
venu govindaraju, PhD

Senior Vice President for Research, Innovation, and Economic Development
University at Buffalo, The State University of New York (SUNY)
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SUNY Distinguished Professor
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SUMMARY STATEMENT

With a decade of senior leadership experience at the helm of the University at Buffalo's research, innovation, and economic development enterprise, my accomplishments demonstrate proven effectiveness in my capacity to successfully drive initiatives and exceed institutional goals. This reflects a collaborative leadership style whereby colleagues seek counsel and partnership, resulting in my substantial contributions to research, enrollment, advancement, talent development, community engagement, and beyond.

As an educator and a scientist, I have mentored nearly 50 doctoral students as their major adviser, overseen six postdocs, and maintained continuous external funding totaling \$97 million, including serving as director and principal investigator of the \$20 million National AI Institute for Exceptional Education, one of only 29 National Science Foundation-designated AI institutes. As an AI pioneer and an advocate for AI for good, I champion the positive societal impacts of emerging technologies and the crucial role universities play in enabling groundbreaking discoveries.

This combination of institutional leadership, deep disciplinary expertise, and a proven ability to establish and lead forward-looking initiatives is especially relevant as AI integration becomes central to pedagogy, research, operational efficiency, and economic and workforce development. This distinct perspective, supported by an internationally recognized record of research and scholarship, provides a comprehensive understanding of how to advance higher education and generate meaningful impact for our students, campus, and community.

EXECUTIVE LEADERSHIP, University at Buffalo, SUNY

11/25-Present	Senior Vice President for Research, Innovation and Economic Development (SVPRIED) <i>An expansion of VP for Research and Economic Development role to include:</i> <ul style="list-style-type: none">• <i>Campus lead for emerging technologies:</i><ul style="list-style-type: none">◦ <i>Chief AI Officer: Established and leads Office of AI Innovation and Integration</i>◦ <i>Nexus for research, education, philanthropy, advocacy, and operations</i>
2023 – Present	Director/PI, NSF National AI Institute for Exceptional Education (9 university consortium)
2020 – Present	Operations Manager, SUNY Research Foundation for UB
2004 – Present	Director, Center for Unified Biometrics and Sensors (CUBS)
2016 – 2025	Vice President for Research and Economic Development (VPRED)
2013 – 2015	Director, Computational Data Science and Engineering
2007 – 2015	Director, Strategic Strength in Information and Computing Technology
1994 – 2004	Associate Director, Center for Document Analysis and Recognition (CEDAR)

ACADEMIC POSITIONS, Department of Computer Science and Engineering, University at Buffalo, SUNY

2010 – Present	SUNY Distinguished Professor
2008 – 2010	UB Distinguished Professor
2002 – 2010	Full Professor
2000 – 2002	Associate Professor
1992 – 2000	CEDAR Research Scientist, Senior Scientist (1994) and Principal Scientist (1996)

UNIVERSITY-WIDE COMMITTEE CHAIR (at the behest of UB Provost)

2025 – Present	UB AI Advisory Committee to drive AI innovation and integration campus-wide
2023 – 2024	Research Administration Steering Committee, “How to reduce administrative burden on PIs”
2022 – 2025	Regional Economic Hub positioning (Build Back Better, Tech Hub, NSF Engines)
2022 – 2023	Storage, Security, and Access of Research Data Strategy
2020 – 2021	Disciplinary Excellence Initiative (recommendations for significant investments)
2018 – 2020	Safeguarding university faculty assets and interests from foreign interference

EXTERNAL LEADERSHIP

2025 – Present	Empire AI – Board Member and Operations and Finance Committees Member
2018 – Present	Buffalo 2020 Development Corporation – Chair
2014 – Present	Universities Research Association (URA) – UB President’s proxy
2020 – Present	Empire Discovery Institute (Drug Discovery Consortium) – Director
2023 – 2025	SUNY STRIVE Artificial Intelligence Task Force – Co-chair
2023 – 2024	AAU Task Force on Expanding U.S.-India University Partnerships – UB President’s delegate
2019 – 2025	SUNY-IBM Artificial Intelligence Research Alliance – Advisor
2018 – 2020	APLU Council on Research – Executive Committee Member
2015 – 2024	Hauptman-Woodward Research Institute – Board Member
2015 – 2016	IEEE Biometric Council – President
2014 – 2021	Institute for Development and Research in Banking Technologies (India) – Adviser

