

CURRICULUM VITAE

Vijay V. Raghavan

EDUCATION

- 1978 Ph.D. Computing Science, University of Alberta
1970 M.B.A. McMaster University
1968 B. Tech. Mechanical Engineering, Indian Institute of Tech., Madras

EMPLOYMENT EXPERIENCE

- 2013-2023 Alfred and Helen Lamson / BoRSF Endowed Professor in Computer Science
2012-2023 *Director*, NSF I/UCRC on Visual and Decision Informatics
2010 *Visiting Professor*, King Saud University, Riyadh, Saudi Arabia
2007-2008 *Visiting Professor*, Int'l School of Inform. Management (ISiM), University of Mysore
2004-2011 *VP for Business Development*, Webscalers L.L.C.
Led the company to NSF SBIR Phase II-B Award stage
2001-2021 *Co-coordinator*, LS-Louisiana Alliance for Minority Participation (LS-LAMP)
1997-to date Co-Director, Laboratory for Internet Computing (LINC)
1994-2013 *Distinguished Professor in Computer Science*,
UL- Ctr. for Adv. Computer Studies
1988-2023 *Professor of Computer Science*,
UL- Ctr for Adv. Computer Studies
1986-88 *Assoc. Professor of Computer Science*,
UL- Ctr. for Adv. Computer Studies
1981-86 *Assoc. Professor of Computer Science*,
University of Regina
May 1984-Aug 1984 *Database Consultant*,
Computer Center, University of Malaya
Aug 1983-Apr 1984 *Visiting Professor*,
CIS Group, Technical University of Berlin
1977-81 *Asst. Professor of Computer Science*,
University of Regina
1970-73 *Lecturer of Business Administration*,
St. Mary's University

AWARDS AND HONORS

- 2023 to Date Founding Fellow, Web Intelligence Academy
- 2023 to Date ACM Lifetime Member
- 2017 to Date IEEE Life Senior Member
- 2016 – 17 Outstanding Achievement in Research and Sponsored Activities, Office of Research and Sponsored Programs, UL Lafayette
- 2016 – 17 Innovator Award, Office of Research and Sponsored Programs, UL Lafayette
- 2014 – 16 Research Excellence Award, R. P. Authement College of Sciences, UL Lafayette
- 2014 – 16 Innovator Award, Office of Research and Sponsored Programs, UL Lafayette
- 2015 C. G. Khatri Memorial Lecturer, 2015 Rao Prize Conf., Pennsylvania State University
- 2013 Web Intelligence Consortium (WIC) Outstanding Service Award
- 2012-to date Association for Computing Machinery (ACM) Distinguished Scientist
- 2009 - 2017 IEEE Senior Member
- 2008 Grand Marshall, UL Lafayette Graduate School Commencement
- 2005 IEEE Int'l Conf. on Data Mining (ICDM) Outstanding Service Award
- 2001 UL Lafayette Foundation Distinguished Professor Award
- 1997-to date Member of the Phi Kappa Phi Honor Society
- 1995-to date Member of the Upsilon Pi Epsilon Computer Science Honor Society
- 1994-2013 UL Lafayette Foundation Professorship
- 1993-2006 ACM Distinguished Lecturer
- 1987 ACM Recognition of Service Award
- 1986 ACM Computing Reviews' *Reviewer Excellence* Recognition

RESEARCH AREAS

Information Retrieval & Extraction, Conceptual Categorization of Text/Images, Knowledge Discovery in Databases, Big Data Analytics, Integration of Unstructured, Semi-structured and Structured Data, Bioinformatics.

RESEARCH GRANTS AND CONTRACTS

The MITRE Corporation, “Predicting Dynamic Communication Links in IT Systems,” 02/23 – 12/23, MITRE-1161269, \$226,286 (co-PI, with Mehmet Tozal and Raju Gottumukkala).

The MITRE Corporation, “Predicting Dynamic Communication Links in IT Systems,” 08/22 – 12/22, MITRE-1161269, \$106,683 (co-PI, with Mehmet Tozal and Raju Gottumukkala).

National Science Foundation (NSF), “RAPID: Visual Analytics Approach to Real-Time Tracking of COVID-19,” 06/20 – 05/21, CNS-2027688, \$187,477 (co-PI, with Raju Gottumukkala et al.).

National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance Participation Program, NSF- SUBR (2020-21) P00000616, 09/20 - 8/21, \$25,000, (with Dr. Broussard).

Center for Visual and Decision Informatics (NSF/CVDI), “Visual Analytics of Online Streams at the Edge: Application to Hospital Emergency Department Operations,” 2019-20, \$100,000, (with Raju Gottumukkala and Christoph Borst), Co-PI.

Center for Visual and Decision Informatics (NSF/CVDI), “An Ontology-based Fast Semantic Indexing for Structured and Unstructured Data in Health Care,” 2018-19, \$40,000, (with Satya Katragadda), PI.

National Science Foundation (NSF), “*Supporting US-Based Students to Attend the 2017 IEEE International Conference on Data Mining (ICDM 2017)*”, 11/15/2017 – 10/31/2018, \$24,000, (with Dr. Gottumukkala).

Center for Visual and Decision Informatics (NSF/ CVDI), “An Ontology-based Architecture for Providing Insights,” 2017-18, \$38,000, (with Raju Gottumukkala), **PI**.

NSF- Industrial Innovation Division, PI, I/UCRC Phase II: Center for the Visual and Decision Informatics (CVDI), (**Coordinating Institution**: UL Lafayette), 60 months, \$499,995, 03/2017 – 02/2022 (with Raju Gottumukkala, Xindong Wu, Jian Chen, and Christoph Borst). The total funding, including industry members’ funding, is over \$1.5M over 5 years.

Center for Visual and Decision Informatics (NSF/ CVDI), “Comparative Knowledge Discovery: Analyzing, Understanding and Visualizing Rankings,” 2016 -17, \$64,788, (with Raju Gottumukkala).

National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance for Minority Participation- Senior Alliance (SA), NSF(2015-20)-LAMP-SA-08, 09/01/15 - 8/31/20, \$125,000, (with Dr. DeCuir).

LA BoR Support Fund (ITRS), Development of an Algorithm and a Tool for Accurate Comparison of Protein and Chemical 3-D Structures, LEQSF(2015-18)RD-B-06, 07/01/15 - 06/30/18, \$182,679 (with Wu Xu).

Center for Visual and Decision Informatics (NSF/ CVDI), “Predicting Future Relations: Incremental and Robust Link Prediction,” 2015 -16, \$72,535, (with Raju Gottumukkala and Ryan Benton).

NSF- Computer Networks and Systems, Co-PI, MRI: Development: A Distributed Visual Analytics Sandbox for High Volume Data Streams, 48 months, \$499,998, 08/2014 – 07/2018 (with Raju Gottumukkala, Ryan Benton, Dmitri Perkins, Christoph Borst).

NSF- Industrial Innovation Division, PI, I/UCRC FRP: Collaborative Research: Fundamental Research in Visualization-based Gap Analysis and Link Prediction, 24 months, \$100K, 08/2013 – 07/2015 (with Ryan Benton).

NSF- Industrial Innovation Division, PI, I/UCRC Phase I: Center for the Visual and Decision Informatics (CVDI), (**Lead Institution**: UL Lafayette), 60 months, \$400K, 02/2012 – 01/2017 (with Ryan Benton, Carolina Cruz-Neira, Raju Gottumukkala and Ramesh Kolluru).
The total funding, including industry members' funding, is over \$1.72M over 5 years.

National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance for Minority Participation- Phase IV (Years 1 - 5), 11/01/10 - 8/31/16, \$250,000, (with Dr. DeCuir).

LaTRC/ Transportation Innovation for Research Exploration (TIRE) Program, PI, "Mining Potentially Interesting Positive and Negative Association Patterns from Traffic Safety Data", \$30,000, 07/2010 – 06/2011 (with Dr. Xiaoduan Sun).

NSF Contract/ CISE-AC Subcommittee on Discovery in a Research Portfolio, "Interactive Information Extraction, Structuring and Visualization in a Research Portfolio," \$30,000, 04/2010 – 10/2010 (with Drs. Ryan Benton, Tom Johnsten and Ying Xie).

LA BoR Support Fund, Web 3.0 and Beyond: Enhancement of the Laboratory for Internet Computing for the Future Web Generation, 07/01/09 - 06/30/10, \$97,000 (with R. Benton, C. H. Chu and Z. Wu).

Araicom Life Sciences L.L.C., Enhancements of the Hypothesis Generation Application, 01/10/09 – 06/30/09, \$17,750.

NSF. Planning Grant for Industry/University Collaborative Research Center for Visual Decision Informatics, 08/15/2008 - 07/31/2010, \$10,000 (with B. Clark, M. Zappi and C. Cruz-Niera).

GE HealthCare., GE Exploratory Work in Alzheimer's Disease Prediction and Asset Allocation/Reallocation, 03/01/08 - 12/31/09, \$33,000 (with R. Benton, C. H. Chu and K. Efe).

Araicom Life Sciences L.L.C., Enhancements of the Hypothesis Generation Application, 01/16/08 – 12/24/08, \$34,250.

Araicom Life Sciences L.L.C., Enhancements of the Hypothesis Generation Application, 10/01/07 – 12/31/07, \$15,200.

State of Louisiana, Governor's Information Technology Initiative (GITI). Towards Creating a Large and Scalable In-memory Database Management System, 07/01/07 - 07/31/09, \$161,019, with Drs. Kolluru and Shah.

Webscalers L.L.C., Technologies for automatic Metasearch Engine Building, 02/08/07 - 09/30/07, \$60,295.

State of Louisiana, Governor's Information Technology Initiative (GITI). GRID: A New Paradigm for LITE, 07/01/05 - 07/31/07, \$327,750, with Dr. Kolluru.

National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance for Minority Participation- Phase III (Years 1 - 5), 11/01/05 - 10/31/10, \$250,000, with Ms. DeCuir and A. Wimberley.

