January 24-30, 1998.
- [C31] Y. Rui, T. Huang, and S. Mehrotra. *Browsing and Retrieving Video Content in a unified framework*. IEEE Multimedia Signal Processing, Los Angeles, CA, 1998.
- [C32] Y. Rui, T. Huang, and S. Mehrotra. *Exploring Video Structure Beyond the Shots*. IEEE International Conference on Multimedia Computing and Systems, Austin, Texas, June 28-July 1, 1998.
- [C33] Y. Zhuang, Y. Rui, T. S. Huang, and S. Mehrotra, *Adaptive Key Frame Extraction Using Unsupervised Clustering*. Proceedings of the IEEE International Conference of Image Processing, Oct. 1998, Chicago, IL, 1998.

- [C34] K. Hu, S. Mehrotra, and S. Kaplan. *Failure Handling in an optimized two-safe approach to maintaining primary backup systems*. Proceedings of the Symposium on Reliable Distributed Systems (SRDS), 1998.
- [C35] Y. Zhuang, T. Huang, S. Mehrotra. *A conceptual framework for multimedia reasoning*. Second Annual Symposium of the ARL Federated Laboratory Display Consortium, 1998.
- [C36] K. Chakrabarti, S. Mehrotra, M. Ortega, K. Porkaew, and R. Winkler. *Processing Uncertainty in Database Management Systems*. Second Annual Symposium of the ARL Federated Laboratory Display Consortium, 1998.
- [C37] K. Chakrabarti, and S. Mehrotra, *The Hybrid Tree: An Index Structure for High Dimensional Feature Indexing*. Proceedings of the 15th International Conference on Data Engineering, 1999.
- [C38] M. Ortega, K. Porkaew, and S. Mehrotra. *Information Retrieval over Multimedia Documents*. 1999 SIGIR post-conference workshop on Multimedia Indexing and Retrieval, Berkeley, CA, August 19, 1999.
- [C39] K. Chakrabarti and S. Mehrotra. *Efficient Concurrency Control in Multidimensional Access Methods*. Proceedings of the 1999 ACM SIGMOD Conference on Management of Data, June 1999.
- [C40] K. Porkaew, S. Mehrotra, and M. Ortega. *Query Reformulation for Content-based Multimedia Retrieval in MARS*. IEEE International Conference on Multimedia Computing and Systems (ICMCS), Centro Affari, Florence, Italy, Vol. 2, Pages 747-751, June 7-11, 1999.
- [C41] K. Porkaew, S. Mehrotra, M. Ortega, and K. Chakrabarti. *Similarity Search Using Multiple Examples in MARS*. International Conference on Visual Information Systems (Visual '99), LNCS Vol. 1614, Pages 68-75, Amsterdam, The Netherlands, June 2-4, 1999.
- [C42] Y. Zhuang, S. Mehrotra, and T. Huang. *A multimedia information retrieval model based on semantic and visual content*. Fifth International ICYCS Conference, Nanjing, China, 1999.
- [C43] K. Porkaew, S. Mehrotra, and M. Ortega. *Query Reformulation for Content-based Multimedia Retrieval in MARS*. IEEE International Conference on Multimedia Computing and Systems (ICMCS), Centro Affari, Florence, Italy, Vol. 2, Pages 747-751, June 7-11, 1999.
- [C44] K. Porkaew, K. Chakrabarti, and S. Mehrotra. *Query Refinement for Multimedia Retrieval and its Evaluation techniques in MARS*. ACM International Multimedia Conference, Orlando, Florida, Oct. 30th - Nov. 4th, 1999.
- [C45] S. Mehrotra, M. Ortega-Binderberger, K. Chakrabarti, K. Porkaew, and Y. Rui. *WebMARS: A Multimedia Web Search Engine (poster)* CASCON 1999 Conference, Toronto, Canada, November 1999.
- [C46] K. Porkaew, S. Mehrotra, and M. Ortega. *Query Reformulation for Content-based Multimedia Retrieval in MARS*. IEEE International Conference on Multimedia Computing and Systems (ICMCS), Centro Affari, Florence, Italy, Vol. 2, Pages 747-751, June 7-11, 1999.
- [C47] H. Yu, S. Mehrotra, R. Winkler, S. S. Ho, T. C. Gregory, S. D. Allen. *Integration of SATURN System and VGIS*. Proceedings of the 3rd Symposium on the Federated Lab on Interactive and Advanced Display Army Research Labs, Aberdeen, 1999.
- [C48] Kaushik Chakrabarti, Sharad Mehrotra, Michael Ortega, and Kriengkrai Porkaew. *Web-MARS: a Multimedia Search Engine for the World Wide Web*. Electronic Imaging, 2000.
- [C49] Kaushik Chakrabarti, Michael Ortega, and Kriengkrai Porkaew, Peng Zou, and Sharad Mehrotra. *Similar Shapes Retrieval in MARS*, IEEE International Conference on Mul-timedia and Expo, 2000.
- [C50] K. Porkaew, S. Mehrotra, R. Winkler. *Database Support for Visualization*, Proceedings of the 4th Symposium on the Federated Lab on Interactive and Advanced Display Army Research Labs, 2000.

- [C51] K. Chakrabarti and S. Mehrotra. *Local Dimensionality Reduction: a new approach to indexing high dimensional spaces*. Very Large Database Conference (VLDB), 2000.
- [C52] Michael Ortega-Binderberger, Sharad Mehrotra, Kaushik Chakrabarti, and Kriengkrai Porkaew. *WebMARS: A Multimedia Search Engine for Full Document Retrieval and Cross Media Browsing*. Multimedia Information Systems Workshop 2000 (MIS2000), October 2000, Chicago, IL.
- [C53] K. Chakrabarti, K. Porkaew, and S. Mehrotra. *Efficient Query Refinement in Multimedia Database. Poster Publication*. Sixteenth International Conference on Data Engineering, 2000.
- [C54] H. Hacigumus, B. Iyer and S. Mehrotra, *NetDB2:database Service provision*. 2000 CASCON, Toronto, Canada, 2000 (poster)
- [C55] E. Keogh, K. Chakrabarti, S. Mehrotra, M. Pazzani. *Locally adaptive Dimensionality Reduction for Indexing Large Time Series Datasets*. 2001 SIGMOD Conference on Management of Data, 2001. **(Best Paper Award)**
- [C56] K. Porkaew, I.Lazaridis, S. Mehrotra. *Querying Mobile Objects in Spatio-Temporal Databases*. 7th International Symposium on Spatial and Temporal Databases, 2001.
- [C57] I. Lazaridis, S. Mehrotra. *Incorporating Aggregate Queries in Interactive Visualization*. 5th Annual Federated Laboratory Symposium, 2001.
- [C58] I. Lazaridis, S. Mehrotra. *Progressive Approximate Aggregate Queries with a Multi-resolution Tree Structure*. 2001 SIGMOD Conference on Management of Data, 2001.
- [C59] S. Mehrotra, I. Lazaridis and K. Porkaew. *Situational Awareness over Large Spatio-Temporal Databases*. Workshop at the Intersection of Geospatial Information and Information Technology, Computer Science and Telecomm. Board, National Council of Research, Oct 2001.
- [C60] H. Hacigümüs, B. Iyer, and S. Mehrotra. *Providing Database as a service*. International Conference on Data Engineering, 2002.
- [C61] M. Ortega, K. Chakrabarti, and S. Mehrotra. *An approach to integrating query refinement in SQL*. 8th International Conference on Extending Database Technology, 2002.
- [C62] I. Lazaridis, K. Porkaew, S. Mehrotra. *Dynamic Queries over Mobile Objects*. 8th International Conference on Extending Database Technology, 2002.
- [C63] H. Hacigümüs, B. Iyer, C. Li and S. Mehrotra. *Executing SQL over Encrypted Data in Database-Service-Provider-Models*. ACM SIGMOD 2002 conference.
- [C64] H. Hacigümüs, B.R. Iyer, S. Mehrotra. *Encrypted Database Integrity in Database Service Provider Model*. 2002 IFIP WCC, Workshop on Certification and Security in E-Services (CSES) 2002: 165-174
- [C67] L. Jin, C. Li, S. Mehrotra. *Efficient Record Linkage in Large Data Sets*. DASFAA 2003.
- [C65] X. Yu, S. Mehrotra. *Capturing Uncertainty in Spatial Queries over Imprecise Data*. DEXA 2003: 192-201
- [C66] H. Hacigümüs, B. Iyer, and S. Mehrotra. *Ensuring the integrity of Encrypted Databases in Database as a Service Model*. IFIP Conference on Applications and Data Security, Estes Park, Colorado, 2003.
- [C67] X. Yu, K. Niyogi, S. Mehrotra, N. Venkatasubramanian. *Adaptive Middleware for Distributed Sensor Environments*. Middleware 2003 (work in progress paper).
- [C68] M. Ortega-Binderberge, K. Chakrabarti, S. Mehrotra. *Efficient Evaluation of Relevance Feedback for Multidimensional All-pairs Retrieval*. SAC 2003: 847-852.

- [C69] I. Lazaridis and S. Mehrotra. *Capturing Sensor-Generated Time Series with Quality Guarantees*. International Conference on Data Engineering (ICDE 2003), Bangalore, India, March 2003.
- [C73] Q. Han, S. Mehrotra and N. Venkatasubramanian. *Power Aware Data Collection in Sensor Databases*. IEE International Conference on Distributed Computing Systems (ICDCS), 2004.
- [C70] I. Lazaridis and S. Mehrotra. *Approximate Selection Queries over Imprecise Data*. IEEE International Conference on Data Engineering. ICDE 2004.
- [C71] S. Mehrotra, C. Butt , D. Kalashnikov, N. Venkatasubramanian, R. Rao, G. Chockalingam, R. Eguchi, B. Adams C. Huyck, *Project RESCUE: Challenges in Responding to the Unexpected*. SPIE Internet Imaging Conference, 2004.
- [C72] H. Hacigumus, B. Iyer, and S. Mehrotra. *Efficient Execution of Aggregation Queries over Encrypted Databases*. DASFAA 2004. **(Best Paper Award)**
- [C73] B. Iyer, S. Mehrotra, E. Mylketun, G. Tsudik, and Y. Wu. *A Framework for Efficient Storage Security in RDBMSs*. EDBT 2004.
- [C74] D. Seid, S. Mehrotra. *Efficient Relationship Pattern Mining using Multi-relational Iceberg-cubes*. Fourth IEEE International Conference on Data Mining (ICDM'04), pp. 515-518, 2004
- [C75] H. Hacigumus, S. Mehrotra. *Performance-Conscious Key Management in Encrypted Databases*. DBsec, 2004
- [C76] X.Yu, K.Niyogi, S. Mehrotra, N. Venkatasubramanian. *Adaptive Target Tracking in Sensor Networks*. The 2004 Communication Networks and Distributed Systems Modeling and Simulation Conference (CNDS'04), San Diego, 2004-01
- [C77] Q. Han, S.Mehrotra, and N. Venkatasubramanian. *Energy Efficient Data Collection in Distributed Sensor Environments*. 24th IEEE International Conference on Distributed Computing Systems (ICDCS), Tokyo, Japan, 2004-03
- [C78] B. Iyer, S. Mehrotra, E. Mykletun, G. Tsudik, and Y. Wu. *A Framework for Efficient Storage Security in RDBMs*. International Conference on Extending Database Technology (EDBT'04), 2004-03
- [C79] I. Lazaridis and S. Mehrotra. *Approximate Selection Queries over Imprecise Data*. International Conference on Data Engineering (ICDE 2004), Boston, 2004-03.
- [C80] S. Mehrotra, C. Butts, D. Kalashnikov, N. Venkatasubramanian, K. Altintas, R. Hariharan, H. Lee, Y. Ma, A. Meyers, J. Wickramasuriya, R. Eguchi, C. Huyck. *CAMAS: A Citizen Awareness System for Crisis Mitigation*. ACM Conference on Special Interest Group on Management of Data (SIGMOD 2004), Paris, France, 2004-06
- [C81] B. Hore, S. Mehrotra, G. Tsudik, *A Privacy-Preserving Index for Range Queries* 30th International Conference on Very Large Data Bases (VLDB), 2004-08
- [C82] J. Wickramasuriya, M. Datt, S. Mehrotra, N. Venkatasubramanian. *Privacy Protecting Data Collection in Media Spaces* ACM International Conference on Multimedia (ACM Multimedia 2004), 2004-10
- [C83] B. Hore, H. Hacigumus, B. Iyer, S. Mehrotra. *Indexing Text Data under Space Constraints* ACM Thirteenth Conference on Information and Knowledge Management (CIKM), Washington D.C., U.S.A., 2004-11
- [C84] Y. Ma, Q. Zhong, S. Mehrotra, D. Seid. *A Framework for Refining Similarity Queries Using Learning Techniques* ACM 13th Conference on Information and Knowledge Management (CIKM), 2004-11