EDUCATION

1992	PhD, Computer Science, University at Buffalo, SUNY
1988	MS, Computer Science, University at Buffalo, SUNY
1986	BTech, Computer Science and Engineering, Indian Institute of Technology Kharagpur

AWARDS AND HONORS

- **Elected Member**, *Pan American Academy of Engineering (API)* – Recognized for distinguished contributions to engineering and innovation across the Americas (2025).
- **Person of the Year**, *Council of Heritage and Arts of India* – For outstanding global leadership in science and technology (2024).
- **President’s Medal**, *University at Buffalo* – The university’s highest honor, awarded for exemplary leadership in research and innovation (2024).
- **118th U.S. Congressional Recognition** – Presented by Hon. *Timothy M. Kennedy* for advancing AI and innovation leadership in New York State (2024).
- **New York State Assembly Citation** – Presented by Hon. *Karen M. McMahon* for excellence in research and public service (2024).
- **Office of the Erie County Executive Proclamation** – Presented by Hon. *Mark C. Poloncarz*, recognizing leadership in AI and regional economic development (2024).
- **Proclamation by Town Supervisor** – Presented by *Brian J. Kulpa*, *Amherst, NY*, for sustained contributions to science and education (2024).
- **Elected Fellow**, *Asia-Pacific Artificial Intelligence Association (AAIA)* – For sustained research impact in AI and data-driven systems (2022).
- **Elected Fellow**, *Andhra Pradesh Academy of Sciences (APAS)* – For distinguished contributions to computer science and engineering (2016).
- **Excellence in Graduate Student Mentoring Award**, *University at Buffalo* – For exceptional doctoral supervision and career development of graduate students (2016).
- **Elected Fellow**, *National Academy of Inventors (NAI)* – For innovations with significant societal and economic impact (2015).

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- **ICDAR Outstanding Achievements Award**, *International Conference on Document Analysis and Recognition* – “For pioneering contributions to pattern recognition” (2015).
 - **Distinguished Alumnus Award**, *Indian Institute of Technology Kharagpur* – For leadership and innovation in AI research (2014).
 - **Elected Fellow**, *SPIE – The International Society for Optics and Photonics* – “For contributions to biometrics” (2013).
 - **Elected Fellow**, *AAAS – American Association for the Advancement of Science* – “For outstanding contributions in biometrics and document retrieval” (2010).
 - **IEEE Technical Achievement Award**, *IEEE Computer Society* – “For pioneering contributions to handwriting systems” (2010).
 - **Elected Fellow**, *ACM – Association for Computing Machinery* – “For contributions to handwritten document image analysis, recognition, and retrieval” (2009).
 - **SUNY Chancellor’s Award for Scholarship and Creative Productivity** – In recognition of exceptional academic and research accomplishments (2007).
 - **Elected Fellow**, *IEEE – Institute of Electrical and Electronics Engineers* – “For contributions to handwriting recognition” (2006).
 - **Elected Fellow**, *IAPR – International Association of Pattern Recognition* – “For contributions to advances in handwriting recognition” (2004).
 - **MIT Global Indus Technovator Award**, *MIT Indian Business Club, Cambridge, MA* – “For pioneering endeavors at the frontiers of technological innovation” (2004).
 - **Elected Fellow**, *IETE – Institution of Electronics and Telecommunication Engineers* (2002).
 - **IAPR/ICDAR Outstanding Young Investigator Award** – “For visibly demonstrating the utility of pattern recognition algorithms and for outstanding scientific productivity” (2001).

APPENDIX

Faculty Curriculum Vitae

FACULTY CURRICULUM VITAE

Publications

h-index 72; total citations: ~19,000

BEST PAPER AWARDS (8)

1. IJCB Best Paper Award (Bhavin, Mohan, Fedorishin, Setlur), Ljubjana, Slovenia, 2023.
2. FG 2nd Best Student Paper Award, (Mohan and Sankaran), Jodhpur, India, 2020.
3. ICDAR Best Student Paper Award, (Fei Xu), Sydney, Australia, 2019.
4. CBDAR Best Paper Award, Sydney, Australia, 2019.
5. Data for Development Challenge, National Statistics Prize (Neeti Pokhriyal), Boston, 2015.
6. ICFHR, ITESOFT Best Paper Award, Kolkata, India, 2010.
7. ICPR, IBM Best Student Paper Award, (X. Peng), Istanbul, Turkey, 2010.
8. ICDAR Best Paper Award, ICDAR 1st Place in Line segmentation competition, Barcelona, 2009.