State of Louisiana, Governor's Information Technology Initiative (GITI). Distributed Heterogeneous Information Systems, October 1, 2001 - July 31, 2007, \$1.58M.

National Science Foundation (NSF) and the State of Louisiana Board of Regents (BoR), Louis Stokes- Louisiana Alliance for Minority Participation- Phase II (Years 1 -4), 10/01/00 - 09/30/04, approx. \$100,000 per year, with Ms. DeCuir.

Louisiana Board of Regents (BoR), Interactive Assignments on the Web for Graduate Level Data Mining Courses- JFAP/SE Program, Jan. 1, 2000 - Dec. 31, 2000, \$24,000, with Dr. Kubat.

United States Geological Survey (USGS), Creating Metadata for Framework Datasets- Don't Duck Metadata Program, Aug. 1, 1999 - July 31, 2000, \$11,500, with Dr. Chu.

Department of Energy (DoE), EETAP- Information Systems and Technology Center for Energy and Environmental Applications, Aug. 1, 1997 - July 31, 2000, \$2.3 M, with Drs. Chu, Efe and Szu.

State of Louisiana Board of Regents (ITRS), Ranking and Similarity-based Retrieval in Heterogeneous, Distributed Databases, July 1, 1997 - June 30, 2000, \$120,000.

State of Louisiana Board of Regents, Systematic and Statewide Initiatives to Support DoD-EPSCoR FY97 Proposal, June 1, 1997 - June 1, 2000, \$750,000.

Board of Regents and NSF-EPSCoR, Joint Faculty Appointment Program on Harnessing Distributed, Heterogeneous Information Sources, December 1996 - August 1998. \$450,000, with Dr. Erol Hinds, of Southern Univ., and Drs. H. Chu and T. R. Rao.

State of Louisiana Board of Regents, LEQSF (1995-1998), Systemic and State-wide Initiative to Support Louisiana DoD- EPSCoR Proposal, 1996-99, \$1.5M, with Dr. Trudell of UNO.

Department of Defense, Louisiana's DoD- EPSCoR Planning Grant, September 1993- August 1994. \$75,000, with Dr. Terry Watkins, of UNO, and Mrs. Reba Poulson and Mr. Ed Goodell of the State of Louisiana Board of Regents.

National Science Foundation, NSF-9114210, Invitational Workshop on Future Directions in Text Analysis, Retrieval and Understanding, 1991, \$25,105, with Dr. J. S. Deogun.

State of Louisiana Board of Regents, LEQSF (1991-92)- ENH - 100, Laboratory for Applied Artificial Intelligence, 1991-92, \$60,000, with Drs. Bayoumi, Chu, Dasgupta, Lursinsap and Loganantharaj.

DARPA, MDA 903-89-c-0041, Message Understanding for Template Filling, \$45,000, with Dr. J. S. Deogun.

State of Louisiana Board of Regents, LEQSF (1989-90)-ENH-51, Laboratory for Computer Vision and Multi- sensor Fusion Research, 1989-90, \$130,000, with Drs. Bayoumi, Chu, Loganantharaj and Seetharaman.

United States Army Research Office, DAAL03-89-0118, Application of Machine Learning Techniques for Effective Retrieval in Image Databases, 1989-1991, \$122,000, with V.N. Gudivada.

State of Louisiana Board of Regents, NSF/LASER (1989) - JCP-13, USL-NLU Distinguished Lecture Series in Data and Knowledge Bases, 1989-1990, \$5,000.

National Science Foundation, IRI-8805875, Cluster-based Adaptive Information Retrieval, 1988-90, \$143,000, with J.S. Deogun.

Natural Sciences and Engineering Research Council (NSERC) of Canada, Operating grants from April 1979 to July 1987, \$54,000 during last 3 years.

PUBLICATIONS

Edited Books

V. N. Gudivada, V. V. Raghavan, V. Govindaraju, C. R. Rao (Editors), *Cognitive Computing- Theory and Applications: Handbook of Statistics (Volume 35)*, September 2016, ISBN: 978-0-444-63744-4, Elsevier, Amsterdam, Netherlands.

V. Govindaraju, V. V. Raghavan, C. R. Rao (Editors), *Big Data Analytics: Handbook of Statistics (Volume 33)*, July 2015, ISBN: 978-0-444-63492-4, Elsevier, Amsterdam, Netherlands.

Edited Conference Proceedings

Victor S. Sheng, Chindo Hicks, Charles Ling, Vijay Raghavan and Xindong Wu, (Editors), *Proceedings of the 2023 IEEE International Conference on Knowledge Graph, 1-2 December 2023, Shanghai, PRC*, IEEE Computer Society, Los Alamitos, CA.

Shusaku Tsumoto, Yukio Ohsawa, Lei Chen, Dirk Van den Poel, Xiaohua Hu, Yoichi Motomura, Takuya Takagi, Lingfei Wu, Ying Xie, Akihiro Abe, Vijay Raghavan (Editors), *Proceedings of the IEEE International Conference on Big Data, Big Data 2022, Osaka, Japan, December 17-20, 2022*. IEEE 2022, ISBN 978-1-6654-8045-1

Vijay Raghavan, Srinivas Aluru, George Karypis, Lucio Miele and Xindong Wu, (Editors), *Proceedings of the 2017 IEEE International Conference on Data Mining, 18-21 November 2017, New Orleans, LA, USA*, IEEE Computer Society, Los Alamitos, CA.

Raju Gottumukkala, Xia Ning, Guozhu Dong, Vijay Raghavan, Srinivas Aluru, George Karypis, Lucio Miele and Xindong Wu, (Editors), *Proceedings of the 2017 IEEE International Conference on Data Mining (Workshops), 18-21 November 2017, New Orleans, LA, USA*, IEEE Computer Society, Los Alamitos, CA.

Xiaohua Hu, Tsau Young Lin, Vijay Raghavan, Benjamin W Wah, Ricardo A Baeza-Yates, Geoffrey Fox, Cyrus Shahabi, Matthew Smith, Qiang Yang, Rayid Ghani, Wei Fan, Ronny Lempel, Raghunath Nambiar (Editors), *Proceedings of the 2013 IEEE International Conference on Big Data, 6-9 October 2013, Santa Clara, CA, USA*, IEEE Computer Society, Los Alamitos, CA.

V. V. Raghavan, S. Ruegar, T. Yamaguchi and Y. Zhang (Editors), *Proc. of the 2013 IEEE/WIC/ACM International Conference on Web Intelligence (WI-IAT 2013)*, Atlanta, GA, Nov. 17 – Nov. 20, 2013, IEEE Computer Society, Los Alamitos, CA.

V. V. Raghavan, Xiaolin Hu, C-J. Liao and J. Treur (Editors), *Proc. of the 2013 IEEE/WIC/ACM International Conference on Intelligent Agent Technologies (WI-IAT 2013)*, Atlanta, GA, Nov. 17 – Nov. 20, 2013, IEEE Computer Society, Los Alamitos, CA.

Xiaohua Hu, T. Y. Lin, V. V. Raghavan, J. Grzymala-Busse, Q. Liu and A. Broder (Editors), *Proc. of the 2010 IEEE International Conference on Granular Computing*, San Jose, Ca, August 14 -16, 2010, IEEE Computer Society, Los Alamitos, CA.

X. J. Huang, I. King, V. V. Raghavan and S. Ruegar (Editors), *Proc. of the 2010 IEEE/WIC/ACM International Conference on Web Intelligence (WI-IAT 2010)*, Toronto, Canada, Aug. 31 – Sept. 3, 2010, IEEE Computer Society, Los Alamitos, CA

Y.-F. Li, V. V. Raghavan A. Broder and H. Ho (Eds.), *Proceedings of the Web Intelligence and Intelligent Agent Technology (ACM/IEEE WI-IAT 2007) Workshops*, Silicon Valley, CA, Nov. 2 - 5, 2007.

J. Han, B. W. Wah, V. V. Raghavan, X. Wu and R. Rastogi (Eds.), "Proc. of the Fifth International Conference on Data Mining," IEEE Press, November 2005.

A. Bookstein, Y. Chiamarella, G. Salton and V. V. Raghavan (Eds.), "Proc. of the 14th International ACM- SIGIR Conference on Research and Development in Information Retrieval," ACM Press, 1991.

J. S. Deogun and V. V. Raghavan (Eds.), "Proc. of the 1987 South Central Regional ACM Conference," USL Press, 1987.

V. V. Raghavan (Ed.), "Proc. of the 8th International ACM-SIGIR Conference on Research and Development in Information Retrieval," ACM Press, 1985.

Edited Journal Special Issues

V. N. Gudivada, V. V. Raghavan and L. Berti-Equille (Guest Editors), *Special Issue on Data Quality in Big Data: Problems and Solutions, IEEE Trans. on Big Data*, Volume *nn*, Issue *n*, 2019, IEEE Computer Society, Los Alamitos, CA (In Print).

M.D. Lytras, V. V. Raghavan and E. Damiani (Guest Editors), [Special Issue on Big Data and Data Analytics Research: Challenging Data and Web Science for Next Generation High Performance Information Systems](#), *Int'l J. on Semantic Web and Information Systems*, Volume 13, No.1, January – March 2017, IGI Global, Hershey, PA.

V. N. Gudivada, R. Baeza-Yates and V. V. Raghavan, (Guest Editors), *Special Issue on Big Data Management, IEEE Computer*, Volume 48, Issue 3, March 2015, IEEE Computer Society, Los Alamitos, CA.

S. Ruegar, V. V. Raghavan, I. King, and X. J. Huang (Guest Editors), *Neurocomputing- Special Issue on Advances in Web Intelligence*, Vol. 76, No. 1, pp. 48 – 146, 2012.

V. V. Raghavan, Editor-in-Chief, *The IEEE Intelligent Informatics Bulletin*, Vol. 11 - 17, No. 1, Dec. 2010 - Dec. 2016.

J.-T. Yao, V. V. Raghavan and Z. Wu (Guest Eds.), Special Issue on "Web Information Fusion," *An International J. on Information Fusion*, Vol. 9, No. 4, Elsevier, October 2008.