- [C85] R. C. Jammalamadaka, S. Mehrotra, and N. Venkatasubramanian. *PVault: A Client Server System Providing Mobile Access to Personal Data*. Proceedings of the 2005 ACM workshop on Storage security and survivability, 2005
- [C86] J. Wickramasuriya, M. Alhazzazi, M. Datt, S. Mehrotra, and N. Venkatasubramanian. *Privacy-Protecting Video Surveillance*. SPIE International Symposium on Electronic Imaging (Real-Time Imaging IX) San Jose, CA, 2005-01
- [C87] Q. Han, I. Lazaridis, S. Mehrotra, and N. Venkatasubramanian. *Sensor Data Collection with Expected Reliability Guarantee*. The First International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS), (in conjunction with PerCom), Kauai Island, Hawaii, 2005-03-08
- [C88] D. Kalashnikov, S. Mehrotra, and Z. Chen. *Exploiting relationships for domain-independent data cleaning*. SIAM Data Mining (SDM) 2005 Conference, 2005-04
- [C89] C. Hung, C. Huyck, S. Cho, M. Mio, R. Eguchi, M. Shinozuka, S. Mehrotra. *A Centralized Web-based Loss Estimation and Transportation Modeling Platform for Disaster Response*. Proceedings of the 9th International Conference on Structural Safety and Reliability, Rome, Italy, 2005-06
- [C90] R. C. Jammalamadaka, S. Mehrotra. *Querying Encrypted XML documents*. Proceedings of the IEEE International Database Engineering & Applications Symposium, (IDEAS), 2006
- [C91] D. Kalashnikov, Y. Ma, S. Mehrotra, R. Hariharan, and N. Venkatasubramanian. *SAT: Spatial Awareness from Textual Input EDBT*. (Demo), 2006
- [C92] D. Massaguer, V. Balasubramanian, S. Mehrotra, N. Venkatasubramanian. *Synthetic Humans in Emergency Response Drills*. 2006 AAMAS Conference, Demo Paper, 2006
- [C93] D. Massaguer, V. Balasubramanian, S. Mehrotra, N. Venkatasubramanian. *Multi-Agent Simulation of Disaster Response*. ATDM Workshop in AAMAS 2006, 2006
- [C94] V. Balasubramanian, D. Massaguer, S. Mehrotra, and N. Venkatasubramanian. *DrillSim: A Simulation Framework for Emergency Response Drills*. ISI 2006
- [C95] C. Huyck, H. Chung, S. Cho, M. Mio, S. Ghosh, R. Eguchi, S. Mehrotra. *Loss estimation online using INLET (Inter-based Loss Estimation Tool)*. 8th U.S. National Conference on Earthquake Engineering, San Francisco, 2006
- [C96] C. Huyck, H. Chung, S. Cho, M. Mio, S. Ghosh, R. Eguchi, and S. Mehrotra. *Centralized web-based loss estimation tool*. SPIE Conference, San Diego, CA, 2006
- [C97] R. C. Jammalamadaka, T. van der Horst, S. Mehrotra, K. Seamons, and N. Venkatasubramanian. *Delegate: A Proxy Based Architecture for Secure Website Access from an Untrusted Machine*. 22nd Annual Computer Security Applications Conference (ACSAC), Maimi, FL, December, 2006
- [C98] D. Kalashnikov, Y. Ma, S. Mehrotra, R. Hariharan, C. Butts. *Modeling and Querying Uncertain Spatial Information for Situational Awareness Applications*. ACM GIS, 2006
- [C99] Y. Ma, S. Mehrotra, D. Y. Seid, Q. Zhong. *RAF: An Activation Framework for Refining Similarity Queries Using Learning Techniques*. 11th International Conference on Database Systems for Advanced Applications (DASFAA 2006), 2006-04
- [C100] Y. Ma, D. Seid, S. Mehrotra. *Interactive Refinement of Filtering Queries on Streaming Intelligence Data*. 2006 ISI, 2006-05
- [C101] M. Deshpande, B. Xing, I. Lazaridis, B. Hore, N. Venkatasubramanian, and S. Mehrotra. *CREW: A Gossip-based Flash-Dissemination System*. ICSDCS (International Conference on Distributed Computing Systems), 2006., 2006-07

- [C102] D. Kalashnikov, Y. Ma, S. Mehrotra, R. Hariharan. *Index for Fast Retrieval of Uncertain Spatial Point Data*. ACM-GIS 2006, 2006-11
- [C103] X. Yu, S. Mehrotra, and N. Venkatasubramanian. *SURCH: Distributed Aggregation over Wireless Sensor Networks*. Tenth International Database Engineering & Applications Symposium, 2006-12
- [C104] R. Hariharan, M. Shmueli-Scheuer, C. Li, and S. Mehrotra. *Quality-driven approximate methods for integrating GIS data*. GIS 2005: 97-104
- [C105] Z. Chen, D. V. Kalashnikov, and S. Mehrotra. *Exploiting relationships for object consolidation*. IQIS 2005: 47-58
- [C106] M. Deshpande, N. Venkatasubramanian, and S. Mehrotra. *Heuristics for Flash-Dissemination in Heterogenous Networks*. HiPC 2006: 607-618
- [C107] I. Lazaridis, Q. Han, S. Mehrotra, and N. Venkatasubramanian. *Fault-Tolerant Queries over Sensor Data*. 13th International Conference on Management of Data (COMAD 2006), Delhi, India, December, 2006 (Full paper acceptance rate: 25%)
- [C108] Q. Zhong, I. Lazaridis, M. Deshpande, C. Li, S. Mehrotra, and H. Stern. *Supporting Approximate Similarity Queries with Quality Guarantees in P2P Systems*. 13th International Conference on Management of Data (COMAD 2006), Delhi, India, December, 2006 (Full paper acceptance rate: 25%)
- [C109] Z. Chen, D. V. Kalashnikov, and S. Mehrotra. *Adaptive Graphical Approach to Entity Resolution*. In Proc. of ACM IEEE Joint Conference on Digital Libraries (ACM IEEE JCDL), June 17-23, 2007.
- [C110] Y. Ma, D. Kalashnikov, S. Mehrotra, N. Venkatasubramanian, R. Hariharan, N. Ashish, J. Lickfett. *On demand information portal for disaster situations*. Intelligence and Security Informatics, IEEE International Conference on Intelligence and Security Informatics, ISI 2007
- [C111] D.V. Kalashnikov, Z. Chen, R. Nuray, S. Mehrotra, and N. Ashish. *Disambiguation Algorithm for People Search on the Web*. In Proc. of IEEE International Conference on Data Engineering (IEEE ICDE), short publication, April 16-20, 2007.
- [C112] R. Nuray, D. Kalashnikov, S. Mehrotra. *Self-tuning in graph based reference disambiguation*. 12th International Conference on Database Systems for Advanced Applications (DASFAA), 2007
- [C113] B. Hore, R. Jammalamadaka, S. Mehrotra. *Flexible Anonymization for Privacy Preserving Data Publishing: a systematic search based approach*. Siam Data Mining (SDM), Minneapolis, 2007
- [C114] R. Hariharan, B. Hore, S. Mehrotra, C. Li. *Processing Spatial Keyword (SK) Queries in Geographical Information Retrieval (GIR) Systems*, SSDBM 2007 Banff, Canada
- [C115] B. Hore, H. Jafarpour, R. Jain, S. Ji, D. Massaguer, S. Mehrotra, N. Venkatasubramanian, U. Westermann. *Design and Implementation of Middleware for Sentient Spaces*. Intelligence and Security Informatics, IEEE International Conference on Intelligence and Security Informatics, ISI 2007
- [C116] R. Jammalamadaka, S. Mehrotra, K. Seamons, N. Venkatasubramanian. *gVault: A Gmail Based Cryptographic Network File System*. 21st Annual IFIP WG 11.3 Working Conference on Data and Applications, 2007
- [C117] Y. Ma, S. Mehrotra. *Integrating Similarity Retrieval and Skyline Explorations via Relevance Feedback*. 12th International Conference on Database Systems for Advanced Applications (DASFAA), 2007
- [C118] M. Deshpande, A. Amit, M. Chang, N. Venkatasubramanian, and S. Mehrotra. *Flashback: A peer to peer webserver for handling flash crowds*. IEEE International Conference on Distributed Computing Systems (ICDCS), 2007

- [C119] D. Seid and S. Mehrotra. *Semantically Ranked Graph pattern queries for link analysis*. Intelligence and Security Informatics, IEEE International Conference on Intelligence and Security Informatics, ISI 2007
- [C120] M. Montanari, S. Mehrotra, and N. Venkatasubramanian. *Architecture for an automated Customized Warning Dissemination*. Intelligence and Security Informatics, IEEE International Conference on Intelligence and Security Informatics, ISI 2007
- [C121] X. Yu, S. Mehrotra, and N. Venkatasubramanian. *Sensor Scheduling for Aggregate Monitoring in Wireless Sensor Networks* SSDBM 2007: 24
- [C122] D. Seid, and S. Mehrotra. *Grouping and Aggregate queries Over Semantic Web Databases*. Proceedings of the International Conference on Semantic Computing, 2007 (recommended for journal publication).
- [C123] B. Xing, M. Deshpande, N. Venkatasubramanian, and S. Mehrotra. *Towards reliable application data broadcast in wireless adhoc networks*. IEEE Wireless Communications and Networking Conference (WCNC), 2007
- [C124] J. Wang, S. Mehrotra, and N. Venkatasubramanian. *PBCA - Prediction Based Channel Allocation*. GLOBECOM 2007: 4801-4806
- [C125] B. Hore, H. Jafarpour, R. Jain, S. Ji, D. Massaguer, S. Mehrotra, N. Venkatasubramanian, and U. Westermann. *SATware: Middleware for Sentient Spaces*. In Multimodal Surveillance: Sensors, Algorithms and Systems. 2007. Presented in the IEEE Workshop on Multimodal Sentient Computing: Sensors, Algorithms and Systems (WMSC 2007) held in conjunction with CVPR 2007 conference. (**Best Student Paper Award**)
- [C126] J. Lickfett, N. Ashish, S. Mehrotra, N. Venkatasubramanian and J. Green. *The RESCUE Disaster Portal for Disasters and Emergency Response*. The 5th International ISCRAM Conference, May 2008, Washington DC
- [C127] D. V. Kalashnikov, R. Nuray-Turan, and S. Mehrotra. *Towards breaking the quality curse. A web-querying approach to Web People Search*. In Annual International ACM SIGIR Conference, July 20-24, 2008.
- [C128] H. Jafarpour, B. Hore, S. Mehrotra, and N. Venkatasubramanian. *Subscription Subsumption Evaluation for Content-based Publish/Subscribe Systems*. (MIDDLEWARE 2008, Leuven, Belgium)
- [C129] R. Hariharan, B. Hore, S. Mehrotra. *Discovering GIS Sources on the Web using Summaries*. (JCDL 2008, Pittsburg, USA)
- [C130] R. Vaisenberg, S. Ji, B. Hore, S. Mehrotra, N. Venkatasubramanian. *Exploiting Semantics for Sensor Re-Calibration in Event Detection Systems*. MMCN 2008, San Jose, USA
- [C131] R. Vaisenberg, A. Satish, K. A. Mogensen, R. Jain, and S. Mehrotra. *A new approach for adding browser functionality*. Proceedings of the 19th ACM Conference on Hypertext and Hypermedia 2008: 247-248
- [C132] R. C. Jammalamadaka, R. Gamboni, S. Mehrotra, K. Seamons, and N. Venkatasubramanian. *iDataGuard: Middleware Providing a Secure Network Drive Interface to Untrusted Internet Data Storage* Demo Paper. In the Proceeding of International Conference on Extending Database Technology (EDBT), 2008.
- [C133] Y. Ma, D. Yimam Seid, and S. Mehrotra. *Automated Filtering on Data Streaming for Intelligence Analysis*. Intelligence and Security Informatics 2008: 199-213
- [C134] H. Jafarpour, S. Mehrotra, N. Venkatasubramanian. *A Fast and Robust Content-based Publish/Subscribe Architecture*. NCA 2008: 52-59