BOOKS (8)

1. Discovery of Self, V. Govindaraju, 2025.
2. Handbook of Statistics Vol 48: Deep Learning, A. S. Rao, V. Govindaraju, and C. R. Rao (eds.), Elsevier 2023.
3. Handbook of Statistics Vol 35: Cognitive Computing: Theory and Applications, V. V. Raghavan, V. Gudivada, V. Govindaraju, and C. R. Rao (eds.), Elsevier 2017.
4. Handbook of Statistics Vol 33: Big Data, V. Govindaraju, V. V. Raghavan, and C. R. Rao (eds.), Elsevier 2016.
5. Handbook of Statistics Vol 31: Machine Learning Theory and Applications, C. R. Rao & V. Govindaraju (eds.), Elsevier 2013.
6. Multibiometrics for Human Identification. B. Bhanu & V. Govindaraju (eds.), Cambridge University Press 2011.
7. Indic OCR- Document Recognition & Retrieval. V. Govindaraju & S. Setlur (eds.), Springer 2009.
8. Biometrics: Sensors, Systems, and Algorithms. N. Ratha & V. Govindaraju (eds.), Springer 2007.

JOURNAL PAPERS (90)

2025

1. S. Rangasrinivasam, M. S. Sumi Suresh, A. Olszewski, S. Setlur, B. Jayaraman, and V. Govindaraju, "AI-Enhanced Child Handwriting Analysis: A Framework for the Early Screening of Dyslexia and Dysgraphia", *SN Computer Science* 6(5): 399 (2025).

2024

2. S. Suresh, V. Menon, and V. Govindaraju, "Adaptive Coverage Optimization for Energy-Constrained Multi-Camera Surveillance Networks", *IEEE Sensors* (2024).
3. P. Nedungadi, M. V. Ramesh, V. Govindaraju, Bhavani Rao, P. Berbeglia, and R. Raman, "Emerging leaders or persistent gaps? Generative AI research may foster women in STEM", *International Journal of Information Management*, 77 (2024).

2023

4. M. Singh, B. M. Mehtre, S. Sangeetha, and V. Govindaraju, "User Behavior-based Insider Threat Detection using a Hybrid Learning Approach", *Journal of Ambient Intelligence and Humanized Computing*, Springer, 14(4): 4573-4593 (2023).

2021

5. K. Davila, F. Xu, S. Setlur, and V. Govindaraju, "FCN-LectureNet: Extractive Summarization of Whiteboard and Chalkboard Lecture Videos", *IEEE Access*.
6. K. Davila, S. Setlur, D. Doermann, B. U. Kota, and V. Govindaraju, "Chart Mining: A Survey of Methods for Automated Chart Analysis", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 43, no. 11, pp. 3799-3819, 2021. doi: 10.1109/TPAMI.2020.2992028.

2020

7. N. Pokhriyal and V. Govindaraju, "Learning Discriminative Factorized Subspaces with Application to Touchscreen Biometrics", *IEEE Access*, vol. 8, pp. 152500-152511, 2020.
8. Z. Yan, V. Govindaraju, Q. Zheng, and Y. Wang, "IEEE Access Special Section Editorial: Trusted Computing," in *IEEE Access*, vol. 8, pp. 25722-25726, 2020.
9. N. Sankaran, D.D. Mohan, N. N. Lakshminarayana, S. Setlur, and V. Govindaraju, "Domain adaptive representation learning for facial action unit recognition", *Pattern Recognition*, Volume 102, 2020.

2019

10. N. Narayan, N. Sankaran, S. Setlur, and V. Govindaraju, "Learning Deep Features for Online Person Tracking Using Non-Overlapping Cameras: A survey", *Image Vision and Computing*, pp. 222-235, 2019.
11. B. Urala Kota, K. Davila, A. Stone, S. Setlur, and V. Govindaraju, "Generalized Framework for Summarization of Fixed-Camera Lecture Videos by Detecting and Binarizing Handwritten Content", *International Journal of Document Analysis and Recognition - ICDAR Special Issue 2019*.