V. V. Raghavan and J. S. Deogun and H. Sever (Guest Eds.), Special Issue on "Knowledge Discovery and Data Mining," *J. Amer. Soc. for Information Sci.*, Vol. 49, No. 4, April 1998.

V. V. Raghavan and V. N. Gudivada (Guest Eds.), Special Issue on "Content- Based Picture Retrieval Systems," *IEEE Computer*, Vol. 28, No. 9, IEEE Press, September 1995, pp. 18-62.

Book Chapters

Ying Xie, Linh Le, Yiyun Zhou and V. V. Raghavan, "Deep Learning for Natural Language Processing," in *Computational Analysis and Understanding of Natural Languages: Principles, Methods and Applications (Volume 38)*, (V. N. Gudivada, C. R. Rao, Eds.), Elsevier, Amsterdam, pp. 317 - 328, 2018.

Y. Xie, Jing He, and V. Raghavan, "Identifying Minimum-Sized Influential Vertices on Large-Scale Weighted Graphs: A Big Data Perspective," in *Data Science and Big Data Computing: Frameworks and Methodologies*, (Mahmoud Zaigham, ed.), Springer-Verlag, Berlin-Heidelberg, pp. 79-92, 2016 (ISBN 978-3-319-31861-5).

M. K. Pusala, M. A. Salehi, J. R. Katukuri, Y. Xie, and V. V. Raghavan, "Massive Data Analysis: Tasks, Tools, Applications and Challenges," in *Big Data Analytics- Methods and Applications*, (S. Pyne, B. L. S. Prakasa Rao and S. B. Rao eds.), Chapter 2, Springer-Verlag, New Delhi, pp. 33-46, 2016 (ISBN 978-8-132-23626-9).

S. R. Venna, R. N. Gottumukkala and V. V. Raghavan, "Visual Analytic Decision-Making Environments for Large-scale Time-evolving Graphs," in *Cognitive Computing- Theory and Applications: Handbook of Statistics (Volume 35)*, (V. N. Gudivada, V. V. Raghavan, V. Govindaraju, C. R. Rao, Eds.), Elsevier, Amsterdam, pp. 81 - 116, 2016.

- V. N. Gudivada, Dhana Rao and V. V. Raghavan, "Big Data Driven Natural Language Processing Research and Applications," in *Big Data Analytics: Handbook of Statistics (Volume 33)*, (V. Govindaraju, V. V. Raghavan, C. R. Rao, Eds.), Elsevier, Amsterdam, pp. 203 - 238, 2015.
- Y. Xie, T. Johnsten, V. Raghavan, R. Benton and W. Bush, "A Comprehensive Granular Model for Decision Making with Complex Data," in *Granular Computing and Decision Making: Interactive and Iterative Approaches*, (W. Pedrycz and S-M. Chen, eds.), Springer-Verlag, Berlin-Heidelberg, pp. 33-46, 2015 (ISBN 978-3-319-16828-9).
- Y. Xie, J. Katukuri, Vijay. V. Raghavan, and T Presti, "Conceptual Biology Research Supporting Platform: Current Design and Future Directions," in *Applications of Computational Intelligence in Biology: Current Trends and Open Problems*, (Tomasz G. Smolinski, Mariofanna G. Milanova, and Aboul-Ella Hassanien, Eds.), Springer-Verlag Berlin Heidelberg, pp. 307-324, 2008.
- B. Shah, R. Benton, Z. Wu, V. Raghavan, "Automatic and Semi-automatic Annotation Techniques for Images," in *Semantic-Based Visual Information Retrieval*, (Yu-Jin Zhang, ed.), IRM Press, Hershey, PA, pp. 112-134, 2007 (ISBN 1-59904-370-X).
- Y. Xie, V. Raghavan, "A Probabilistic Logic-based Framework for Characterizing Knowledge Discovery in Databases," in *Foundations of Data Mining and Knowledge Discovery*, (T. Y. Lin, S. Ohsuga, C. J. Lian, S. Tsumoto, eds.), Springer-Verlag, Berlin-Heidelberg, pp. 87-100, 2005 (ISBN 3-540-26257-1).
- V. Raghavan, N. Gudivada, Z. Wu, W. Grosky, "Information Retrieval," in *The Practical Handbook of Internet Computing*, (Munindar P. Singh, ed.), Chapman and Hall/CRC Press, Part-2, Ch. 12, 2004.
- K. Efe, V. Raghavan, A. Lakhotia, "Content and Link Structure Analysis for Searching the Web," *Computational Web Intelligence: Intelligent Technology for Web Applications*, (Y.-Q. Zhang, A. Kandel, T. Y. Lin and Y. Y. Yao, eds.), World Scientific Press, pp. 431-448, Aug 2004.
- S. Noel, V. Raghavan, C. Chu, "Document Clustering, Visualization, and Retrieval via Link Mining," in *Clustering and Information Retrieval*, (W. Wu, H. Xiong, S. Shekhar, eds.), Kluwer, Boston, MA, pp. 161-194, 2003.
- T. D. Johnsten and V. V. Raghavan, "Impact of Decision-Region based classification Mining Algorithms on Database Security," in J. Hale and V. Atluri (eds.), *Research Advances in Database and Information Systems Security*, Kluwer Academic, Norwell, MA, pp. 171-191, 2000.
- J. S. Deogun, V. V. Raghavan, A. Sarkar and H. Sever, "Data Mining: Trends in Research and Development," in T. Y. Lin and Nick Cercone (eds.), *Rough Sets and Data Mining: Analysis of Imprecise Data*, Kluwer Academic, pp. 9-46, 1997.
- V. N. Gudivada, V. V. Raghavan and K. Vanapipat, "Unified Approach to Data Modeling and Retrieval for a Class of Image Database Applications," in S. Jajodia and V. S. Subrahmanian (eds.), *Multimedia Database Systems: Issues and Research Directions*, Springer-Verlag, pp. 37-78, 1995.
- V. V. Raghavan, S. K. M. Wong and W. Ziarko, "Vector Space Model in Information Retrieval," in A. Kent and J. G. Williams (Eds.), *Encyclopedia of Computer Science and Technology*, Marcel Dekker, Inc., Vol. 22, Supplement 7, pp. 423-446, 1990.

Special Report to the National Science Foundation

- V. V. Raghavan, Y. Xie, T. Johnsten, R. G. Benton, B. Lemoine and D. Difallah, "Concept Map-based Organizer for REsearch Portfolios (C-MORE)," in *CISE and SBE AC Subcommittee on Discovery in a Research Portfolio: Tools for Structuring, Analyzing, Visualizing and Interacting with Proposal and Award Portfolios*, Nov. 2011.

Refereed Journal Papers

- T. Sarkar, Y-W. Chen, Y. Wang, Y-X. Chen, F. Chen, C. R. Reaux, L. E. Moore, V.V. Raghavan, W. Xu, "Introducing mirror-image discrimination capability to the TSR-based method for capturing stereo geometry and understanding hierarchical structure relationships of protein receptor family," *Computational Biology and Chemistry*, Vol. 103, pp.107824, 2023.
<https://doi.org/10.1016/j.compbiolchem.2023.107824>
- S. Katragadda, R.T. Bhupatiraju, V. V. Raghavan, Z. Ashkar, and R. Gottumukkala, "Examining the COVID-19 case growth rate due to visitor vs. local mobility in the United States using machine learning," *Sci Rep* 12, pp. 12337, 2022.
<https://doi.org/10.1038/s41598-022-16561-0> [IF 4.9]
- T. Sarkar, C. R. Reaux, J.-X. Li, V. V. Raghavan, and W. Xu, "The specific applications of the TSR-based method in identifying Zn²⁺ binding sites of proteases and ACE/ACE2," *Data in Brief*, Vol 45, pp. 108629, 2022.
<https://doi.org/10.1016/j.dib.2022.108629>
- M. Hassan, Md. E. Haque, M. E. Tozal, V. V. Raghavan and R. Agrawal, "Intrusion detection using payload embeddings," *IEEE Access*, Vol. 10, pp. 4015-4030, 2022,
<https://doi.org/10.1109/ACCESS.2021.3139835>
- R. Gottumukkala, S. Katragadda, R. T. Bhupatiraju, V. V. Raghavan, *et al.* "Exploring the relationship between mobility and COVID-19 infection rates for the second peak in the United States using phase-wise association". *BMC Public Health* 21, 1669, 2021.
<https://doi.org/10.1186/s12889-021-11657-0>
- S. Katragadda, R. Gottumukkala, R. T. Bhupatiraju, V. V. Raghavan, *et al.* "Association mining based approach to analyze COVID-19 response and case growth in the United States". *Sci Rep* 11, 18635, 2021.
<https://doi.org/10.1038/s41598-021-96912-5>
- S. R. Venna, S. Katragadda, V. V. Raghavan, *et al.* "River Stage Forecasting using Enhanced Partial Correlation Graph". *Water Resour Manage* 35, 4111-4126, 2021.
<https://doi.org/10.1007/s11269-021-02933-0>
- T. Sarkar, V.V. Raghavan, F. Chen, A. Riley, S. Zhou and W. Xu. "Exploring the effectiveness of the TSR-based protein 3-D structural comparison method for protein clustering, and structural motif identification and discovery of protein kinases, hydrolases, and SARS-CoV-2's protein via the application of amino acid grouping". *Computational Biology and Chemistry* Jun;92, 107479, 2021 (Impact factor: 2.877).
<https://pubmed.ncbi.nlm.nih.gov/33951604/>
- V. S. Kondra, T. Sarkar, V. V. Raghavan, and W. Xu. "Development of a TSR-based method for protein 3-D structural comparison with its applications to protein classification and motif discovery". *Frontiers in Chemistry-Theoretical and Computational Chemistry* 8, 602291, 2021 (Impact factor: 3.782).
<https://www.frontiersin.org/articles/10.3389/fchem.2020.602291/full>
- T. Sarkar, V. S. Kondra, W. Xu and V. V. Raghavan. "Identification of Common Structural Motifs from Proteases, Kinases, and Phosphatases Using a New Structure Comparison Method". *Biomed J Sci & Tech Res* 26(5)-2020. *BJSTR*, short-communications.
<https://biomedres.us/pdfs/BJSTR.MS.ID.004411.pdf>
- Linh Le, Ying Xie, and V. V. Raghavan, "KNN Loss and Deep KNN," *Fundamenta Informaticae*, vol. 182, no. 2, pp. 95-110, 2021.