- [C135] R. Jammalakunda, R. Gamboni, S. Mehrotra, N. Venkatasubramanian, and K. Seamons, *DataGuard: An Interoperable Security Middleware for Untrusted Internet Data Storage*. Middleware 2008, Leuven, Belgium (WiP paper).
- [C136] C. Desai, D. Kalashnikov, and S. Mehrotra. *Using Semantics for Speech Annotation of Images*. IEEE ICDE 2008
- [C137] R. Vaisenberg, S. Mehrotra, D. Ramanan. *Exploiting semantics for scheduling data collection from sensors on real time to maximize event detection*. MMCN 2009
- [C138] B. Hore, J. Wickramasuriya, S. Mehrotra, N. Venkatasubramanian, and D. Massaguer. *Privacy-Preserving Event Detection in Pervasive Spaces*. PERCOM 2009.
- [C139] B. Xing, S. Mehrotra, and N. Venkatasubramanian. *RADcast: Enabling Reliability Guarantees for Content Dissemination in Ad Hoc Networks*. INFOCOM 2009.
- [C140] S. Chen, D. Kalashnikov, and S. Mehrotra. *Exploiting Context Analysis for Combining Multiple Entity Resolution Systems*. SIGMOD 2009
- [C141] N. Ashish, J. Lickfett, S. Mehrotra, and N. Venkatasubramanian. *The Software EBox: Information Integration for Situational Awareness* IEEE ISI 2009.
- [C142] H. Jafarpour, S. Mehrotra, and N. Venkatasubramanian. *Dynamic Load Balancing for Cluster-based Publish/Subscribe System*. IEEE SAINT, 2009.
- [C143] H. Jafarpour, S. Mehrotra, N. Venkatasubramanian and M. Montanari. *MICS: An Efficient Content Space Representation Model for Publish/Subscribe Systems*. DEBS, 2009.
- [C144] H. Jafarpour, B. Hore, S. Mehrotra, N. Venkatasubramanian. *CCD: Efficient Customized Dissemination in Distributed Publish/Subscribe*. ACM/IFIP/USENIX Middleware 2009
- [C145] D. Massaguer, B. Hore, M. H. Diallo, S. Mehrotra, N. Venkatasubramanian. *Middleware for Pervasive Spaces: Balancing Privacy and Utility*. ACM/IFIP/USENIX Middleware 2009
- [C146] V. Balasubramanian, D. V. Kalashnikov, S. Mehrotra, and N. Venkatasubramanian. *Efficient and scalable multi-geography route planning*. EDBT 2010
- [C147] B. Xing, M. Deshpande, S. Mehrotra and N. Venkatasubramanian. *Gateway Designation for Timely Communications in Instant Mesh Networks*. IEEE PerCom on Pervasive Wireless Networks, 2010
- [C148] M. Sainy, P. Atrey, S. Mehrotra, S. Emmanuel and M. Kankanhalli. *Privacy Modeling for Video Data Publication*. ICME 2010.
- [C149] M. Canim, M. Kantarcioglu, B. Hore and S. Mehrotra. *Building Disclosure Risk Aware Query Optimizers for Relational Databases*. Very Large DataBases (VLDB) 2010.
- [C150] N. Ashish and S. Mehrotra. *Community Driven Data Integration for Emergency Response*. ISCRAM 2010.
- [C151] B. Xing, S. Mehrotra and N. Venkatasubramanian. *Disruption-Tolerant Spatial Dissemination*. SECON 2010
- [C152] K. Kim, S. Mehrotra, and N. Venkatasubramanian. *FaReCast: Fast, Reliable Application Layer Multicast for Flash Dissemination*. ACM Middleware 2010.
- [C153] P. Sinha, S. Mehrotra, and R. Jain. *Summarization of Personal Photologs Using Multidimensional Content and Context*. ACM International Conference on Multimedia Retrieval (ICMR) 2011.
- [C154] P. Sinha, S. Mehrotra, R. Jain. *Effective Sharing of Large Collections of Personal Photos Through Summarization*. International World Wide Web Conference (WWW) 2011, Hyderabad. (Short Paper)

- [C155] D. Kalashnikov, Z. Chen, R. Nuray-Turan, S. Mehrotra, and Z. Zhang. *WEST: Modern Technologies for Web People Search*. IEEE ICDE 2008. (demo paper)
- [C156] L. Jalali, V. Balasubramanian, S. Mehrotra, and N. Venkatasubramanian. *Metasim: Reflective Middleware Solutions for Simulation Integration*. Demo Paper, ACM/IFIP/USENIX Middleware 2009.
- [C157] M. Kim, D. Massaguer, N. Dutt, S. Mehrotra, S. Ren, M. Stehr, C. Talcott, and N. Venkatasubramanian. *A Semantic Framework for Reconfiguration of Instrumented Cyber Physical Spaces*. 2nd Workshop on Event-based Semantics (WEBS'08) in conjunction with IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS'08) in part of CPSWEEK, 2008.
- [C158] L. Jalali, N. Venkatasubramanian and S. Mehrotra. *A Reflective Middleware Architecture for Simulation Integration*. Adaptive Reflective Middleware Workshop, Middleware 2009
- [C159] R. Vaisenberg, R. Jain, S. Mehrotra. *SMPL, a Specification Language Based Framework for the Semantic Structure, Annotation and Control of SMIL Documents*. IEEE International. Workshop on Data Semantics for Multimedia Systems and Applications (DSMSA09, San Diego, CA). 2009-12
- [C160] R. Nuray-Turan, Z. Chen, D. Kalashnikov, S. Mehrotra. *Exploiting Web querying for Web People Search in WePS2*. In 2nd Web People Search Evaluation Workshop (WePS 2009), 18th WWW Conference, 2009
- [C161] S. Mehrotra and B. Hore. *A Middleware Approach for Managing Privacy of Outsourced Personal Data*. NSF workshop on Database and Application Security, 2009
- [C162] B. Xing, S. Mehrotra and N. Venkatasubramanian. *Reliable Dissemination of Mission-Critical Content over Heterogeneous Wireless Networks*. AFRL Workshop on Proactive Computing in Wireless Adhoc Networks, 2009
- [C163] N. Ashish, S. Mehrotra and P. Pirzadeh. *XAR: An Integrated Framework for Free Text Information Extraction*. CSIE 2009
- [C164] N. Ashish, J. Lickfett, S. Mehrotra and N. Venkatasubramanian. *Rapid Information Integration for Emergency Response*. DHS Workshop on Emergency Management: Incident, Resource and Supply Chain Management (EMWS'09), Nov 2009.
- [C165] L. Jalali, S. Mehrotra, and N. Venkatasubramanian. *Middleware Solutions for Integrated Simulation Environments*. The proceedings of 7th Middleware Doctoral Symposium, 2010
- [C166] M. Diallo, B. Hore, D. Massaguer, S. Mehrotra, N. Venkatasubramanian. *A framework for Privacy Enforcement in Pervasive Spaces*. The Society of Advancement of Chicanos and Native Americans in Science (SACNAC) Conference, 2010
- [C167] L. Jalali, S. Mehrotra, and N. Venkatasubramanian. *Integrated Simulation Environments for Emergency Response Management*. Poster in Southern California Smart Grid Research Symposium, Oct. 2010.
- [C168] C. Davison, D. Massaguer, L. Paradi, M. R. Rahimi, B. Xing, Q. Han, S. Mehrotra, and N. Venkatasubramania. *Practical Experiences in Enabling and Ensuring Quality Sensing In Emergency Response Applications*. PERNEM 2010.
- [C169] S. Bonetti, S. Mehrotra, and N. Venkatasubramanian. *Exploring Quality in MultiSensor Pervasive Systems - A Localization Case Study*. IQ2S Workshop PerCom 2010
- [C170] D. M. Ngoc, K. Kim, S. Mehrotra and N. Venkatasubramanian. *Enabling Fast, Reliable Notification over MultiNetworks*. Position Paper. 2nd Workshop on Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Adhoc Networks (SSPC-WAN), held in conjunction with 11th IEEE International Conference on Mobile Data Management (MDM 2010)

- [C171] M. Diallo, B. Hore, C. Ee-Chien, S. Mehrotra, and N. Venkatasubramanian. *A Middleware-based Approach to Privacy Management in Web Data Services*. Research Poster. CC Grid, 2011.
- [C172] L. Zhang, R. Vaisenberg, S. Mehrotra, and D. V. Kalashnikov. *Video Entity Resolution: Applying ER Techniques for Smart Video Surveillance*. In Workshop on Information Quality and Quality of Service for Pervasive Computing (IQ2S 2011) in Conjunction with IEEE PERCOM 2011, invited paper, 2011.
- [C173] L. Jalali, S. Mehrotra, N. Venkatasubramanian. *Interoperability of Multiple Autonomous Simulators in Integrated Simulation Environments*. Proceedings of the Simulation Interoperability Standards Organization (SISO) Spring SIW'11, 2011.
- [C174] M. Saini, P. K. Atrey, S. Mehrotra and M. S. Kankanhalli. *Anonymous surveillance*. IEEE ICME Workshop on Advances in Automated Multimedia Surveillance of Public Safety (AAMS-PS'2011), July 2011, Barcelona, Spain
- [C175] L. Jalali, S. Mehrotra, and N. Venkatasubramanian. *Multisimulations: Towards Next Generation Integrated Simulation Environments*. Invited paper in the symposium for the Festschrift in Honor of Carolyn Talcott, pp. 252-267, FHCT 2011.
- [C176] S. Wu, F. Li, S. Mehrotra, B. C. Ooi. *Query Optimization for Massively Parallel Data Processing*. ACM Symposium on Cloud Computing (SOCC), 2011
- [C177] J. Wang, K. Kim, S. Mehrotra and N. Venkatasubramanian. *Enhancing Cellular Infrastructures: A Reflective Approach*. Workshop on Adaptive and Reflective Middleware, Middleware 2011.
- [C178] K. Oktay, V. Khadilkar, B. Hore, M. Kantarcioglu, S. Mehrotra, and B. Thuraisingham. *Risk-Aware Workload Distribution in Hybrid Clouds*. IEEE Cloud 2012.
- [C179] M. H. Diallo, B. Hore, E. Chang, S. Mehrotra, N. Venkatasubramanian. *CloudProtect: Managing Data Privacy in Cloud Applications*, IEEE CLOUD, June 2012. Pages 303-310.
- [C180] C. Zhang, J. Jin, E. Chang, and S. Mehrotra. *Secure Quasi-Realtime Collaborative Editing over Low-Cost Cloud Storage Services*. IEEE Cloud 2012.
- [C181] L. Jalali, C. Talcott, N. Venkatasubramanian and S. Mehrotra. *Formal Specification of Multisimulation using Maude*. TMS/DEVS: Theory of Modeling and Simulation (formerly known as Modeling and Simulation), March 2012.
- [C182] M. Reza, R. Rahimi, N. Venkatasubramanian, S. Mehrotra and A. Vasilakos. *MAPCloud: Mobile Applications on an Elastic and Scalable 2-Tier Cloud Architecture*, In the 5th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2012), November 2012, USA. 83-90
- [C183] N. Adam, J. Eledath, S. Mehrotra, and N. Venkatasubramanian. *Social Media Alert and Response to Threats to Citizens (SMART-C.)* Invited Paper, In 8th IEEE International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCOM 2012), October 2012, pages 181-189. Invited Paper.
- [C184] B. Hore, E. Chang, M. Diallo and S. Mehrotra. *Indexing Encrypted Documents for Supporting Efficient Keyword Search*. The 9th International Workshop on Secure Data Management 2012.
- [C185] C. Zhang, J. Jin, E. Chang, and S. Mehrotra. *Secure Quasi-Collaborative Editing over Low-Cost Cloud Storage Services*. International Workshop on Secure Data Management 2012.
- [C186] L. Zhang, D. Kalashnikov, and S. Mehrotra. *A Unified Framework for Context Assisted Face Clustering*. 2013 ACM International Conference on Multimedia Retrieval. ICMR'2013 **Best Paper Award**.
- [C187] R. Vaisenberg, A. Della Motta, S. Mehrotra, and D. Ramanan. *Scheduling Sensors for Monitoring Sentient Spaces using an Approximate POMDP Policy*. IEEE PERCOM 2013.