2018

12. C. Liu, G. Fink, V. Govindaraju, and L. Jin, "Special Issue on Deep Learning for Document Analysis and Recognition", *International Journal for Document Analysis and Recognition*.

2017

13. N. Pokhriyal, K. Tayal, I. Nwogu, and V. Govindaraju, "Cognitive-biometric recognition from language usage: A feasibility study", *Transactions on Information Forensics and Security*, Vol. 12, No. 1, 2017.
14. Gaurav Kumar and Venu Govindaraju, "Bayesian background models for keyword spotting in handwritten documents", *Pattern Recognition* 64: 84-91, 2017.

2014

15. S. Wshah, G. Kumar, and V. Govindaraju, "Statistical script independent word spotting in offline handwritten documents", *Journal of Pattern Recognition*, Vol. 47, No. 3, pp. 1039-1050, 2014.
16. V. Menon, B. Jayaraman, and V. Govindaraju, "Probabilistic spatio-temporal retrieval in smart spaces" *Special issue of Journal of Ambient Intelligence and Humanized Computing*, Vol. 5, No. 3, pp. 383-392, 2014.

2013

17. X. Peng, S. Setlur, V. Govindaraju, and R. Sitaram, "Handwritten text separation from annotated machine printed documents using Markov random fields", *International Journal on Document Analysis and Recognition*, Vol. 16, No. 1, pp. 1-16, 2013.
18. U. Porwal and V. Govindaraju, "Semi supervised framework for writer identification using structural learning", *IET Biometrics*, Vol. 2, No. 4, pp. 208-215, 2013.
19. M. Malgireddy, I. Nwogu, and V. Govindaraju, "Language motivated approach to action recognition", *Journal of Machine Learning Research*, Vol. 14, No. 1, pp. 2189-2212, 2013.
20. A. Shivram, C. Ramaiah, and V. Govindaraju, "A hierarchical Bayesian approach to online writer identification", *IET Biometrics, Special Issue on Handwriting Recognition*, Vol. 2, No. 4, pp. 191-198, 2013.
21. Y. Zhou, I. Nwogu, and V. Govindaraju, "Labeling Spain with Stanford", *IEEE Transactions on Image Processing*, Vol. 22, No. 12, pp. 5362-5371, 2013.
22. V. Menon, B. Jayaraman, and V. Govindaraju, "Enhancing biometric recognition with spatio-temporal reasoning in smart environments", *Journal of Personal and Ubiquitous Computing, Springer*, Vol. 17, No. 5, pp. 987-998, 2013.

2012

23. X. Peng, S. Setlur, V. Govindaraju, and R. Sitaram, "Using a boosted tree-classifier for text segmentation in hand-annotated documents", *Pattern Recognition Letters, Special Issue of Award-Winning Papers*, Vol. 33, No. 7, pp. 943-950, 2012.

2011

24. V. Menon, B. Jayaraman, and V. Govindaraju, "The 3 R's of cyber-physical spaces", *IEEE Computer*, Vol. 44, No. 9, pp. 73-79, 2011.
25. V. Menon, B. Jayaraman, and V. Govindaraju, "Spatio-temporal querying in smart spaces", *Procedia Computer Science*, Elsevier Press, Vol. 10, pp. 366-373, 2011.
26. H. Cao, A. Bhardwaj, and V. Govindaraju, "Unconstrained handwritten document retrieval", *International Journal for Document Analysis and Recognition, Special Issue on Noisy Text Analytics*, Springer, Vol. 14, No. 2, pp. 145-157, 2011.

2010

27. P. Mansukhani, S. Tulyakov, and V. Govindaraju, "A framework for efficient fingerprint identification using a minutiae tree", *IEEE Systems Journal- Special Issue on Biometrics*, Vol. 4, No. 2, pp. 126-137, 2010.
28. V. Menon, B. Jayaraman, and V. Govindaraju, "Multimodal identification and tracking in smart environments", *Special Issue on Multimodal Systems, Services and Interfaces for Ubiquitous Computing in the Journal of Personal and Ubiquitous Computing*, Springer, Vol. 14, No. 8, pp. 685-694, 2010.
29. R. Chandrasekhar, J. C. Miecznikowski, D. P. Gaile, V. Govindaraju, F. V. Bright, and K. F. Sellers, "Xerogel package", *Chemometrics and Intelligent Laboratory Systems*, Elsevier Press, Vol. 96, No. 1, pp. 70-74, 2010.
30. A. Rusu, A. Thomas, and V. Govindaraju, "Generation and use of handwritten CAPTCHAs", *International Journal of Document Analysis and Recognition*, Springer, Vol. 13, No. 1, pp. 49-64, 2010.
31. S. Tulyakov, C. Wu, and V. Govindaraju, "On the difference between optimal combination functions for verification and identification systems", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 24, No. 2, pp. 173-191, 2010.