- G. Cao, A. Iosifidis, M. Gabbouj, V. V. Raghavan and R. N. Gottumukkala, "Deep Multi-view Learning to Rank", *IEEE Trans. on Knowledge and Data Engineering*, Sept. 2019 (Early Access).
<https://doi.org/10.1109/TKDE.2019.2942590>
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- S. K. Bhatia, J. S. Deogun and V. V. Raghavan, "Assignment of Term Descriptors to Clusters," *Proc. of the 1990 Symposium on Applied Computing*, April 1990, Fayetteville, AR, pp. 181-185.
- G. S. Jung and V. V. Raghavan, "Connectionist Learning in Constructing Thesaurus-like Knowledge Structure," *Working Notes of AAAI Symposium on Text-Based Intelligent Systems*, March 1990, Palo Alto, CA, pp. 123-127.
- V. V. Raghavan and G. S. Jung, "A Machine Learning Approach to Automatic Pseudthesaurus Construction," *Proc. of the Fourth International Symposium on Methodologies for Intelligent Systems: Poster Session Program*, Oak Ridge National Lab., October 1989, Charlotte, NC, pp. 111-121.
- J. S. Deogun, V. V. Raghavan, and S. K. Bhatia, "A Theoretical Basis for the Automatic Extraction of Relationships from Expert-provided Data," *Proc. of the Fourth International Symposium on Methodologies for Intelligent Systems: Poster Session Program*, Oak Ridge National Lab., October 1989, Charlotte, NC, pp. 123-131.
- J. N. Bhuyan, J. S. Deogun, and V. V. Raghavan, "Near-optimal Algorithms for the Boundary Selection Problem in User-oriented Information Retrieval", *Proc. of the Eleventh World Computer Congress*, North-Holland, August 1989, San Francisco, CA, pp. 275-280.
- V. V. Raghavan, P. Bollmann and G. S. Jung, "Retrieval System Evaluation Using Recall and Precision: Problems and Answers," *Proc. of the Twelfth International ACM-SIGIR Conf. on Research and Development in Information Retrieval*, Association for Computing Machinery Press, June 1989, Cambridge, MA, pp. 59-68.
- J. S. Deogun, V. V. Raghavan and P. Rhee, "Formulation of the Term Refinement Problem for User-oriented Information Retrieval," *Proc. of the Fourth AI Systems in Government Conf.*, March 1989, Washington, DC, pp. 72-78.
- P. Bollmann and V. V. Raghavan, "A Utility-theoretic Analysis of Expected Search Length," *Proc. of the 11th International ACM-SIGIR Conf.*, June 13-15, 1988, Grenoble, France, pp. 245-256.
- R. Kosireddy, M. A. Bayoumi and V. V. Raghavan, "A VLSI Parallel Architecture for Pattern Classification," *ACM South Central Regional Conf.*, Nov. 1987, Lafayette, LA, pp. 189-199.
- V. V. Raghavan, "Deterministic Strategies for Query (Re)formulation in Information Retrieval," *First International Conf. on Bibliometrics and Theoretical Aspects of Information Retrieval*, Aug. 1987, Diepenbeek, Belgium, published in L. Egghe and R. Rousseau (Eds.) *Informetrics 87/88*, Elsevier Science Publishers B.V., Amsterdam, 1988, pp. 219-229.
- V. V. Raghavan and B. Agarwal, "Optimal Determination of User-oriented clusters: An Application for the Reproductive Plan," *Proc. of the Second International Conf. on Genetic Algorithms*, July 1987, Cambridge, MA., pp. 241-246.
- V. V. Raghavan and J. S. Deogun, "Optimal Determination of User-oriented Clusters," *Proc. of the Tenth ACM- SIGIR International Conf.*, June 3-5, 1987, New Orleans, LA, pp. 140-146.
- V. V. Raghavan and L. V. Saxton, "Conceptual Design for an Integrated Information Retrieval/Database Management System," *G.I. Conf. on Database Systems for Office Automation, Engineering and Scientific Applications*, March-April 87, Darmstadt, FRG., published in H. -J. Schek and G. Schlageter (Eds.) *Datenbanksysteme in Buro, Technik und Wissenschaft*, Springer-Verlag, Berlin, FRG, 1987, pp. 443-447.
- V. V. Raghavan, L. V. Saxton, S. K. M. Wong and S. S. Ting, "A Unified Architecture for the Integration of Data Base Management and Information Retrieval Systems," *Proc. of the IFIP 10th World Computer Congress*, North-Holland, Sept. 1986, Dublin, Ireland, pp. 1049-1054.
- J. S. Deogun and V. V. Raghavan, "User-oriented Document Clustering - A Framework for Learning in IR, " *Proc. of Ninth International ACM-SIGIR Conf.*, Sept. 1986, Pisa, Italy, pp. 157-163.

- S. K. M. Wong, W. Ziarko, V. V. Raghavan and P. C. N. Wong, "On Extending the Vector Space Model for Boolean Query Processing," *Proc. of Ninth Annual International ACM-SIGIR Conf.*, Sept. 1986, Pisa, Italy, pp. 175-185.
- V. V. Raghavan, "Clustering Algorithms for Information Retrieval - An AI Perspective," *Proc. of the 19th Hawaii International Conf. on System Sciences*, Jan. 1986, Honolulu, HI, pp. 142-151.
- K. Vidyasankar and V. V. Raghavan, "Highly Flexible Integration of the Locking and the Optimistic Approaches of Concurrency Control," *Proc. of the IEEE 9th International Compsac Conf.*, Oct. 1985, Chicago, IL, pp. 489-494.
- J. S. Deogun and V. V. Raghavan, "Integration of Information Retrieval and Data Base Management Systems," *Proc. of the RIAO-85 (Recherche d'Informations Assistee par Ordinateur) Conf.*, March 1985, Grenoble, France, pp. 627-644.
- J. S. Deogun and V. V. Raghavan, "A Generalized Retrieval System: Formulation and its Implications for the Sciences, *Symposium on Automatic Information Retrieval in the Sciences (organizer: Dr. M. J. McGill, Symposium II, Ninth International CODATA Conf.*, June 1984, Jerusalem, Israel, published in *The Role of Data in Scientific Progress*, P. S. Glaser (ed.) Elsevier Science Publishers B. V. (North Holland), 1985, pp. 513-516 (INVITED PAPER).
- S. K. M. Wong and V. V. Raghavan, "Vector Space Model of Information Retrieval - A Reevaluation," in (ed.) C. J. van Rijsbergen: *Research and Development in Information Retrieval, Proc. of the 3rd Joint BCS and ACM Symposium*, July 1984, King's College, Cambridge, England, pp. 167-186.
- V. V. Raghavan, K. Vidyasankar and Jing Xinhai, "Distributed Calendar System with High Availability," *Proc. of the 17th Hawaii International Conf. on System Sciences*, Jan. 1984, Honolulu, HI, pp. 639-645.
- K. W. Tsou, L. V. Saxton, V. V. Raghavan and J. S. Deogun, "Consecutive Retrieval with Redundancy Organization of Clustered Files," in R. E. A. Mason (ed.) *Information Processing 83*, North-Holland, Amsterdam. Proc. of the IFIP 9th World Computer Congress, Sept. 1983, Paris, France, pp. 533-537.
- V. V. Raghavan, H. Shi and C. T. Yu, "Evaluation of the 2-Poisson Model as a Basis for Using Term Frequency Data in Searching," *Proc. of Sixth International ACM-SIGIR Conf.*, June 1983, Washington, DC, pp. 88-100.
- V. V. Raghavan and M. Y. L. Ip, "Techniques for Measuring the Stability of Clustering: A Comparative Study," in G. Salton and H.-J. Schneider (ed.) *Research and Development in Information Retrieval Proc.*, Berlin, May 1982. Published as Lecture Notes in Computer Science Series, Springer-Verlag, Berlin, FRG, 1983, pp. 209-237.
- J. S. Deogun and V. V. Raghavan, "Query Directed Partitioning Scheme for Securing Statistical Databases," *Proc. of the Workshop on Statistical Database Management*, Dec. 1981, Menlo Park, CA, pp. 285-293.
- M. Y. L. Ip, V. V. Raghavan and L. V. Saxton, "An Approximation Algorithm for the Index Selection Problem," *Proc. of the IEEE 5th International COMPSAC Conf.*, Nov. 1981, Chicago, IL, pp. 43-49.
- V. V. Raghavan and J. S. Deogun, "Information Retrieval: Research Strategies and their Implications," *Proc. of the Canadian Information Processing Society Conf.*, June 1981, Waterloo, CDN, pp.9.4.1-9.4.9.
- V. V. Raghavan and K. Birchard, "A Clustering Strategy Based on a Formalism of the Reproductive Process in Natural Systems," *Proc. of the Second International ACM-SIGIR Conf.*, Sept. 1979, Dallas, TX, pp. 10-22.