- [C188] J. Brouwer, G.P. Li, S. Mehrotra and N. Venkatasubramanian. *Integrating Testbeds for Safety and Sustainability in Smartspaces*, Whitepaper, Accepted to the NIST/White House SmartAmerica Workshop, 2013.
- [C189] S. Mehrotra. *Towards a Risk-Based Approach to Achieving Data Confidentiality in Cloud Computing*. Secure Data Management 2013: 42-47 (invited paper by select researchers in the area)
- [C190] E. Pattuk, M. Kantarcioglu, V. Khadilkar, H. Ulusoy, and S. Mehrotra. *BigSecret: A Secure Data Management Framework for Key-Value Stores*. IEEE Cloud 2013.
- [C191] K. Y. Oktay, V. Khadilkar, M. Kantarcioglu, and S. Mehrotra. *Risk Aware Approach to Data Confidentiality in Cloud Computing*. ICISS 2013.
- [C192] C. Li, S. Mehrotra, and L. Jin. *Record Linkage: A 10-Year Retrospective*. DASFAA (1) 2013: 3-12. **Invited Paper Accompanying the 10 Year Best Paper Award.**
- [C193] J. Xu, D. V.Kalashnikov, and S. Mehrotra. *Efficient Summarization Framework for Multi-Attribute Uncertain Data*. ACM SIGMOD 2014: 421-432
- [C194] H. Hacigumus, B. Iyer, and S. Mehrotra. *Secure Computation on Outsourced Data: A 10-Year Retrospective*. DASFAA 2014:16-27. **Invited Paper accompanying the 10 Year Best Paper Award.**
- [C195] K. Y. Oktay, S. Mehrotra, V. Khadilkar and M. Kantarcioglu. *SEMROD: Secure and Efficient MapReduce Over HybriD Clouds*. SIGMOD Conference 2015: 153-166
- [C196] P. Pappachan, R. Yus, P. K. Das, S. Mehrotra, T. Finin and A. Joshi. *Mobipedia: Mobile Applications Linked Data*. International Semantic Web Conference (Posters & Demos) 2015
- [C197] P. Pappachan, R. Yus, P. K. Das, S. Mehrotra, T. Finin and A. Joshi. *Building a Mobile Applications Knowledge Base for the Linked Data Cloud*. MoDeST@ISWC 2015: 14-25
- [C198] S. Mehrotra, A. Kobsa, N. Venkatasubramanian and S. R. Rajagopalan. *TIPPERS: A Privacy Cognizant IoT Environment*. PerCom Workshops 2016: 1-6
- [C199] M. Sadri, S. Mehrotra and Y. Yu. *Online Adaptive Topic Focused Tweet Acquisition*. CIKM 2016: 2353-2358
- [C200] S. Doudalis, S. Mehrotra, S. Haney and A. Machanavajjhala. *Releasing True Data with Formal Privacy Guarantees*, Privacy-Preserving IR Workshop at SIGIR, 2016
- [C201] A. Alsaudi, M. Sadri, Y. Altowim and S. Mehrotra. *Adaptive Topic Follow-Up on Twitter*. ICDE 2017: 1385-1386
- [C202] Y. Altowim and S. Mehrotra. *Parallel Progressive Approach to Entity Resolution Using MapReduce*. ICDE 2017: 909-920
- [C203] K. Y. Oktay, M. Kantarcioglu and S. Mehrotra. *Secure and Efficient Query Processing over Hybrid Clouds*. ICDE 2017: 733-744
- [C204] P. Pappachan, M. Degeling, R. Yus, A. Das, S. Bhagavatula, W. Melicher, P. Emami Naeini, S. Zhang, L. Bauer, A. Kobsa, S. Mehrotra, N. M. Sadeh and N. Venkatasubramanian. *Towards Privacy-Aware Smart Buildings: Capturing, Communicating, and Enforcing Privacy Policies and Preferences*. ICDCS Workshops 2017: 193-198
- [C205] R. Egushi, S. Mehrotra and N. Venkatasubramanian. *Integrating Sensing and Simulation for Rapid and Effective Early Warning of Tsunami Effects*. 1st US-Japan Workshop Enabling Global Collaborations in Big Data Research 2017: 86-90.
- [C206] S. Doudalis and S. Mehrotra *SORTaki: A Framework to Integrate Sorting with Differential Private Algorithms*, Privacy Security Trust, 15th conference on. IEEE 2017

- [C207] S.Doudalis, I. Kotsogiannis, A. Machanavajjhala and S. Mehrotra: *One Sided Privacy*, Theory and Practice of Differential Privacy, in conjunction with CCS October 2017
- [C208] S. Mirzamohammadi, J. A. Chen, A. Amiri Sani, S. Mehrotra and G. Tsudik. *Ditio: Trustworthy Auditing of Sensor Activities in Mobile & IoT Devices*, ACM Sensys, November 2017
- [C209] E. Shin, R. Yus, S. Mehrotra, N. Venkatasubramanian. *Exploring Fairness in Participatory Thermal Comfort Control in Smart Buildings*, ACM Buildsys, November 2017
- [C210] Mamadou H. Diallo, Nisha Panwar, Roberto Yus, Sharad Mehrotra: Trustworthy Privacy Policy Translation in Untrusted IoT Environments. IoTBDS 2018: 132-143
- [C211] Luca Scalzotto, Kyle E. Benson, Georgios Bouloukakis, Paolo Bellavista, Valérie Issarny, Sharad Mehrotra, Nalini Venkatasubramanian: An Implementation Experience with SDN-enabled IoT Data Exchange Middleware. Middleware (Posters) 2018: 21-22
- [C212] Kyle E. Benson, Georgios Bouloukakis, Casey Grant, Valérie Issarny, Sharad Mehrotra, Ioannis D. Moscholios, Nalini Venkatasubramanian: FireDeX: a Prioritized IoT Data Exchange Middleware for Emergency Response. Middleware 2018: 279-292
- [C213] Mamadou H. Diallo, Nisha Panwar, Sharad Mehrotra, Ardan Amiri Sani: Trustworthy Sensing in an Untrusted IoT Environment. PerCom Workshops 2018: 468-471
- [C214] Sameera Ghayyur, Yan Chen, Roberto Yus, Ashwin Machanavajjhala, Michael Hay, Gerome Miklau, Sharad Mehrotra: IoT-Detective: Analyzing IoT Data Under Differential Privacy. SIGMOD Conference 2018: 1725-1728
- [C215] Qing Han, Ronald T. Eguchi, Sharad Mehrotra, Nalini Venkatasubramanian: Enabling State Estimation for Fault Identification in Water Distribution Systems Under Large Disasters. SRDS 2018: 161-170 (**Best Paper Award**)
- [C216] Nisha Panwar, Shantanu Sharma, Guoxi Wang, Sharad Mehrotra, Nalini Venkatasubramanian, Mamadou Diallo and Ardan Amiri Sani. IoT Notary : Sensor Data Attestation in Smart Environment. In 18th IEEE International Symposium on Network Computing and Applications , NCA , Cambridge, MA, USA, Sept 26-28, 2019 , pages 1–8, 2019.
- [C217] Sharad Mehrotra, Shantanu Sharma, Jeffrey D. Ullman, and Anurag Mishra. Partitioned data security on outsourced sensitive and non-sensitive data. In 35th IEEE International Conference on Data Engineering , ICDE , Macao, China, April 8-11, 2019 , pages 650–661
- [C218] Sharad Mehrotra, Shantanu Sharma, and Jeffrey D. Ullman., Scaling cryptographic techniques by exploiting data sensitivity at a public cloud, In Proceedings of the Ninth ACM Conference on Data and Application Security and Privacy, CODASPY, Richardson, TX, USA, March 25-27, 2019, pages 165–167, 2019. (**Distinguished Poster Award**)
- [C219] Nisha Panwar, Shantanu Sharma, Guoxi Wang, Sharad Mehrotra, and Nalini Venkatasubramanian. Verifiable round-robin scheme for smart homes. In Proceedings of the Ninth ACM Conference on Data and Application Security and Privacy , CODASPY , Richardson, TX, USA, March 25-27, 2019 , pages 49–60, 2019.
- [C220] R. Yus, G. Bouloukakis, S. Mehrotra, N. Venkatasubramanian, Abstracting Interactions with IoT Devices Towards a Semantic Vision of Smart Spaces, ACM Buildsys 2019
- [C221] SemIoTic: Bridging the Semantic Gap in IoT Spaces . Sumaya Almanee, Georgios Bouloukakis, Daokun Jiang, Sameera Ghayyur, Dhruvajyoti Ghosh, Peeyush Gupta, Yiming Lin, Sharad Mehrotra, Primal Pappachan, Eun-Jeong Shin, Nalini Venkatasubramanian, Guoxi Wang, Roberto Yus . 6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation, BuildSys 2019, New York, NY, USA, November 13-14, 2019

- [C222] Towards Accuracy Aware Minimally Invasive Monitoring (MiM), by Sameera Ghayyur, Dhruvajyoti Ghosh, Xi He and Sharad Mehrotra. TDP, CCS 2019
- [C223] E. Shim, D. Ghosh, S. Mehrotra, N. Venkatasubramanian, SCARF: A Scalable Data Management Framework for Context Aware Applications in Smart Environments, Mobiquitous 2019
- [C224] Exploring Privacy Breaches and Mitigation Strategies of Occupancy Sensors in Smart Buildings, Phillip Le, Eun-Jeong Shin, Valerie Guralnik, Sharad Mehrotra, Nalini Venkatasubramanian Kevin Smith, TESCA 2019 in conjunction with ACM Buildsys, 2019.
- [C225] Qing Han, Sharad Mehrotra, Nalini Venkatasubramanian. 2019. Poster Abstract: AquaSCALE - Exploring Resilience of Community Water Systems. In 20th International Middleware Conference (Middleware'19), December 8–13, 2019, Davis, CA, USA.
- [C226] IoT Notary: Sensor Data Attestation in Smart Environment , Nisha Panwar, Shantanu Sharma, Guoxi Wang, Sharad Mehrotra, Nalini Venkatasubramanian, Mamadou H. Diallo, and Ardalan Amiri Sani, 18th IEEE International Symposium on Network Computing and Applications (IEEE NCA) Cambridge, MA, USA, Sept 26-28, 2019. (Best Paper Award)
- [C227] Zhenhua Huang, Zhenyu Wang, Rui Zhang, Yangyang Zhao, Xiaohui Xie, Sharad Mehrotra: Network2Vec: Learning Node Representation Based on Space Mapping in Networks. ICDM Workshops 2019: 727-734
- [C228] Secure and Privacy-Preserving Big-Data Processing . Anton Burtsev, Sharad Mehrotra, Shantanu Sharma . IEEE Big-Data, Los Angeles, CA, USA, Dec 09-12, 2019
- [C229] Qing Han, Sharad Mehrotra, Nalini Venkatasubramanian. 2019. AquaEIS: Middleware Support for Event Identification in Community Water Infrastructures. In 20th International Middleware Conference (Middleware'19), December 8–13, 2019, Davis, CA, USA.
- [C230] Nisha Panwar, Shantanu Sharma, Peeyush Gupta, Dhruvajyoti Ghosh, Sharad Mehrotra, Nalini Venkatasubramanian. "IoT Expunge: Implementing Verifiable Retention of IoT Data", CODASPY 2020: 283-294
- [C231] Praveen Venkateswaran, Cheng-Hsin Hsu, Sharad Mehrotra, Nalini Venkatasubramanian. "REAM: Resource Efficient Adaptive Monitoring of Community Spaces at the Edge Using Reinforcement Learning", in IEEE International Conference on Smart Computing (SMARTCOMP), 2020. **(best paper award)**
- [C232] Sharad Mehrotra, Shantanu Sharma:Recent Advances in Information-Theoretically Secure Data Outsourcing. IWSPA@CODASPY 2020: 31-32 (tutorial)
- [C233] Peeyush Gupta, Yin Li, Sharad Mehrotra, Nisha Panwar, Shantanu Sharma: Obscure: Information-Theoretically Secure, Oblivious, and Verifiable Aggregation Queries. CODASPY 2020: 165-167
- [C234] Ios Kotsogiannis, Stelios Doudalis, Samuel Haney, Ashwin Machanavajjhala, Sharad Mehrotra: One-sided Differential Privacy. ICDE 2020: 493-504
- [C235] Shantanu Sharma, Anton Burtsev, Sharad Mehrotra: Advances in Cryptography and Secure Hardware for Data Outsourcing. ICDE 2020: 1798-1801 (tutorial)
- [C236] The ZotBins solution to Waste Management using Internet of Things. Joshua Cao, Jesse Chong, Marissa Lafreniere, Owen Yang, Primal Pappachan, Sharad Mehrotra, Nalini Venkatasubramanian . 18th ACM Conference on Embedded Networked Sensor Systems (SenSys '20)
- [C237] A Privacy-Enabled Platform for COVID-19 Applications. Michael August and Christopher Davison and Mamadou Diallo and Dhruvajyoti Ghosh and Peeyush Gupta and Christopher Graves and Shanshan Han and Michael Holstrom and Pramod Khargonekar and Megan Kline and Sharad Mehrotra