2009

32. F. Farooq, A. Bharadwaj, and V. Govindaraju, "Using topic models for OCR correction", *International Journal of Document Analysis and Recognition*, Springer, Vol. 12, No. 3, pp. 153-164, 2009.
33. A. Thomas, A. Rusu, and V. Govindaraju, "Synthetic handwritten CAPTCHAs", *The Journal of Pattern Recognition, Special Issue on Handwriting Recognition*, Elsevier Press, Vol. 42, No. 12, pp. 3365-3373, 2009.
34. F. Farooq, D. Jose, and V. Govindaraju, "Phrase based direct model for improving handwriting recognition accuracies", *The Journal of Pattern Recognition, Special Issue on Handwriting Recognition*, Elsevier Press, Vol. 42, No. 12, pp. 3271-3277, 2009.
35. H. Cao, A. Bharadwaj, and V. Govindaraju, "A probabilistic method for keyword retrieval in handwritten document images", *The Journal of Pattern Recognition, Special Issue on Handwriting Recognition*, Elsevier Press, Vol. 42, No. 12, pp. 3374-3382, 2009.
36. S. Kompalli, S. Setlur, and V. Govindaraju, "Devanagari OCR using a recognition driven segmentation framework and stochastic language models", *International Journal on Document Analysis and Recognition*, Springer, Vol. 12, No. 2, pp. 123-138, 2009.
37. R. N. Rodrigues, L. L. Ling, and V. Govindaraju, "Robustness of multimodal biometric fusion methods against spoof attacks", *Journal of Visual Languages and Computing, Special Issue on Advances in Multimodal Biometric Systems*, Elsevier Press, Vol. 20, No. 3, pp. 169-179, 2009.
38. R. Milewski, A. Bharadwaj, and V. Govindaraju, "Automatic recognition of handwritten medical forms for search engines", *International Journal of Document Analysis and Recognition*, Springer, Vol. 11, No. 4, pp. 203-218, 2009.

39. H. Cao and V. Govindaraju, "Preprocessing of low quality handwritten carbon forms using Markov Random Fields", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, IEEE Computer Society Press, Vol. 31, No. 7, pp. 1184-1194, 2009.
40. R. V. Yampolskiy and V. Govindaraju, "Strategy-based behavioral biometrics: A novel approach to automated identification", *International Journal of Computer Applications in Technology, Special Issue on: Automated Identification Technology*, Vol. 35, No. 1, pp. 29-41, 2009.

2008

41. S. Tulyakov and V. Govindaraju, "Use of identification trial statistics for the combination of biometric matchers", *IEEE Transactions on Information Forensics and Security*, IEEE Signal Processing Society Press, Vol. 3, No. 4, pp. 719-733, 2008.
42. R. Milewski and V. Govindaraju, "Binarization and cleanup of handwritten text from carbon copy medical form images", *The Journal of Pattern Recognition*, Elsevier Publishers, Vol. 41, No. 4, pp. 1308-1315, 2008.
43. R. V. Yampolskiy and V. Govindaraju, "Behavioral biometrics: A survey and classification", *International Journal of Biometrics*, Inderscience Publishers, Vol. 1, No. 1, pp. 81-113, 2008.