Demo and Industrial Track Papers

- Ying Xie, Jing (Selena) He, Vijay V. Raghavan: "MapReduce Algorithms for Identifying Minimum-Sized Influential Vertices on Large-Scale Weighted Graphs." *2nd International IBM Cloud Academy Conference program (ICA CON 2014)*, Poster Session, Atlanta, GA, USA, May 2014, pp. 57.
- Y. Lu, Z. Wu, H. Zhao, W. Meng, K.-L. Liu, V. V. Raghavan and C. Yu. "MySearchView: A Customized Meta-search Engine Generator," *26th ACM SIGMOD International Conf. on Management of Data (ACM SIGMOD 2007)*, Demo paper, Beijing, China, June 2007, pp. 1113-1115.
- K.-L. Liu, W. Meng, J. Qiu, C. Yu, V. V. Raghavan, Z. Wu, Y. Lu, H. He and H. Zhao. "AllInOneNews: Development and Evaluation of a Large-Scale News Meta-search Engine," *26th ACM SIGMOD International Conf. on Management of Data (ACM SIGMOD 2007)*, Industrial track, Beijing, China, June 2007, pp. 1017-1028.
- Z. Wu, V. V. Raghavan, W. Meng, C. Yu, D. Chun, H. He and K. Sai, "SE-LEGO: A System to Create Meta-Search Engines on Demand," in *Proc. of 26th ACM SIGIR Conf.*, Demo paper, Toronto, CDN, Jul. 2003, pp. 464.
- Z. Wu, V. V. Raghavan, C. Du, W. Meng, H. He and C. Yu, "Creating Customized Meta-Search Engines on Demand Using SE-LEGO," in *Proc. of Fourth International Conf. on Web-Age Information Management (WAIM'03)*, Demo Paper, Chengdu, China, Aug. 2003, pp. 503-505.

Poster Session Papers

- Mohammad A. Sharif and V. V. Raghavan, "Scalable Hybrid Approach for Web Page Recommendation," *2015 Frontiers in Service Conference, Concurrent Sessions: Session 6-1*, San Jose, Ca, July 9 – 12, 2015.
- Elshaimaa Ali, Michael Lauruhn, and V. V. Raghavan, "Wikipedia-based Extraction of Lightweight Ontologies for Concept Level Annotation," *Proc. of the International Conference on Dublin Core and Metadata Applications (DC 2014)*, Austin, TX, Oct. 2014.
- Ying Xie, Jing Selena He and V. V. Raghavan, "A MapReduce Algorithm for Identifying Minimum-Sized Influential Vertices on Big Weighted Graph," *Proc. of the IBM Cloud Academy Conference (ICA CON 2014)*, Atlanta, GA, May 8-9, 2014.

SELECTED SCHOLARLY ACTIVITIES

Journal Editorships and Professional Service

- 2017-to-date Associate Editor, Big Data Mining and Analytics, Tsinghua Univ. Press
- 2016-to-date Editorial Board member, International J. of Business Intelligence and Data Mining, InderScience Publishers, Geneva, CH
- 2016-to-date Advisory Board member, International J. on Semantic Web and Information Systems, IGI Global, Hershey, PA
- 2016-2018 Associate Editor, Journal of KSU- Computer and Information Sciences, King Saud Univ. Press
- 2015-2016 Co-editor, Handbook of Statistics on Cognitive Computing- Theory and Applications, Volume 35, Elsevier

- 2015-to-date Advisory Board member, International J. of Big Data Intelligence, InderScience Publishers, Geneva, CH
- 2015-2020 *Co-editor-in-Chief*, Web Intelligence Journal, IOS Press, Amsterdam, NL
- 2014-2023 *Associate Editor*, ACM Transactions on Internet Technology
- 2014-to date *Associate Editor*, International J. of Computer Science & Applications
- 2014-to date *Review Board Member*, Journal of Creating Value, SAGE Publications Inc.
- 2014-2015 Co-editor, Handbook of Statistics on Big Data Analytics, Volume 33, Elsevier
- 2013-to date *Member*, IEEE Big Data Conference Steering Committee
- 2013-to date *Member*, Web Intelligence Consortium (WIC) Steering and Technical Committees
- 2013-2015 *Associate Editor*, Web Intelligence and Agent Systems (WIAS) Journal, IOS Press, Amsterdam, NL
- 2012-to date *Member*, International Rough Set Society (IRSS) Advisory Board.
- 2010-to date *Member*, Executive Committee, IEEE TC on Intelligent Informatics
- 2010-2015 *Editor-in-Chief*, Bulletin of the IEEE TC on Intelligent Informatics
- 2009-to date *Member*, Editorial Board, Int'l J. of Granular Computing, Rough Sets and Intelligent Systems
- 2009-to date *Member*, International Advisory Panel, Faculty of CS and IT, Univ. of Malaysia, Sarawak
- 2008-2010 *Member*, NSF-CISE Directorate Advisory Committee
- 2007-2008 *Member*, IEEE- ICDM Research and Service Awards Committee

Keynote and Invited Presentations

- “Visual Analytics Support for Maintenance of Models Derived from Graph Big Data Streams,” Grambling State University, Feb. 2020.
- “Streaming Graphs: A New paradigm for Big Data Streams,” Sciences Interdisciplinary Monthly Meetings (SIMM), College of Sciences, UL Lafayette, Sept. 2019.
- “Laboratory for Internet Computing (LINC)- The TSR Team,” School of Computing and Informatics, UL Lafayette, Oct. 2019.
- “Streaming Graphs: A New paradigm for Big Data Streams,” CUNY Graduate Center, Nov. 2019.
- “Unsupervised Rank Aggregation Using Parameterized Function Optimization,” Department of Computer Science, East Carolina University, Nov. 2018.
- “Graph mining-based approaches to the Customer Churn Prediction problem,” Keynote, Workshop on Data Mining for Services (DMS) held in conjunction with 2017 IEEE ICDM

Conference, Nov. 2017, New Orleans, Louisiana.

- “A Framework for Real-Time Event Detection for Emergency Situations using Social Media Streams,” Data Science Initiative/Complex Systems Institute, University of North Carolina at Charlotte, February 2017.
- “A Framework for Real-Time Event Detection for Emergency Situations using Social Media Streams,” Keynote, Workshop on Foundations of Big Data Computing (BigDF) held in conjunction with 23rd IEEE Int’l Conference on High Performance Computing, Data, and Analysis. Dec. 2016, Hyderabad, India.
- “Triangular Spatial Relationships Based Protein 3-D Structure Comparison,” Featured Talk, 2016 Web Intelligence Conference, Oct. 2016, Omaha, NE.
- “Visual Analytics of Large-scale Evolving Networks,” C. G. Khatri Memorial Lecture, Penn State University, May 2015.
- “Visual Analytics of Time-Evolving Large-scale Graphs,” CACS Seminar, UL Lafayette, March 2015.
- “Visual Analytics of Time-Evolving Large-scale Graphs,” Short Course, 2015 International Winter School on Big Data, Tarragona, Spain, Jan. 26 – 30, 2015.
<http://grammars.grlmc.com/BigDat2015/courseDescription.php#VijayV.Raghavan>
- “Massive Data Analysis: Challenges and Applications,” University of Buffalo, March 2015.
- “Massive Data Analysis: Challenges and Applications,” CACS Seminar, UL Lafayette Sept. 5, 2014.
- “Hybrid Approach for Recommending Pages Based on Previous User Click Pattern and Content,” Agni’s Center for Research and Development, Agni College of Technology, July. 10, 2014, Thalambur, Chennai, India.
- “Representations for Large-Scale Sequence Data Mining: A Tale of Two Vector Space Models,” Keynote Lecture, Joint Rough Sets Symposium, Oct. 12, 2013, Halifax, Canada.
- “Massive Data Analysis: Challenges and Applications,” Statistics 2013 International Conference (Stat2013), Dec. 30, 2013, Hyderabad, India.
- “Representations for Large-Scale Sequence Data Mining: A Tale of Two Vector Space Models,” Jawaharlal Nehru Technical University (JNTU), Dec. 31, 2013, Hyderabad, India.
- “Hypotheses generation as supervised link discovery with automated class labeling on large-scale biomedical concept networks,” Keynote Lecture, Hong Kong Baptist Univ., Dec. 12, 2012.
- “Big Data- Perspectives, Problems and Research Trends,” Research Symposium Celebrating Centenary of Alan Turing’s Birth: Promises and Challenges of Future Computing and Informatics, Hong Kong Baptist Univ., Dec. 3, 2012.
- “Hypotheses generation as supervised link discovery with automated class labeling on large-scale biomedical concept networks,” College of Information Science and Technology, Drexel University, Philadelphia, PA, Nov. 2012.

- “Hypotheses generation as supervised link discovery with automated class labeling on large-scale biomedical concept networks,” UL-CACS seminar series, Nov. 2012.
- “Center for Visual and Decision Informatics: An NSF Industry/University Center for Research Collaboration”, Cave Consortium Seminar Series, LITE Center, Lafayette, LA, Apr. 2012.
- “An Overview of String Kernel Methods for the Extraction of Protein-Protein Interactions from Literature,” College of Information Science and Technology, Drexel University, Philadelphia, PA, March 2011.
- “An Overview of String Kernel Methods for the Extraction of Protein-Protein Interactions from Literature,” Keynote Speaker, The 7th Annual Biotechnology and Bioinformatics Conference, Oct. 2010.
- “Incorporating Trust into Web Search,” Information Assurance Center, King Saud University, Saudi Arabia, June 2010.
- “A Framework for Developing Self-Learning Algorithms,” College of Computer and Information Sciences, King Saud University, Saudi Arabia, June 2010.
- “Efficient Algorithm for Discovering Potentially Interesting Patterns with Closed Itemsets,” College of Computer and Information Sciences, King Saud University, Saudi Arabia, June 2010.
- "Towards Building a Self -Learning Environment for Semantic Search," Faculty of Computer Science and Information Technology, Universiti Malaya, Sarawak, Malaysia, July 2009.
- "Fuzzy Result Merging Models for Metasearch," Rough Sets Workshop at University of Pune, Pune, India, July 2009.
- "Text Mining for Knowledge Discovery from BioMedical Digital Libraries," Conference on Scientific Collaborations, Connections, and Communities at Emory University, Oct. 2008.
- "Text Mining for Knowledge Discovery from BioMedical Digital Libraries," Informatics Endowment Lecture Series on Digital Libraries-5 at University of Mysore, Mar. 2008.
- "Text Mining for Knowledge Discovery from BioMedical Digital Libraries," UL-CACS seminar series, Mar. 2008.
- "Technology Support for Biomedical Hypothesis Generation," Info Vision 2007 - The Knowledge Summit, Bombay, India, Dec. 2007.
- "All in one news: The Anatomy of a Large-Scale News Metasearch Engine," UL-CACS seminar series, Oct. 2007.
- "Language-Modeling Kernel Based Approach for Information Retrieval," UL-CACS seminar series, Mar. 2007.
- "An Overview of E-commerce," E-Commerce Workshop at the Lafayette City-Parish Government, Feb. 2007.
- "Web Content Mining for Web Search Sources," InfoSys Ltd., Mysore, India, Jan. 2007.
- "Web Content Mining for Web Search Sources," International School of Information Management, Mysore, India, Jan. 2007.
- "Web Content Mining for Web Search Sources," IIT Madras, India, Jan. 2007.
- "Adaptive and Efficient Content-based Image Retrieval Architectures," Univ. of Louisville, Feb. 2006.