and Shantanu Sharma and Nalini Venkatasubramanian and Guoxi Wang and Roberto Yus . 18th ACM Conference on Embedded Networked Sensor Systems (SenSys '20)

[C238] Adaptive Mediation for data exchange in IoT systems, A. Chio, Georgios Bouloukakis, Cheng-Hsin Hsu, Sharad Mehrotra, Nalini Venkatasubramanian Proceedings of the 18th Workshop on Adaptive and Reflexive Middleware, 2020

[C239] Designing Privacy Preserving Data Sharing Middleware for Internet of Things . Sameera Ghayyur, Primal Pappachan, Guoxi Wang, Sharad Mehrotra, Nalini Venkatasubramanian . The 3rd International SenSys+BuildSys Workshop on Data: Acquisition to Analysis (DATA '20)

[C240] IoT Expunge: Implementing Verifiable Retention of IoT Data . Nisha Panwar, Shantanu Sharma, Peeyush Gupta, Dhrubajyoti Ghosh, Sharad Mehrotra, Nalini Venkatasubramanian . CODASPY'20: Tenth ACM Conference on Data and Application Security and Privacy, New Orleans, LA, USA, March 16-18, 2020

[C241] Yin Li, Dhrubajyoti Ghosh, Peeyush Gupta, Sharad Mehrotra, Nisha Panwar, and Shantanu Sharma. Prism: Private Verifiable Set Computation over Multi-Owner Outsourced Databases. Proceedings of the ACM International Conference on Management of Data}, SIGMOD}, Xi'an, Shaanxi, China, June 2021

[C242] Peeyush Gupta, Sharad Mehrotra, Shantanu Sharma Nalini Venkatasubramanian, and Guoxi Wang. Concealer: SGX-based Secure, Volume Hiding, and Verifiable Processing of Spatial Time-Series Datasets.Proceedings of the 24th International Conference on Extending Database Technology, EDBT, Nicosia, Cyprus, March 2021.

[C243] T-Cove: An exposure tracing System based on Cleaning Wi-Fi Events on Organizational Premises, Yiming Lin , Pramod Khargonekar, Sharad Mehrotra, Nalini Venkatasubramanian , VLDB 2021

[C244] Quest: Privacy-Preserving Monitoring of Network Data: A System for Organizational Response to Pandemics Shantanu Sharma, Sharad Mehrotra, Nisha Panwar, Nalini Venkatasubramanian, Peeyush Gupta, Shanshan Han, and Guoxi Wang IEEE Transactions on Services Computing, 2022

[C245] SmartSPEC: Customizable Smart Space Datasets via Event-Driven Simulations Andrew Chio, Daokun Jiang, Peeyush Gupta, Georgios Bouloukakis, Roberto Yus, Sharad Mehrotra and Nalini Venkatasubramanian IEEE PERCOM 2022, (**Best Paper Award**)

[C246] Artifact: SmartSPEC: customizable smart space datasets via event-driven simulations Andrew Chio, Daokun Jiang, Peeyush Gupta, Georgios Bouloukakis, Roberto Yus, Sharad Mehrotra, Nalini Venkatasubramanian 2022 IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops)

[C247] Supporting Complex Query Time Enrichment For Analytics Dhrubajyoti Ghosh, Peeyush Gupta, Sharad Mehrotra, Shantanu Sharma EDBT 2023

[C248] WedgeBlock: An Off-Chain Secure Logging Platform for Blockchain Applications Abhishek A. Singh, Yinan Zhou, Mohammad Sadoghi, Sharad Mehrotra, Shantanu Sharma, Faisal Nawab EDBT 2023

[C249] TransEdge: Supporting Efficient Read Queries Across Untrusted Edge Nodes Abhishek A. Singh, Aasim Khan, Sharad Mehrotra, Faisal Nawab EDBT 2023

[C250] Sentauro: Sensor Observable Data Model for Smart Spaces Peeyush Gupta, Sharad Mehrotra, Shantanu Sharma, Roberto Yus, Nalini Venkatasubramanian ACM CIKM 2022

- [C251] Testing CareDEX: SAGAT methodology deployed for a disaster drill at a senior living community Aaron Allred, Alfonso Arauz, Mowhebat Bazargani, Rahul Bhope, Erin Boomershine, Nnenia Campbell, Christopher B. Davison, Nikil Dutt, Ronald Eguchi, Lisa Gibbs, ZhengHui Hu, Modeste Kenne, Sharad Mehrotra, Davis Park, Celeste Penney, Julie Rousseau, Nalini Venkatasubramanian, Guoxi Wang IACIS Annual 23 – Clearwater, 2023
- [C252] Data-CASE: Grounding Data Regulations for Compliant Data Processing Systems Vishal Chakraborty, Stacy Ann-Elvy, Sharad Mehrotra, Sharad Mehrotra, Faisal Nawab, Muhammad Sadoghi, Shantanu Sharma, Nalini Venkatsubhramanian, Farhan Saeed EDBT 2024
- [C253] Nada Lahjouji, Sameera Ghayyur, Xi He, Sharad Mehrotra, ProBE: Proportioning Privacy Budget for Complex Exploratory Decision Support. CCS 2024: 1924-1938
- [C254] Water-COLOR: Water-Conservation using a Learning-based Optimized Recommender, Guang Xue Zhang, David L. Feldman ; Yiming Lin; Sharad Mehrotra; Nalini Venkatasubramanian; Thayer Drew; Kim Sentovich; Owen Veranth 10th IEEE International Conference on Smart Computing (SMARTCOMP 2024)
- [C255] BatchIT: Intelligent and Efficient Batching for IoT Workloads at the Edge. Guoxi Wang, Ryan Hildebrandt, Andrew Chio, Nalini Venkatasubramanian, and Sharad Mehrotra. In IEEE Network Operations and Management Symposium (IEEE NOMS '24).
- [C256] Secure Normal Form: Mediation Among Cross Cryptographic Leakages in Encrypted Databases Shufan Zhang, Xi He, Ashish Kundu, Sharad Mehrotra, Shantanu Sharma , Data Engineering for Future Technologies, ICDE 2024
- [C257] SES: Bridging the Gap Between Explainability and Prediction of Graph Neural Networks Zhenhua Huang†, Kunhao Li†, Shaojie Wang†, Zhaohong Jia*†, Wentao Zhu‡, Sharad Mehrotra ICDE 2024
- [C258] Jun Zhang , Jue Wang, Huan Li, Lidan Shou, Ke Chen, Gang Chen, Sharad Mehrotra: Draft& Verify: Lossless Large Language Model Acceleration via Self-Speculative Decoding. ACL (1) 2024: 11263-11282
- [C259] Shlomi Dolev, Komal Kumari, Sharad Mehrotra, Baruch Schieber, Shantanu Sharma: Reminisce for Securing Private-Keys in Public. CSCML 2024: 168-177
- [C260] Habiba Farrukh, Nada Lahjouji, Sharad Mehrotra, Faisal Nawab, Julie Rousseau, Shantanu Sharma, Nalini Venkatasubramanian, Roberto Yus: PrivacySphere: Privacy-Preserving Smart Spaces. TPS-ISA 2024: 255-264
- [C261] Shlomi Dolev, Komal Kumari, Sharad Mehrotra, Baruch Schieber , Shantanu Sharma: Brief Announcement: Make Master Private-Keys Secure by Keeping It Public. SSS 2024: 338-343
- [C262] FOVDA: A Federated Architecture for Overcoming Data Silos in Water Domain [Vision] M Luti, D Feldman, ZH Hu, S Mehrotra, M Mendoza, Future of Information and Communication Conference, 625-646 , 2025
- [C263] Zhang, Shufan; He, Xi; Kund, Ashish; Maiyya, Sujaya; Mehrotra, Sharad; Sharma, Shantanu (Invited Paper) Towards Secure Data Management using Multi-cryptographic Solutions Conference DAC, 2025.
- [C264] Yus, Roberto; Lahjouji, Nada; Bouloukakis, Georgios; Mehrotra, Sharad; Venkatasubramanian, Nalini Modeling Inhabited Smart Spaces to Support Interoperable IoT-Based Applications, The 26th IEEE International Conference on Mobile Data Management, 2025.
- [C265] ClusterFed: Self-Supervised Federated Network Intrusion Detection Using Clustering, Saquib Irtiza (The University of Texas at Dallas, USA); Latifur Khan (University of Texas, USA); Kevin Hamlen (University of Texas at Dallas, USA); Kevin S Chan (DEVCOM Army Research Laboratory, USA); Michael De Lucia (US Army Research Laboratory, USA); Murat Kantarcioglu (University of Texas at Dallas, USA); Sharad Mehrotra (University of California, Irvine, USA); Ananthram Swami (DEVCOM Army Research Laboratory, USA); Bhavani Thuraisingham (University of Texas at Dallas, USA), MILCOM 2025

- [C266] SSPNet: Semi-Supervised Prototypical Networks for Few-Shot Network Intrusion Detection
Umid Suleymanov and Murat Kantarcioglu (Virginia Polytechnic Institute and State University, USA); Kevin S Chan (DEVCOM Army Research Laboratory, USA); Michael De Lucia (US Army Research Laboratory, USA); Kevin Hamlen (University of Texas at Dallas, USA); Latifur Khan (University of Texas, USA); Sharad Mehrotra (University of California, Irvine, USA); Ananthram Swami (DEVCOM Army Research Laboratory, USA); Bhavani Thuraisingham (UTD, USA), MILCOM 2025
- [C267] GRACE: Querying for Novelty in Data Streams under Resource Constraints, F. Rahman, S. Halim, P. Saha, L. Khan, K. Chan, M. Lucia, K. Hamlen, M. Kantarcioglu, S. Mehrotra, A. Swami, B. Thuraisingham, IEEE WCCI 2026
- [C268] GENIE : Simulator-Driven Iterative Data Exploration for Scientific Discovery, Ashwin Gerard Colaco*, Martin Boissier†, Sriram Rao*, Shubharoop Ghosh‡, Sharad Mehrotra*, Tilmann Rabl, IEEE ICDE 2026
- [C269] Vishal Chakraborty, Youri Kaminsky, Arnav Dhariya, Sharad Mehrotra, Felix Naumann, and Sarvesh Pandey. *Inference-Aware & Privacy-Preserving Deletions in Databases [Vision]*. Workshop on Secure and Private Data Management at SIGMOD 2026.