- "Web Content Mining," Marshall University, Huntington, WV, Feb. 2006.
- "Enhancement of Internet Search Engines to Achieve Concept-based Retrieval," Univ. of Cincinnati, Feb. 2006.
- "First Louisiana - Cuba workshop on Data Mining (1 week)," UL-CACS seminar series, with G. Maples, Jan. 2006.
- "Web Content Mining," UL-CACS seminar series, Fall 2005.
- "3M Clustering: A Validity Function and Clustering Algorithm for Prototype-based Reasoning," IIT Madras, India, June 2005.
- "A Methodology for Knowledge Hiding in Databases and its Application to Patient Anonymity," IIT Madras, India, June 2005.
- "XML Indexing and Retrieval System" at the Workshop on Cyber Security at University of Louisiana at Lafayette, September 2003.
- "Access Control in XML Retrieval," at the Workshop on Cyber Security at University of Louisiana at Lafayette, September 2003.
- "Knowledge Hiding in Databases: A Methodology for Database Security," at the Workshop on Cyber Security at University of Louisiana at Lafayette, September 2003.
- "SE-LEGO: Build Your Own Meta-Search Engine on Demand," at the Workshop on Cyber Security at University of Louisiana at Lafayette, September 2003.
- "Itemset Trees for Targeted Association Queries," University of Malaya, Kuala Lumpur, Malaysia, December 2002.
- "Adaptive Image Retrieval Based on Color," International Islamic Univ. of Malaysia, December 2002.
- "Itemset Trees for Targeted Association Queries," MIMOS Inc., Kuala Lumpur, Malaysia, December 2002.
- "Dynamic Data Mining," Professional ACM Chapter, Houston, TX, May 2002.
- "Dynamic Data Mining," University of South Alabama, Mobile, AL, March 2002.
- "Dynamic Data Mining," MITRE Corporation, Washington, D.C., 2001.
- "Dynamic Data Mining," SIGMA XI Chapter, Univ. of Louisiana, Lafayette, LA, 2001.
- "Enhancement of Internet Search Engines to Achieve Concept-based Retrieval," University of Central Florida, Orlando, FL, 2001.
- "Dynamic Data Mining," 7th CIICC, October 2000.
- "The Itemset Tree: A Data Structure for Data Mining," 4th SITI, October 2000.
- "Architectural, User Interface and Performance Issues in Image Database Management," *Workshop on Large Databases of Complex Objects, with special focus on Image Databases* Sept. 1997, Caceres, Spain.
- "Advances in Content-based Image Retrieval and their Implications to GIS," *Workshop on Advances in Geographic Information Systems*, Nov. 1993, Washington, DC.
- "Perspectives on Text Analysis, Retrieval and Understanding," *'Reflections on the Future' Conf.* Sept. 1993, Edmonton, Alta., Canada.
- "A Machine Learning Approach to Automatic Pseudo-Thesaurus Construction," *Workshop of Japanese Computer Society's Special Interest Group on Fundamental Infology*, May 1992,

Tokyo, Japan.

- “On the Integration of Information Retrieval and Database Management Systems,” *Malaysian Computer Society’s Banquet*, Sept. 1984.

Intellectual Property Disclosures and Patents

- 2019 “Method and System for Comparing Proteins in Three Dimensions,” U.S. Continuation-in-Part Patent Application No. 16/654,349, Oct. 2019.
- 2017 “Method and System for Comparing Proteins in Three Dimensions,” U.S. Non-provisional Patent Application No. 15/725,663, Oct. 2017.
- 2017 “Architecture and Method for Providing Insights in Wireless Networks Domain,” U.S. Non-provisional Patent Application No. 15/724,495, Oct. 2017.
- 2015 ‘System, method and computer program product for information sorting and retrieval using a language-modeling kernel function’ Araicom Research L.L.C., US9177047, Issued November 3, 2015.
- 2014 ‘Method and apparatus for information visualized expression, visualized human computer interactive expression interface thereof,’ Senovation L.L.C., US8732621, Issued May 20, 2014.
- 2013 ‘Semantic Relationship Extraction, Text Categorization and Hypothesis Discovery,’ Araicom Research L.L.C., US8494987, Issued July 23, 2013.
- 2007 Patent, ‘System, Method and Computer Program Product for Data Mining and Automatically Generating Hypothesis from Data Repositories,’ Araicom Research L.L.C., filed 03/14/2007, Serial No. PCT/US2007/063983 (Abandoned).
- 2004 Patent, ‘Large-scale Metasearch Engine,’ Webscalers, L.L.C., filed 07/22/2004, Serial No. 11/184040 (Denied).

Conference & Professional Positions

- 2023 General Co-Chair, IEEE Knowledge Graph Conference, Shanghai, PRC, Dec. 2023
- 2022 General Co-Chair, IEEE Big Data Conference, Osaka, Japan, Dec. 2022
- 2019 Panel Moderator, 2019 IEEE Big Data Conference, Panel on *Addressing Big Data Heterogeneity: Recent Advances and Challenges*, Los Angeles, CA, Dec. 2019
- 2018 Area Chair, Technical Program Committee, 2018 International Conference on Data Mining (ICDM 2018), Singapore, Nov. 2018
- 2017 Panel Moderator, 2017 IEEE Big Data Conference, Panel on *Big Data Software and Analytic Methods- What is Next?* Boston, MA, Dec. 2017
- 2017 Co-Chair, Technical Program Committee, 2017 International Conference on Data Mining (ICDM 2017), New Orleans, LA, Nov. 2017
- 2016 Session Chair, 2016 IEEE / ACM WI-BIH Conference, Omaha, NE, Oct. 2016

- 2016 Member, Panel Session on Connecting Network and Brain with Big Data, 2016 IEEE / ACM WI-BIH Conference, Omaha, NE, Oct. 2016
- 2015 Tutorial Presenter, 2015 ACM-IEEE WI-IAT conference, Visual Analytics of Large Time-Evolving Graphs, Singapore, Dec. 2015
- 2015 Panel Moderator, 2015 IEEE Big Data Conference, Panel on *Key Challenges for Future Big-Data to Knowledge (BD2K) Technologies*, Santa Clara, CA, Oct. 2015
- 2015 Workshop Co-chair, 2015 IEEE Big Data Conference Workshop on *Big Data Quality Issues*, Santa Clara, CA, Oct. 2015
- 2015 Session Chair, 2015 International Symposium on Methodologies for Intelligent Systems, Lyon, France, Oct. 2015
- 2015 Participant, Round Table on "*Challenges and Opportunities for Big Data Research and Development*," BigDat 2015, Tarragona, Spain, Jan. 2015
- 2014 Workshop Co-chair, First Workshop on Big Data to Wise Decision- RSKT 2014, Shanghai, PRC, Oct. 2014
- 2014 Session Chair, WI-IAT 2014 Conferences, Warsaw, Poland, Aug. 2014
- 2014 Panel Session Member, WI-IAT 2014 Conferences, Warsaw, Poland, Aug. 2014
- 2013 Panel Session Member, Statistics 2013 International Conference (STAT2013), Dec. 2013
- 2013 General Co-Chair, IEEE Big Data Conference, San Jose, Ca, Oct. 2013
- 2013 Panel Session Moderator, IEEE Big Data Conference, San Jose, Ca, Oct. 2013
- 2013 Session Chair, IEEE Big Data Conference, San Jose, Ca, Oct. 2013
- 2013 Program Committee Chair, WI-IAT 2013 Conferences, Atlanta, Ga, Nov. 2013
- 2013 Session Chair, WI-IAT 2013 Conferences, Atlanta, Ga, Nov. 2013
- 2012 Session Chair, International Symposium on Methodologies for Intelligent Systems, Macau, China, Dec. 2012
- 2010 General Chair, Symposium on the Foundations and Practice of Data Mining; held in conjunction with IEEE Conference on Granular Computing, San Jose, Ca, Aug. 2010
- 2010 Program Committee Co-Chair, IEEE International Conference on Web Intelligence, IEEE WI-IAT 2010 Conference, Toronto, Canada, Sept. 2010
- 2009 Review Panel member, Canadian Foundation for Innovation
- 2009- Member, Joint NSF CISE-AC and SBE_AC Subcommittee for 'Discovery in a Research Portfolio' Project
- 2008 Panel Member, New Partnerships & Possibilities at the Symposium on "Scientific Collaborations, Connections, and Communities, Emory University
- 2008 Panel Member, NSF-Expeditions Preliminary Proposals

2008 Member, IEEE ICDM 2008 conference Awards Selection Committee

2007 Member, IEEE ICDM 2007 conference Awards Selection Committee

2007 Workshops Chair, IEEE/WIC Web Intelligence/ Intelligent Agents Technology Conference

2007 Review Panel, National Science Foundation

2006 Reviewer, Book on 'Web Intelligence' by Lingras and Akerker, Bartlett & James Publishers

2006 Awards Chair, IEEE ICDM 2006 Conference Awards Selection Committee

2005 Reviewer, Atlantic Canada Innovation Fund Proposals

2005 Member, Consulting Team for LA Dept. of Health Hospitals

2005 General Chair, IEEE ICDM 2005 Conference (IEEE ICM'05)

2005 Panel member, IEEE ICDM 2005 Panel on 'Data Mining: Where do we go next?'

2004 Co-Chair, Workshop on Web-based Support Systems (WSS'04- IEEE WI/IAT'04)

2004 Reviewer, Workshop on Foundations of Data Mining (FDM'04- IEEE ICDM'04)

2003 Session Chair, IEEE WI/IAT Conference (IEEE WI/IAT'03)

2002 Review Panel, Member of a panel that reviewed Proposals for NSF Career Award

2001 Review Panel, Member of a panel that did a 10-year review of the CS program at UNLV

2001 Review Panel, Member of a panel that reviewed Proposals for NSF Career Award

2000 Reviewer, IEA/AIE 2000

1999 Session Chair, ISMIS-99

1998 Co-Guest Editor, Special Issue of J. Amer. Soc. for Inform. Sci. on Data Mining

1997 Session Chair, Pattern recognition in Practice- V

1997 Session Chair, CISST-97

1997 Session Chair, ISMIS-97 Int'l Symp. on Methodologies for Intelligent Systems

1997 Reviewer, ACM Multimedia Conference- 97

1996 Reviewer, 8th Int'l. Conference on Computing and Information

1995 Panel Member, ACM CSC '95, Content-based Image Retrieval Systems

1995 Session Chair, Mardi Gras 1995 Conference on HPCC Technologies

1995 Ex-officio Member, La. Stimulus for Excellence in Research (LaSER) Committee

1995 Organizing Committee, ACM-CSC Workshop on Rough Sets & Database Mining

1994 Session Chair, IFIP World Congress 1994

1993-00 Co-chair, La. State Planning Committee (DOD- EPSCoR)

- 1993 Session Chair, Symp. on Document Analysis & Inform. Retrieval
- 1992 NSF Review Panel, Database and Expert Systems Program
- 1991 Panel Member, NSF Workshop on Text Analysis, Retrieval and Understanding
- 1991 Program Co-chair, ACM- SIGIR Conference
- 1991 Publicity Chair, ACM Multimedia and Information Systems Conference
- 1985-90 Co-editor, SIGIR Forum Newsletter
- 1988 Session Chair, ACM- SIGIR Conference
- 1987 Program Chair, ACM South Central Region Conference
- 1987 Panel Chair, ASIS Annual Conference
- 1987 Session Chair, ACM- SIGIR Conference
- 1987 Publicity Chair, ACM- SIGIR Conference
- 1986 Panel Chair, ASIS Annual Conference
- 1986 Panel Chair, Canadian Assoc. for Inform. Sci. Conference
- 1985 Program Chair, ACM- SIGIR Conference
- 1985 Panel Member, ACM- SIGIR Conference
- 1985 General Chair, Workshop on Found. Adaptive Inform. Processing

Conference Program Committee Membership

- 2023 8th Workshop on Real-time & Stream analytics in Big Data in conjunction with 2023 IEEE Big Data Conf.
- 2022 14th International Conference on Knowledge Discovery and Information Retrieval (KDIR 2022).
- 2022 17th International Symposium on Advanced Artificial Intelligence in Applications (AAIA '21).
- 2022 7th Workshop on Real-time & Stream analytics in Big Data in conjunction with 2022 IEEE Big Data Conf.
- 2021 IEEE International Conference on Data Mining (IEEE ICDM'21).
- 2021 16th International Symposium on Advanced Artificial Intelligence in Applications (AAIA '21).
- 2021 6th Workshop on Real-time & Stream analytics in Big Data in conjunction with 2021 IEEE Big Data Conf.
- 2021 10th International Conference on Data Science, Technology and Applications (DATA 2021).
- 2020 5th Workshop on Real-time & Stream analytics in Big Data in conjunction with 2020 IEEE Big Data Conf.

- 2019 First IEEE Conference on Cognitive Machine Intelligence (2019 IEEE CogMI).
- 2019 4th Workshop on Real-time & Stream analytics in Big Data & Stream Data Management in conjunction with 2019 IEEE Big Data Conf.
- 2018 The 7th Special Session on Parallel and Distributed Data Mining (PDDM'18) in conjunction with HPCS 2018
- 2018 International Conf. on Machine Learning and Data Science (ICMLDS 2018)
- 2018 3rd Workshop on Real-time & Stream analytics in Big Data & Stream Data Management in conjunction with 2018 IEEE Big Data Conf.
- 2018 First Int'l Workshop on AI Methods in Data Mining Challenges (DMGATE'18) in conjunction with FedCSIS 2018
- 2017 12th International Symposium on Artificial Intelligence and Applications (AAIA 2017)
- 2017 IEEE Conf. on Big Knowledge (ICBK-17)
- 2017 The 37th Int'l Conference on Distributed Computing Systems (ICDCS 2017)
- 2016 The 8th Workshop on Web Intelligence & Communities (WI & C 2016) held in conjunction with WWW 2016
- 2016 International Joint Conference on Rough Sets (IJCRS-2016)
- 2016 The 11th International Symposium Advances in Artificial Intelligence and Applications (AAIA'16)
- 2016 IEEE/WIC/ACM 2016 Web Intelligence and Brain and Health Informatics Conference (WI-BIH 2016)
- 2015 The 7th Workshop on Web Intelligence & Communities, Joint with WWW 2015 Conferences (WI & C 2015)
- 2015 Int'l Symposium on Methodologies for Intelligent Systems (ISMIS-2015)
- 2015 International Joint Conference on Rough Sets (JRS-2015)
- 2015 IEEE BIBM 2015 Conference, Washington, DC, Nov. 2015
- 2015 Pattern Recognition and Machine Intelligence Conference (PReMI 2015), Warsaw, Poland
- 2014 The 6th Workshop on Web Intelligence & Communities, Joint with WWW 2014 Conferences (WI & C 2014)
- 2014 Int'l Symposium on Methodologies for Intelligent Systems (ISMIS-2014)
- 2014 Joint Rough Sets Conference (JRS-2014)
- 2014 WI-IAT 2014 Conferences, Warsaw, Poland, Aug. 2014
- 2013 Third International Conf. on Web Intelligence, Mining and Semantics (WIMS-2013)
- 2012 WI-IAT Workshop on Web Information Retrieval Support Systems (WIRSS 2012)
- 2012 Asian Information Retrieval Societies Conference (AIRS 2012)

2012 Advanced Machine Learning Technologies & Applications (AMLTA 2012)

2012 Int'l Joint Rough Set Society Conference (JRSS 2012)

2012 Int'l Conference on Web Intelligence, Mining and Semantics (WIMS 2012)

2012 IEEE Int'l Conference on Bioinformatics and Biomedicine (BIBM 2012)

2012 Int'l Symposium on Methodologies for Intelligent Systems (ISMIS-2011)

2011 ACM Conference of Special Interest Group on Information Retrieval (ACM-SIGIR 2011)

2011 International Conference on Web Intelligence, Mining and Semantics (WIMS-2011)

2011 Rough sets and Knowledge Technologies Conference (RSKT-2011)

2011 WI-IAT Workshop on Web Information Retrieval Support Systems (WIRSS 2011)

2011 International Conference on Theory of Information Retrieval (ICTIR-2011)

2011 Int'l Symposium on Methodologies for Intelligent Systems (ISMIS-2011)

2010 ACM Conference of Special Interest Group on Information Retrieval (ACM-SIGIR 2010)

2010 ACM Conference on Information and Knowledge Management (ACM-CIKM 2010)

2010 7th Annual Biotechnology and Bioinformatics Symposium (BIOT 2010)

2010 Workshop on Web Mining and Information retrieval (WMIR 2010) held in conjunction with ISDA 2010

2010 WI-IAT Workshop on Web Information Retrieval Support Systems (WIRSS 2010)

2009 WI-IAT Workshop on Web Information Retrieval Support Systems (WIRSS 2009)

2009 AAMAS Wkshop on Agents and Data Mining Interaction (ADMI 2009)

2009 IEEE International Conference on Bioinformatics & Biomedicine (BIBM 2009)

2009 12th Annual Int'l Conference on Rough Sets, Fuzzy Sets, Data Mining & granular Computing (RSFDGrC 2009)

2009 International Conference on Information Retrieval Theory (ICTIR 2009)

2009 IEEE International Conference on Data Mining (IEEE ICDM'09)

2009 International Conference on Web-Age Information Management (WAIM 2009)

2008 International Conference on Rough Sets and Current Trends in Computing (RSCTC 2008)

2008 International Conference on Web-Age Information Management (WAIM 2008)

2008 ACM Special Interest Group on Information Retrieval Conference (SIGIR 2008)

2008 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2008)