UNDER PREPARATION/SUBMITTED FOR PUBLICATION

- [U1] LLM-Powered Clustering for Entity Resolution, Jiajie Fu · Haitong Tang · Arijit Khan · Sharad Mehrotra · Xiangyu Ke · Yunjun Gao, 2026 (under review).
- [U2] WorkLoadWeaver: Realistic Synthetic Query Workloads for Adaptive Database Systems. Keming Li, Nada Lahjouji, Ashwin Gerard Colaco ,Shiyuan Zhou,Pratyoy Das,Guangxue Zhang, Sahil Makhijani,Vishal Chakraborty,Sarvesh Pandey,Sharad Mehrotra, 2026 (under review)
- [U3] ColumnCast: Budgeted Workload-Aware Replication, P. Das, V.Chakraborty, S. Mehrotra, 2026 (under review)
- [U4] FauxSQL: Detecting and Correcting Annotation Errors in NL2SQL Benchmarks via Multi-Agent Disagreement and Weak Supervision, S. Zhou, A. Colaco, S. Mehrotra, S. Galhotra , 2026(in preparation)
- [U6] NOMAD: Navigating Optimal Model Application to Datastreams, A. Colaco, S. Mehrotra, M. De Lucia, K. Hamlen, M. Kantarcioglu, L. Khan, A. Swami, B. Thuraisingham (in preparation)
- [U7] From Advocacy to Judgment: Training-Free Analytic Essay Scoring with Multi-Agent Debate and Exemplar Retrieval, A. Keramati, S. Zhou, S. Mehrotra, M. Warschauer 2006 (in review).
- [U8] SPRINT: Semi-supervised Prototypical Representation for Few-Shot Class-Incremental Tabular Learning, U. Suleymanov, M. Kantarcioglu, K. S. Chan, M. J. De Lucia, K. Hamlen, L. Khan, S. Mehrotra, A. Swami, B. Thuraisingham 2026 (in review)
- [U9] Unifying Stacking and Cascading for Efficient Ensemble Inference, A. G. Colaco, S. Mehrotra, M. J. De Lucia, K. Hamlen, M. Kantarcioglu, L. Khan, A. Swami, B. Thuraisingham, U. Jain , 2026 (under review)

CONFERENCE AND WORKSHOP TUTORIALS

[T1] Secure and Privacy-Preserving Big-Data Processing Anton Burtsev, Sharad Mehrotra, and Shantanu Sharma IEEE Big-Data, Los Angeles, CA, USA, Dec 09-12, 2019

[T2] Recent Advances in Information-Theoretically Secure Data Outsourcing Sharad Mehrotra and Shantanu Sharma 6th ACM International Workshop on Security and Privacy Analytics (IWSPA) associated with 10th ACM Conference on Data and Application Security and Privacy (CODASPY), New Orleans, Louisiana, USA, March 18, 2020

[T3] Advances in Cryptography and Secure Hardware for Data Outsourcing, Anton Burtsev, and Sharad Mehrotra, 36th IEEE International Conference on Data Engineering (IEEE ICDE), Dallas, Texas, USA, April 20-24, 2020

[T4] Komal Kumari, Sharad Mehrotra, Shantanu Sharma: Tutorial: Information Leakage from Cryptographic Techniques. ICDCSW 2024: 9-12

OTHER REFEREED PUBLICATIONS

[ORP1] Y. Rui, T. Huang, and S. Mehrotra. MARS and its Application to MPEG-7.” ISO/IEC JTC1/SC29/WG11 MPEG-97/2900.

[ORP2] Y. Rui, T. Huang, and S. Mehrotra. Suggestions to the Draft of MPEG-7 Requirements.” ISO/IEC JTC1/SC2/WG11 M3107, MPEG98.

SOFTWARE SYSTEMS/ARTIFACTS

- **TIPPERS:** Testbed for IoT-based Privacy-Preserving PERvasive Spaces: a robust experimental smart building testbed for real-world deployment, testing, and evaluation of a variety of privacy technologies in Internet of Things scenarios. TIPPERS is a fully operational system that has been deployed for building a variety of smart space services in daily use at the campus. It has been deployed in the context of building/occupancy monitoring at about 20 buildings at UCI and is part of the reopening plans for the buildings. It has also been transitioned to US Navy where it is being used as plan a center level activity at Naval Information Warfare Center. ***TIPPERS is the recipient of the NAVWAR Innovations award in 2021.***
- **EnrichDB:** a fully functional database system that supports data enrichment on the fly. EnrichDB forms the underlying technology for scalable sensor data processing.
- **PE-IoT:** a privacy enhancing middleware for sensor streams that has been transitioned to the UCI campus (and in discussions of being transitioned to UCSD and Ball State University. PE-IoT acts as a policy-based stream processing system that intercepts sensor data to support verifiable implement organizational and user policies.

- **SmartBench:** a smartspace benchmark with corresponding data generator and queries to test / profile database engines support for IoT data
- **FireDEX:** An IoT Based Edge Data Exchange System for Prioritized IoT Data Delivery for Smart Firefighting applications in smartspaces.
- **UCI311 System:** A system for robust emergency monitoring that obtains and merges information from multiple sources including human input (via telephone, email), social media and sensors.
- **OpsTalk:** A Speech based mobile situational awareness platform for command and control operations built for DARPA in collaboration with speech researchers at ICSI Berkeley and SRI.
- **SAFIRE:** A system for generating situational awareness for firefighter safety from multiple mobile and in-situ sensors targeted at delivering actionable information to a incident commander through a Fire Incident Command Board (FICB).
- **CrisisAlert:** An automated system to disseminate customized information to schools and other organizations in case of disasters. <http://www.ics.uci.edu/~projects/dissemination/artifacts.htm>,
- **RAPID:** A P2P framework for flash distribution (over the Internet) of heterogeneous data to a large number of recipients in as short a time period as possible (Flash Dissemination) using an underlying minimum-state gossip-based protocol (CREW). <http://www.ics.uci.edu/~projects/dissemination/rapid.htm>
- **Flashback:** System for scalably handling large unexpected traffic spikes on web-sites where clients (browsers) create a dynamic, self-scaling Peer-to-Peer (P2P) web-server that grows and shrinks according to the load. <http://flashback.calit2.uci.edu/>
- **Disaster Portal:** An Emergency Information Portal (EIP) that includes a web-accessible integrated dashboard of local disaster and associated relief information, hotlinks for citizens and also an online donation management *system*.
- **pVault, dataVault:** A password management service that prevents some of the prevalent online attacks on passwords and supported secure access to data from remote devices.
- **CloudProtect:** a middleware technology that transparently encrypted /decrypted data stored in cloud applications on the fly. The system built served as the catalyst/ inspiration for a startup called GarbleCloud that was launched by one of the postdoctoral students who worked on CloudProtect.
- **SATWARE:** SATware is a multimodal sensor data stream querying, analysis, and transformation middleware for sentient systems. <http://www.ics.uci.edu/~projects/SATware/>

- **NetDB2:** a web-based service offered by IBM to provide free, remote access to IBM DB2 databases for students, educators, and developers. It was amongst the earliest purpose-built, web-hosted relational database services for education, and a clear precursor to modern Database-as-a-Service (DBaaS) offerings
- **DrillSIM:** A multi-agent activity simulator for crisis response that models response activities and information flow at both the macro and micro level.
<http://www.ics.uci.edu/~projects/drillsim/>
- **RelDC:** a novel graph-based data cleaning system that exploited relationships amongst entities for entity and location resolution. RelDC was used by ARL internally for a variety of projects related to data cleaning. <https://www.ics.uci.edu/~dvk/code/RelDC.html>
- **MARS System:** a fully functional database system to support content-based retrieval of multimedia data.
- **Hybrid Tree:** a scalable multidimensional data structure that scaled to highly multidimensional spaces (e.g., 64-dimensional color spaces, texture representations, etc). The hybrid tree was used in several Army and NASA projects including indexing of MARS data. The system also included a novel dimensionality reduction mechanism.

RECENT PROFESSIONAL ACTIVITIES

Program Committees and Conference Organization

- Program Committee, VLDB Conference, 2000
- Program Committee, Workshop on Multimedia Information Systems, 2000
- Proceedings Chair, SIGMOD Conference, 2001
- Program Committee, SIGMOD Conference, 2001
- Program Committee, Workshop on Mobile Data Management, 2001
- Program Committee, International Workshop on Bioinformatics in Data Mining, BioKDD, 2001
- Program Committee, Research Issues in Data Mining and Knowledge Discovery (DMKD 2001)
- Program Committee, Seventh International Symposium on Spatial and Temporal Databases, 2001
- Local Arrangements Co-chair, WORDS Conference, 2002
- Program Chair, Cal-IT2 Workshop on Crisis Response at UC, Irvine, 2002
- Program Committee, SIGMOD Conference, 2002
- Program Committee, SIGMOD Conference, 2003
- Program Committee, Workshop on Mobile Data Management, 2003
- Program Committee, IEEE International Conference on Data Engineering, 2003
- Program Committee, Workshop on Mobile Data Management, 2004

- PC Chair, ISI Conference, 2006
- General Chair, DBSEC conference, 2007
- PC Vice Chair, ICDE 2005
- General Chair DBSEC, 2007
- Program Co- Chair, 1st International Workshop on Sensor Enabled Situational Awareness, (SESA 2011)
- Program Co-Chair, 2nd International Workshop on Sensor Enabled Situational Awareness (SESA 2012).
- Program Co-Chair, US Department of Homeland Security Workshop on Emergency Management, Incident, Resource, and Supply Chain Management 2009
- Workshop Chair, International Conference on Data Engineering ICDE 2012
- Demo Chair, International Conference on Data Engineering, 2011
- *General Chair*, 21st IFIP Working Conference on Data and Applications Security 2008
- General Co-Chair, Symposium on Reliable and Distributed Systems (SRDS), 2012.
- General Co-Chair, VLDB 2014
- Publicity Co-chair , IEEE ISI conference, 2011
- Program Committee, IQ2S 2011
- Program Committee, VLDB 2012
- Program Committee, MDM 2012
- Program Committee, ISI 2011
- Program Committee, ISI 2010
- Program Committee, ISI 2009
- Program Committee, ISI 2008
- Program Committee, ACM CODASPY 2011
- Program Committee, ICDE 2011
- Program Committee, MOBIQUITOUS 2008
- Program Committee, VLDB 2010
- Program Committee, SDM 2008
- Program Committee, ICISS 2011
- Program Committee, SSDBM 2007
- Program Committee, DBSEC 2009
- Program Committee, SIGMOD 2010
- Senior Program Committee Member, CIKM, 2013
- Program Committee, SIGMOD 2014
- Program Committee, Industrial Track, VLDB 2015

- Program Committee, EDBT 2015
- Program Committee, VLDB 2016 (Associate Editor)
- Program Committee, VLDB 2017 (Associate Editor)
- Program Committee, SIGMOD 2018
- Program Committee, ICDE 2017
- Sponsorship Co-chair, ICDE 2020
- PC Area Chair, ICDE 2021
- Program Committee Chair ACM CODS/COMAD 2021
- Program Committee, SIGMOD 2020
- Program Committee EDBT 2021
- Panel Chair ICDE 2021
- Program Committee, SIGMOD 2022
- Panel Co-Chair SIGMOD 2023
- PC Co-Chair IEEE ICDE 2023
- PC, SIGMOD 2024
- PC,
- Associate Editor, VLDB 2024
- Sponsorship Chair, VLDB 2024
- PC Member, The International Workshop on Data Management Opportunities in Unifying Large Language Models+Knowledge Graphs. 2024
- Endowment Sponsorship Co-Chair, VLDB 2023
- PC Member, VLDB 2025
- Meta Reviewer, IEEE ICDE 2025
- PC Member, EDBT 2025
- PC Member VLDSB Tutorial Track. 2025
- Chair, ACM Sigmod Awards Committee, 2025
- Meta Reviewer, EDBT 2026
- Sponsorship Co-Chair ACM SIGMOD 2026
- Co-Organizer, Managing Vector Data for Retrieval Augmented Generation: Systems and Algorithms (26161) April 2026, Schloss Dagstuhl – Leibniz-Zentrum für Informatik in Germany (Oktavie-Allee, 66687 Wadern).