2008 IEEE Advanced Video and Signal Processing Surveillance

2007 IEEE International Conference on Fuzzy Systems (Fuzz-IEEE'07)

2007 Workshop on Mining Complex Data (MCD'07- ECML/PKDD'07)

2007 IEEE International Conference on Data Mining (IEEE ICDM'07)

2007 ACM SIGKDD conference (ACM SIGKDD'07)

2007 Joint Rough Sets Symposium (JRS'07)

2007 Third International Conference on Natural Computation (ICNC'07)

2006 International Conference on Hybrid Information Technology (ICHIT'06)

2006 International Symposium on Fuzzy and Rough Sets (ISFUROS'06)

2006 IEEE-ICDM Workshop on Foundations of Data Mining
(FDM'06- IEEE ICDM'06)

2006 IEEE-ICDM Workshop on Mining Complex data (MCD'06- IEEE ICDM'06)

2006 IEEE International Conference on Data Mining (IEEE ICDM'06)

2006 ACM SIGIR Conference (ACM SIGIR'06)

2006 Conference on Rough Sets and Knowledge Technology (RSKT'06)

2006 Conference on Rough Sets and Current Trends in Computing (RSCTC'06)

2006 International Symposium for Methodologies for Intelligent Systems (ISMIS'06)

2005 ACM SIGIR Conference (ACM SIGIR'05)

2005 International Symposium for Methodologies for Intelligent Systems (ISMIS'05)

2004 ACM SIGIR Workshop on Mathematical Foundations of
IR (MF/IR'04- ACM SIGIR'04)

2004 Workshop on Rough Set Theory and Soft Computing
(RSSC'04- IEEE WI/IAT'04)

2004 IEEE International Conference on Data Mining (IEEE ICDM'04)

2003 Workshop on Rough Set Theory and Soft Computing
(RSSC'03- IEEE WI/IAT'03)

2003 ACM SIGIR Workshop on Mathematical Foundations of
IR (MF/IR'03- ACM SIGIR'03)

2003 International Symposium for Methodologies for Intelligent Systems
(ISMIS'03)

2003 IEEE International Conference on Data Mining (IEEE ICDM'03)

2002 IEEE International Conference on Data Mining (IEEE ICDM'02)

2002 ACM-SIGIR Workshop on Mathematical Foundations of IR (MF/IR'02- ACM SIGIR'02)

2002 World Wide Web Conference (WWW'02)

2002 International Symposium for Methodologies for Intelligent Systems (ISMIS'02)

2001 IEEE International Conference on Data Mining (IEEE ICDM'01)

2001 Multimedia Information Systems (MIS'01) Conference

2001 ACM-SIGIR Workshop on Mathematical Foundations of IR (MF/IR'01- ACM SIGIR'01)

2001 Web Intelligence (WI'01) Conference

2000 ACM-SIGIR Workshop on Theoretical Advances on Information Retrieval

2000 International Symposium for Methodologies for Intelligent Systems (ISMIS'00)

2000 Conference on Rough Sets and Current Trends in Computing (RSCTC'00)

1999 Conference on Data Warehousing & KD (DaWak'99)

1999 Conference on Internet Data Management (IDM'99)

1999 International Symposium for Methodologies for Intelligent Systems (ISMIS'99)

1998 Workshop on Rough Sets, Data Mining and Granular Computing (RSDMGrC'98)

1997 International Database Engineering and Applications Symposium (IDEAS'97)

1997 Workshop on Rough Sets and Soft Computing (RSSC'97)

1996 ACM Conference on Information and Knowledge Management (CIKM'96)

1995 Workshop on Rough Set Theory (RST'95)

1995 ACM Conference on Inform. & Knowledge Mgmt (CIKM'95)

1995 ACM-CSC Workshop on Rough Sets & Database Mining

1994 IEEE Conference on Tools with AI: Knowledge-based Systems, Intelligent Databases

1994 Workshop on Rough Sets and Soft Computing (RSSC'94)

1994 ACM- SIGIR Conference

1993 Workshop on Advances in Geographic Information Systems

1992 ACM- SIGIR Conference

1991 NSF Workshop on Text Analysis, Retrieval and Understanding

1990 ACM- SIGIR Conference

1989 ACM- SIGIR Conference

1988 ACM- SIGIR Conference

GRADUATE STUDENT TRAINING

Thesis Supervision

Ph.D. Level

1. J.N. Bhuyan (1990), "Cluster-based Adaptive Information Retrieval."
2. G.S. Jung (1991), "Connectionist Domain Knowledge Acquisition and its Evaluation in Information Retrieval."
3. J.R. Alsabbagh (1992), "Characterization and Exploitation of Sharing Opportunities in Multiple Query Optimization."
4. V.N. Gudivada (1993), "A Unified Framework for Retrieval in Image Databases."
5. S.K. Mishra (1994), "Randomized Branch and Bound Algorithms-A Framework for Combinatorial Optimization."
6. H. Sever (1995), "Knowledge Structuring for Database Mining, and Text Retrieval Using Past Optimal Queries."
7. K. Vanapipat (1995), "A Framework for Object Integration in the Context of a Multidatabase Environment," Co-advisor: Dr. N. Pissinou.
8. S. Choubey (1997), "Generic and Fully Automatic Content-based Image Retrieval using Color, Shape, and Texture."
9. T. Johnsten (1998), "Impact of Data Mining on Database Security."
10. J. Thomas (2001), "Adaptive Algorithms for Intelligent Association Mining."
11. S. Noel (2001), "Data Mining and Visualization of Reference Associations: Higher order Citation Analysis," Co-advisor: Dr. C. H. Chu.
12. A. Roszypal (2003), "Association Mining in Time Varying Domains," Co-advisor: Dr. M. Kubat.
13. E.D. Diaz (2004), "Selective Merging of Retrieval Results for Metasearch Environments."
14. Y. Xie (2004), "An Approach to Information Retrieval Based on the Language-Modeling Kernel."
15. W.-K. Chen (2005), "Data Structures for Selective Association Mining."
16. B.N. Shah (2005), "On Improving Information Retrieval Performance from Structured, Semi-structured and unstructured Information Sources."
17. A. De (2006), "Fuzzy Result Merging Models for Metasearch."
18. P. Kuntala (2006), "Fusion and Clustering Algorithms for Spatial Data."
19. A. Doloc-Mihu (2007), "Adaptive Image Retrieval System: similarity matching, learning, fusion and visualization."
20. D. Mundluru (2008), "Automatically Constructing Wrappers for Effective and Efficient Web Information Extraction."
21. Nicholas Ruiz (2011), "Statistical Parsing and Integration of Result Records for Answering Factual Questions."

22. Shixian Chu (2011), "Key Phrase Extraction and Co-clustering for Search Engine Result Visualization."
23. Jayasimha Katukuri (2012), "Relationship Extraction and Hypothesis Discovery from Biomedical Literature."
24. Jennifer Lavergne (2013), "An In-Memory Data Structure for Targeted Association Rule Mining in Time-Varying Domains."
25. Murat S. Ayhan (2015), "A Probabilistic Biomarker for Alzheimer's Disease."
26. Sumi Singh (2015), "Protein 3-D Structure Representation for Alignment-Free Comparison and Structural Motif Discovery of Proteins, and Hierarchical Protein Classification."
27. Elshaimaa Ali (2015), "A Framework for Building Lightweight Ontologies based on Semi-Structured data for Semantic annotation."
28. Amir Sharif (2015), "Large-Scale, Hybrid Approaches for Recommending Web Pages Based on Content and User's Previous Click Patterns."
29. Satya Katragadda (2016), "Satya S. Katragadda (2016), "A Framework for Real-Time Event Detection for Emergency Situations."
30. Maria Bala Duggimpudi (2017), "Object Ranking Algorithms for Improved Decision Making."
31. Murali Krishna Pusala (2018), "Link Discovery Through Iterative Link Classification — Towards a Real-Time Analysis of Graph Evolution."
32. Siva R. Venna (2019), "Data-Driven Approaches for Real-Time Forecasting in Network Time Series."
33. Jing Chen (2021), "Data Mining in Social Science Research: Challenges and Solutions."
34. Titli Sarkar (2021), "On the Effectiveness of Triangular Spatial Relationships for Protein 3D Structure Comparison and Application towards Clustering and Motif Discovery with Amino Acid Grouping."
35. Venkata S. Kondra (2022), "A TSR-3D based Protein Structural Representation and its Applications in Protein Structure Comparison and Classification."

M.S. Level

1. T.K.W. Tsou (1982), "Consecutive Retrieval Organization of Clustered Files."
2. S.S. Ting (1985), "A Flexible Approach for the Integration of a DBMS and an IRS."
3. R. Sharma (1986), "Classification-based Adaptive Information Retrieval: A Framework and an Experimental Prototype."
4. K. Uildriks (1996), "WebMine: A System for Data Mining over the World Wide Web."
5. W.-K. Chen (1998), "Reengineering of the Belfast Newsletter Index Database System for Efficient Access via Internet."
6. B. Suravarapu (1998), "An Intermediary Based Approach for Searching Product Catalogs on the Internet."
7. X. Zhao (2000), "Space Transformation and Clustering for Proximity Datasets."

8. B. Shah (2001), "Generic and Efficient Online Content-based Image Retrieval."
9. P. Dhatri (2004), "Adaptive Content-based Image Retrieval using Space Transformation and Clustering."
10. K. Ramachandran (2005), "Techniques for Storage Estimation and Dynamic Selection of OLAP Views."
11. S. Harinarayanan (2007), "Exceptions-based Dynamic Prefetching of Views in an Online Analytical Processing System."
12. J. Katukuri (2007), "Semantic Relationship Extraction and Hypothesis Discovery from Biomedical Literature."
13. S. Uda (2009), "Relation Reduced T-tree Index Structure for Main Memory Database Systems."
14. T. Nomulwar (2010), "Web Personalization Using Wikipedia."

Thesis Committee Membership

Ph.D. Level

T. Huang (1988), P. Michaud (1990), D. Chung (1990), P. Rhee (1990), C. Leger (1990), S. K. Bhatia (1991), B. A. Babin (1992), P.-J. Chung (1992), M. Beheshti (1992), D. Schwartz (1993), C. R. Chow (1994), V. B. Krishnamoorthy (1995), G. Lin (1994), G. Washburn (1995), G.-Y. Song (1995), R. G. Benton (2001), R. Fanguy (2001), J. C. Deprez (2003), C. Gunay (2003), M. Mandviwalla (2005), P. Fanguy (2006), Byung Kim (2006), Alp Astuay (2007), Enamul Karim (2008), Ahmed Abdelwahab (2012), Anshuman Singh (2012), Paul Bible (2013), Ian Chang-Yen (2014), Anurag Singh (2015), Padraic Edgington (2015), Ashish Gupta (2015), Amirhossein Tavanaei (2018), Enamul Haque (2020), Ege Beyazit (2020).

M.S. Level

M.Y.L. IP (1981), P.C.N. Wong (1986), Y.Y. Yao (1988), M. Kottapalli (1991), A. Narasimhan (1992), S.P. Obili (1994), Z. Xing (1994), S. Noel (1998), M. Cooperson (1999), V. Chakilam (2002), A. Ravichandran (2005), A. Gummadi (2004), V. Philip (2006), P. Singh (2023).