Journals Edited

- Multimedia Tools and Applications, Kluwer Academic Press. Guest Editor for Special Issue on Continuous Media Databases (along with A. Zhang and A. Silberschatz).
- Internet Computing (Guest Editor on Crisis Response) 2007
- IEEE Internet Computing, Special Issue on Crisis Management, co-edited with Ty Znati. 2008
- Member of Editorial Board for Elsevier Security Informatics Journal. 2011 –
- Guest Editor for Multimedia Systems Journal Special Issue on Privacy Aware Multimedia Surveillance, 2011. Other co-editors include Mohan Kankanhalli, Sabu Emmanuel, and Pradeep Athrey
- Guest Editor, Data Engineering Bulletin, Special Issue on Security and Privacy in Cloud Computing, Dec. 2012.
- Guest Editor, Internet Technologies (special issue on crisis response), 2013
- Member of the Editorial Board for Elsevier Journal on Big Data 2013-
- Associate Editor VLDB 2016
- Associate Editor , VLDB 2017
- Associate Editor, VLDB 2022
- Associate Editor, VLDB 2024
- Meta Reviewer ACM Sigmod 2026
- Meta Reviewer ACM SIGMOD 2027

Reviewing Activity

- Reviewer for California MICRO program, 2000 and 2001
- Participated in numerous NSF Proposal Review Panel 1998 to 2003
- Referee/reviewer for numerous journals, conferences, workshops, and books including: MIS, ACM TODS, IEEE TKDE, DAPD, SPE, JCSS, JISS, TNN, Tran. Multimedia, Information Systems Journal, ACM SIGMOD, ACM PODS, IEEE Data Engineering, ICDCS, PDIS, VLDB, SRDS, FTCS, and many books on database management and distributed systems for Addison Wesley, Springer-Verlag, and Morgan Kauffman

RECENT INVITED TALKS

- Research Challenges in Responding to the Unexpected, SPIE Internet Imaging, 2004
- The Rescue Project, Cal-IT2 Day at UCI (keynote address), Nov. 2003
- Information Technology Challenges in Responding to the Unexpected, Cal-IT2 Day at UC, San Diego, Oct. 2003.
- Information Technology Challenges in Responding to the Unexpected, CRITO Hour, UCI, 2003.
- The QUASAR Project, University of California Los Angeles, Oct. 2003.

- Urban Crisis Response Center, ICS CEO Roundtable, 2003.
- Similarity Retrieval and Refinement in Databases, Workshop on Data Management at IBM Almaden Research Center, Feb 25th, 2002.
- Efficient Processing of Queries in Multidimensional Databases, Lawrence Livermore National Labs. August, 2001
- Towards Sensor Enabled Device Databases, CaL-IT2 Presentation, August 2001.
- Overcoming Dimensionality Curse in High Dimensional Databases, Santa Teresa Laboratory, IBM, June, 2001.
- Indexing and Retrieval of Multimedia Data in MARS, Workshop on Mathematics in Multimedia, Institute of Mathematics and its Applications, University of Minnesota, Minneapolis, Jan, 2001.
- Institute of Mathematics and its Application, Workshop on Mathematics in Multimedia, University of Minnesota, Minneapolis, January, 2001
- DAGSTUHL workshop on Content-based image and video retrieval, January 6-11, 2002.
- DAGSTUHL workshop on Content-based image and video retrieval, 2004
- National Academy of Science workshop on the Intersection of Geospatial Information and Information Technology, Oct 1-2, 2001.
- NSF workshop on Context Aware Mobile and Pervasive Data Management, January 24-25, Brown University, 2002.
- NSF Workshop on Responding to the Unexpected, NYC Feb 2002
- NSF Workshop on Responding to the Unexpected, San Diego, 2003
- Keynote at ITNG, 2007 Las Vegas
- Panel participant in DG.O 2007
- Invited Speaker, NSF workshop on Data and Application Security, Feb 2009, Arlington, Virginia
- Invited Speaker, Workshop on Distributed Infrastructure for Security Monitoring and Intelligence Extraction, Jan 2010, Bangalore India
- Invited Speaker, Interdisciplinary ONR/ARO/NSF Workshop on Distributed Video Sensor Networks, 2009
- Invited Speaker, Workshop on Geospatial Information for Developing Countries: Science and Technology, Dec. 2009, IIT, Bombay
- Invited Panelist, 1st International Workshop on Sensor Enabled Situational Awareness, 2011.
- Invited presentation, Workshop on Information Quality and Quality of Service for Pervasive Computing, 2011
- Invited panelist, DSPAN, 2010.
- Invitation to Panel in National Academies of Science study on Increasing disaster resilience, May 2011
- Invitation to 2nd workshop on frontiers on multicore computing special session on Situational Awareness, 2010
- Invited speaker at Calit2 Workshop on Situational Awareness Technologies, UCSD, 2010.
- Invited Speaker, FEMA meetings for Firefighter safety, 2008, 2009, 2010.

- Invited Panelist on USC Second Symposium on the Smart Grid. Sept. 2009. Panel Discussion on Research Opportunities in Smart Grid and Societal Response to Crises
- Invited Workshop Panelist, NSF/CCC Workshop on Computing for Disasters, April 23-25th, Washington DC. 2012.
- Panel Moderator, Panel on Cloud computing for CPS Applications, Workshop on Reliable Cyber Physical Systems, 2012
- Talks at various universities and industries.
- Keynote Speaker, ICISSS 2013
- Featured Academic Speaker. NIST Cloud Computing and Big Data Workshop, Jan 2013
- Invited Speaker, ARO Cloud Security Workshop, GMU, March 2013
- Invited Speaker, Big Data Security Workshop, UT Dallas, Sept. 2014
- Invited Speaker, Modern Data Management Systems Summit, (Aug. 29 – Aug. 31, 2014, Beijing, China) Jointly hosted by Tsinghua University, China and IBM Research – China
- Invited Speaker, UC San Diego, 2013
- Invited Participant, Microsoft Faculty Summit, 2014
- Invited Speaker on “Query Driven Approach to Data Cleaning”, Microsoft Power Query Group, 2014
- Invited Participant, Beckman Database Research Self-Assessment Meeting, Oct. 2013
- “Secure Data Processing in the Cloud by Partitioning Computation & Managing Risks” Department Seminar, Univ. of Mississippi, Rolla, 2015.
- “On the fly Data Cleaning to support interactive analysis” Microsoft Corp. 2014
- Secure Data Processing in the Cloud by Managing Risks, Dept.Seminar, Univ.of Pittsburgh.,2014
- On the fly Data Cleaning to Support Interactive Analysis of “Big Data” (Sherlock Project), Dept. Seminar .UC, Riverside, 2014
- Secure Data Processing in the Cloud by Managing Risks, Dept.Seminar, UC Santa Barbara.,2015
- “On the fly Data Cleaning”, 2nd International Workshop on Mining Urban Data, International Conference on Machine Learning 2015
- IT to the RESCUE Experiences with designing IT solutions for Crisis Response, AAAI Workshop 2015
- TIPPERS Testbed for IoT based Privacy Preserving Pervasive Spaces, PERCOM IoT Workshop 2016
- Keynote Talk, Lessons Learnt in building TIPPERS: challenges in scaling privacy technologies to real-world Iot settings, Privacy Issues in Multimedia Workshop, IEEE ICME, 2018
- Invited Talk at Simons Institute, UC Berkeley workshop on Privacy: from foundations to applications, 2019
- Invited Panelist, 2019 IEEE Big Data Conference, Dec. 2019
- Keynote Talk, Challenges in Scaling Privacy Enhancing Technologies to Campus Level IoT Testbed, South West Region Conference) by the Korean-American Scientists and Engineers Association, 2019

- Keynote Talk, Data management Challenges in Building and Deploying Smart Spaces, IEEE ICDE 2020
- Invited talk entitled Secure Data Outsourcing over the years to NSF NITRD Middleware and Grid Interagency Coordination Team (MAGIC) meeting on data privacy, 2020
- Keynote Talk at International Conference on Big Data, IoT, and Cloud Computing, Rome, Italy 2021 (upcoming)
- Invited speaker and Panelist, Virtual Workshop on Privacy Aspects of Contact Tracing, (Oct) 2020
- Invited Talk, Univ. of Vanderbilt, 2021
- Keynote Talk at 4th International Conference on Big Data Engineering and Technology, Singapore 2022
- Invited talk, Plaksha University, "Scaling Privacy Enhancing Technologies for Smart Spaces", April 2022
- ABC(AI-BigData Convergence) on November 29 (Tuesday - Austria time) TippersDB: A Middleware System for Developing Smart Space Applications iiWAS-2022.
- Invited talk at HPI@UCI Workshop, TippersDB: A Middleware System for Developing Smart Space Applications, ICECE 2022
- Keynote at 5th International Conference TippersDB: A Middleware System for Developing Smart Space Applications, ICECE 2022
- Invited Talk at Design Automation Conference, Towards Secure Data Management using Multi-cryptographic Solutions , 2025.
- Invited talk at HPI&UCI Workshop, NOMAD: A Novel Architecture for Integrating ML into Data Ingestion, May 2025
- Panel Moderator, for a panel on Mobile and Spatial Data Infrastructure/Management, IEEE MDM 2025

CURRENT STUDENTS

- **Ph.D.:** Guongxue Zhang, Nada Lahjouji,, Vishal Chakraborty, Pratyoy Das, Ashwin Colaco, Keming Li, Shanshan Han, Shiyuan Zhou, Sahil Makhijani
- **Postdoctoral Scholar:** Sarvesh Pandey (Fulbright scholar)

PREVIOUS Ph.D. STUDENTS

- **Yong Rui**, Content-based retrieval of multimedia data, co-advised with Prof. Tom Huang, (**Ph.D. 1999**) First employment: MSR, current employment: CTO Lenovo.
- **Yueting Zhuang**, Video analysis and database management, (visiting **Ph.D.** student from Zeijiang University, Hangzhou, China (1997-1999)). (First employment – Assistant Professor, Department of Computer Science, Zhejiang University, China, Current Employment: Dean School of Computer Science, Zhejiang University, China).
- **Kexiang Hu**, Lazy Replication Approaches in techniques for distributed collaborative environments, (**Ph.D. 1999**), first employment – Inktomi Inc.
- **Kriengkai Porkaew**, Database Support for Similarity Retrieval and Querying Mobile Objects, (**Ph.D. July 2000**). (first employment – Assistant Professor at the school of Information Technology, King Mongkut's University of Technology, Thonburi, Thailand)
- **Kaushik Chakrabarti**, Incorporating multimedia indexing mechanisms as access methods in database management systems, (**Ph.D. 2002**). first Employment: Microsoft Research Labs
- **Michael Ortega**, Integrating Similarity based Retrieval and Refinement in Databases, (**Ph.D. 2003**) first employment: IBM, SVL, current employment Google
- **Hakan Hacigumus**, Database as a Service, (**Ph.D. 2003**) first employment : IBM Almaden Research Center, current: Google.
- **Iosif Lazaridis** Quality Aware Data Management (**Ph.D. 2007**) current employment, Harvard University
- **Yiming Ma** (**Ph.D. 2007**) first employment Nokia Research
- **Dawit Seid** (**Ph.D. 2007**) first employment Teradata
- **Xingbo Yu** (**Ph.D. 2007**) first employment at Oracle
- **Bijit Hore** (**Ph.D. 2007**) Storing & Querying data security in untrusted environments (First Employment, CEO GarbleCloud)
- **Ravi Jammalamakada** (**Ph.D. 2008**) Providing Secure Data Services via Third Party Servers (first employment Ebay Research)
- **Ramaswamy Hariharam** (**Ph.D. 2008**) first employment at AT&T Yellow Pages
- **Zhaoqi Chen** (**Ph.D. 2008**) first Employment at Microsoft.
- **Vidhya Balasubramanian** (**Ph.D. 2008**) first employment as Asst. Professor Amrita University
- **Hojjat Jafarpour** (**Ph.D. 2009**) first employment at NEC Research
- **Rabia Nurray** (**Ph.D. 2010**) first employment as Principal Data Scientist, Moodwire
- **Daniel Massaguer** (**Ph.D. 2009**)
- **Ronen Vaisenberg** (**Ph.D. 2011**) first employment Google.
- **Leila Jalali** (**Ph.D. 2012**) first employment GE Global Research Labs.
- **Jie Xu** (**Ph.D. 2014**) first employment Facebook.
- **Liyan Zhang**, (**Ph.D. 2014**) first employment as Associate Professor, College of CS, Nanjing Univ of Aeronautics and Astronautics

- **Hotham Altwaijry (Ph.D. 2015)** first employment as Asst. Professor KAIST
- **Yasser Altowim (Ph.D. 2015)** first employment as Asst. Professor KAIST
- **Mehdi Sadri (Ph.D. 2016)** first employment at Ebay Research
- **Kerim Oktay (Ph.D. 2016)** first employment at Bay area Hybrid Cloud Startup
- **Stelios Doudalis (Ph.D. 2017)**, first employment at Alation Technologies
- **Mamadou Diallo (Ph.D. 2018)**, first employment at NIWC
- **Eunjeong Shin (Ph.D. 2019)**, first employment Google
- **Primal Pappachan (Ph.D. 2021)**, first employment Postdoctoral Scholar at PennState
- **Dhrubjyothi Ghosh (Ph.D. 2021)**, first employment Amazon
- **Abdul Alsaudi (Ph.D. 2022)**, first employment, Facebook
- **Sameera Ghayyur (Ph.D. 2022)** first employment, Snapchat
- **Peeyush Gupta (Ph.D. 2022)** first employment, UCI, Advisor
- **Yiming Lin (Ph.D. 2023)** Postdoctoral Scholar UC, Berkeley

PREVIOUS POSTDOCTORAL STUDENTS

- **Dimitri Kalashnikov**, first employment AT&T Research Labs
- **Bijit Hore**, first employment GarbleDrive Startup.
- **Nisha Panwar**, first employment Assistant Professor Augusta University
- **Shantanu Sharma**, first employment Assistant Professor NJIT
- **Roberto Yus**, first employment Assistant Professor, Univ. of Maryland Baltimore County
- **Peeyush Gupta**, 2022 Fall.

CURRENT POSTDOCTORAL STUDENTS

RESEARCH GRANTS

- (1995-96) Concurrent and Recoverable Multidimensional Access Methods, UIUC Research Board , Principal Investigator, **\$16,000.**
- (1994-95) Education Technologies Board Equipment Grant to purchase Encina Toolkit for use in classes on Database Management and Distributed Systems, Principal Investigator, (three others), **\$6,000**
- (1996-2001) Database Support for Battlefield Visualization and Reasoning, Army Research Laboratory, Principal Investigator of the database section of the Advanced Displays Consortium. Consisted of 6 PIs and 10 investigators at UIUC with the budget of approx. 10 million. My share of the money is **\$327,280.**
- (1995-97) Supplement to Illinois DLI Project on Image Processing Research, NSF, Investigator (three others), **\$100,000.**

- (1995-97) Illinois Computing Laboratory of Aerospace Systems and Software (ICLASS), NASA, Investigator (eighteen others) approx. **\$75,000**. (1 student support for 3 years).
- (1996-2000) NSF CISE Research Infrastructure Grant, *NSF*, Co-Principal Investigator (twenty-two others) **\$2,000,000 equipment grant**.
- (1998-2002) Multimedia Analysis and Retrieval System. CAREER Award, NSF Information and Data Management Program, Information and Intelligent Systems Division, Principal Investigator, **\$300,000**.
- (1998) Supporting Uncertain Queries in Databases (seed money for initial exploration). UIUC Research Board, Principal Investigator, **\$7,000**.
- (1998) Multidimensional Indexing Approaches for Scalable Hydrological Analysis. NSF NCSA PACI Grant, **\$10,000**.
- (1998-1999) Aviation Weather Awareness and Reporting Enhancement. Principal Investigator, subcontract for \$70,000 from Rockwell Science Center, Inc. out of a **\$900,000** grant from NASA.
- (1998) Database Support for 3-D visualization, Army Research Laboratory, Principal Investigator **\$106,000**.
- (1999-2000) Multimedia Search Engine for the World Wide Web, NSF REU Supplement grant for Multimedia Analysis and Retrieval Systems Project}. **\$10,000**.
- (2000-2001) Effective Data structures and data management support for dynamic scene generation in real-time visualization, Army Research Laboratory, Principal Investigator (co-PI Renato Pajarola), **\$100,000**
- (2000-2003) Real Time Capture, Management, and Reconstruction of Spatio-temporal Events, NSF Medium ITR Award, Principal Investigator, **\$430,000**
- (2000-2008) Data Mining of Digital Behavior, NSF IIS, Co-Principal Investigator, (PI: Padhraic Smyth), **\$2.2 million**
- (2001-2002) Time Based Coordination of Network Embedded Nodes, Air Force, Co-Principal Investigator (PI: Kane Kim), **\$1,455,560**.
- (2002-2003) Entity Based Data Mining of Spatio-Temporal and Text based Data Streams, Knowledge Discovery and Dissemination Program (NSF-DARPA-NSA Consortium), Co-Investigator (PI: Padhraic Smyth), **\$435,000**
- (2002-2005) Privacy Issues in Database as a Service Model, NSF Small ITR Award, Principal Investigator, **\$595,115**
- (2003-2008) Responding to the Unexpected, NSF Large ITR Award, Principal Investigator, **\$12,500,000**.
- (2004-2009) Responsphere: An IT infrastructure for research on responding to the unexpected. NSF CISE Research Infrastructure Grant, *NSF*, Co-Principal Investigator **\$1.8 million**,

- (2007-) Center for Emergency Response Technologies, Director, **\$15,000**.
- (2008-2010) SAFIRE: Situational Awareness for fire fighter safety, DHS, Principal Investigator **\$1 Million**
- (2008-09) Dispatcher Assistant for emergency first response, NSF, Principal Investigator, **\$135,000**.
- (2010-2013) Dependability Techniques for Instrumented Cyber Physical Spaces, Co-Principal Investigator NSF CNS **\$700,000**.
- (2010) Graph based Disambiguation Framework for Web People Search, Google, Principal Investigator, **\$60,000**.
- (2010) Study Risk Containment in Cloud Computing Services, Principal Investigator, NEC, **\$60,000**.
- (2009-10) Data Quality Research, NSF IIS, Principal Investigator, **\$150,000**.
- (2010-11) Limiting Effects of RAM scraping attacks on DBMSs, NSF CNS, Principal Investigator, **\$100,000**.
- (2010-13) Speech based Situational Awareness for Event Response, DARPA, Principal Investigator, **\$430,000**.
- (2011) A 60 node cluster for distributed multimedia sensor data processing, Yahoo Gift, approx. value **\$30,000**.
- (2011-2015) UCI Irvine Sensorium, Principal Investigator, NSF CNS **\$373,000**.
- (2011-2015) Query and goal driven entity resolution framework, NSF IIS, **\$500,000**.
- (2011-2015) Risk Aware Query Processing in Mixed Security Database Environment, NSF CNS, **\$500,000**.
- (2010-2015) NSF CPS: Medium: Collaborative Research: Dependability Techniques for Instrumented CyberPhysical Spaces". **\$515,996** (co-PI).
- (2012-14) Social Media Alerting and Response to Threats to Citizens (SMART-C, DHS), **\$600,00**
- (2012-2015) Enabling Privacy-Utility Tradeoffs in Pervasive Computing Environments, NSF, **\$142,000**.
- (2014-2016) EAGER: SCALE 2 (Safe Community Awareness and Alerting) - Extending a SmartAmerica Challenge Project, **\$300,000** (Co-PI)
- (2014-2015) III: Small: Query and Goal Driven Entity Resolution Framework, REU, **\$16,000** (PI)
- (2014-2015) III: Small: Query and Goal Driven Entity Resolution Framework, **\$53,406** (PI)
- (2013) Social Media Alerting and Response to Threats to Citizens (SMART-C, DHS) extension to explore privacy in social media, **\$50,000** (PI)

- (2015-2020) DARPA Brandeis, Testbed for Privacy Preserving IoT Spaces, **\$4.95 Million (PI)**
- (2015-2018) NSF CPS: Synergy: Collaborative Research: Extracting time-critical situational awareness from resource constrained networks, **\$224,000 (PI)**
- (2015-2017) NSF EAGER: Exploring Resilience in SmartCity Water Infrastructure, **\$200,000 (co-PI)**
- (2016) Alation Technologies, Gift funds, **\$50,000 (PI)**
- (2015-2018) NSF III: Small: Linking and Resolving Entities in Big Data, **\$500,000 (PI)**
- (2016-2017) Toshiba funded Evaluating GridDB on TIPPERs, **\$150,000 (PI)**
- (2017-2018) NIST: Enabling Infrastructure and Information Resilience for Smart Firefighting., **\$100,000 (co-PI)**
- (2020) DARPA Brandeis, Testbed for Privacy Preserving IoT Spaces, **301K addition (PI)**
- (2020-23) EnrichDB: supporting Enrichment in Databases (PI), NSF IIS **500K**
- (2020-2022) NSF RAPID: An Organizational Scale Approach to Privacy-Enabled Contact Tracing in COVID-19, (PI), NSF IIS **100K**.
- (2020-2023) SCC-IRG-Track2: Creating an Extensible Data Exchange and Analytics Sandbox for Smart Water infrastructures , co-PI NSF SCC (**1.5 Million**)
- (2021) SCC-CIVIC-PG Track A:CaReDeX: Enabling Disaster Resilience in Aging Communities via a Secure Data Exchange, (co-PI) NSF **50K**
- (2021) EnrichDB: supporting Enrichment in Databases (PI), NSF **REU support 16K**
- (2020) Transforming prescribed fire practices for California, (investigator) UC Lab Fees **3.6M**
- (2021) SCC-CIVIC-FA Track B: CaReDeX: Enabling Disaster Resilience in Aging Communities via a Secure Data Exchange, NSF CNS (co-PI) **1.2 million**
- (2020) “GLIDE: A Gestalt Approach to Live Data Engineering.” (PI), ICS Research Award Explorations **75K**
- (2022) SCC-CIVIC-FA Track B: Supplement to CaReDeX: Enabling Disaster Resilience in Aging Communities via a Secure Data Exchange, NSF CNS (co-PI) **200K**
- (2023) Collaborative Research: SaTC: CORE: Medium: Compliance as a Service (CaSe): A Reflectiv Approach to Enforcing User Privacy Regulations, NSF CNS (co-PI)
- (2024) Collaborative Research: CPS: NSF-JST: Enabling Human-Centered Digital Twins for Community Resilience NSF (co-PI) **300K**
- (2024) FARM: Flexible, adaptive and robust machine learning for resource constrained environments , US Army (PI) **1M subcontract from UT Dallas**

- (2024) Secure Mediation Across Multiple Cryptographic Technique, Cisco Gift funds (PI) **50K**
- (2025) Planar Bridge: Confidential Discovery and Retrieval of Publicly Available Internet Information, (PI) **25K**
- (2025) Planning: AI-Ready: TRACE: Testbed for Disaster Resilience Auditing and Crisis Evaluation, NSF AI-Ready Testbeds, (**co-PI 200K**)
- (2025) EAGER: LLM based Enrichment for Data Analytics, NSF PI (**60K**)

SOFTWARE DONATIONS AND GRANTS

- (1997) Infrastructure for Multimedia Database Teaching and Research. *Informix Corporation*, Seven 50 user concurrent licenses for Informix Universal Server plus tools and DataBlades for use in teaching and research at the University of Illinois at Urbana-Champaign, **approx. value \$1,315,000.**
- (1999) Infrastructure for Database Teaching and Research. *Informix Corporation*, Seven 50 user concurrent NT and UNIX licenses for Informix Universal Server plus tools and DataBlades for use in teaching and research at the University of California at Irvine, **approx. value \$1,050,500.**
- (1999) Software gift from *Oracle Corporation* including 50 concurrent NT and UNIX licenses for Oracle 8 and service pack for use in teaching and research at the University of California at Irvine, **approx. value \$746,404.95.**