2007

44. S. Tulyakov, F. Farooq, P. Mansukhani, and V. Govindaraju, "Symmetric hash functions for secure fingerprint biometric systems", *Pattern Recognition Letters*, Elsevier Publishers, Vol. 28, No. 16, pp. 2427-2436, 2007.
45. R. V. Yampolskiy and V. Govindaraju, "Embedded noninteractive continuous bot detection", *ACM Computers in Entertainment (CIE)*, Vol. 5, No. 4, 2007.
46. S. Chikkerur, A. Cartwright, and V. Govindaraju, "Fingerprint image enhancement using STFT analysis", *The Journal of Pattern Recognition*, Elsevier Publishers, Vol. 40, No. 1, pp. 198-211, 2007.
47. R. N. Rodrigues, L. L. Ling, and V. Govindaraju, "Robustness of multimodal biometric fusion methods against spoof attacks", *Journal of Visual Languages and Computing. Special Issue on Advances in Multimodal Biometric Systems*, Elsevier Press, Vol. 20, No. 3, pp. 169-179, 2009.
48. R. Milewski, A. Bharadwaj, and V. Govindaraju, "Automatic recognition of handwritten medical forms for search engines", *International Journal of Document Analysis and Recognition*, Springer, Vol. 11, No. 4, pp. 203-218, 2009.
49. R. V. Yampolskiy and V. Govindaraju, "Computer security: A survey of methods and systems", *Journal of Computer Science*, Vol. 3, No. 7, pp. 478-486, 2007.
50. R. V. Yampolskiy and V. Govindaraju, "Direct and indirect human computer interaction-based biometrics", *Journal of Computers*, Vol. 2, No. 10, pp. 76-88, 2007.
51. K. Bowyer, V. Govindaraju, and N. Ratha, "Guest editorial: Introduction to the special issue on recent advances in biometric systems", *IEEE Transactions on Systems, Man, and Cybernetics – Part B*, Vol. 37, No. 5, pp. 1091-1093, 2007.

2006

52. Z. Shi and V. Govindaraju, "A chaincode based scheme for fingerprint feature extraction", *Pattern Recognition Letters*, Elsevier Press, Vol. 27, pp. 462-468, 2006.
53. L. Lorigo and V. Govindaraju, "Offline Arabic handwritten recognition: A survey", *IEEE Transaction on Pattern Analysis and Machine Intelligence*, IEEE Computer Society Press, Vol. 28, No. 5, pp. 712-724, 2006.
54. S. Kompalli, S. Setlur, and V. Govindaraju, "Multi-font Devanagari OCR using recognition driven segmentation", *Vivek – A Quarterly Journal of Artificial Intelligence*, National Centre for Software Technology, Vol. 16, No. 3, pp. 18-25, 2006.
55. H. Xue and V. Govindaraju, "Hidden Markov models combining discrete symbols and continuous attributes in handwriting recognition", *IEEE Transaction on Pattern Analysis and Machine Intelligence*, IEEE Computer Society Press, Vol. 28, No. 3, pp. 458-462, 2006.

2005

56. H. Lei and V. Govindaraju, "Matching and retrieving sequential patterns under regression", *International Journal on Web Intelligence and Agent Systems*, IOS Press, Vol. 3, No. 4, pp. 261-270, 2005.
57. T. Jea and V. Govindaraju, "A minutia-based partial fingerprint recognition system", *The Journal of Pattern Recognition*, Elsevier Publishers, Vol. 38, No. 10, pp. 1672-1684, 2005.
58. H. Lei and V. Govindaraju, "A comparative study on the consistency of features in online signature verification", *Pattern Recognition Letters*, Elsevier Press, Vol. 26, No. 15, pp. 2483-2489, 2005.
59. A. Teredesai and V. Govindaraju, "GP-based secondary classifiers", *The Journal of Pattern Recognition*, Pergamon Publishers, Vol. 38, No. 4, pp. 505-512, 2005.

2002

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61. V. Govindaraju, P. Slavik, and H. Xue, "Lexicon density as a measure for performance evaluation of handwritten recognizers", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, IEEE Computer Society Press, Vol. 24, No. 6, pp. 789-800, 2002.
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64. Y. Wu, K. Ianakiev, and V. Govindaraju, "Improved to k-nearest neighbor classification", *The Journal of Pattern Recognition*, Pergamon Press, Vol. 35, No. 10, pp. 2311-2318, 2002.
65. R. Kasturi, L. O. Gorman, and V. Govindaraju, "Document image analysis: A primer", *Saadhana*, Vol. 27, No. 1, pp. 3-22, 2002.

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2000

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70. X. Wang, V. Govindaraju, and S. Srihari, "Holistic recognition of handwritten character pairs", *Journal of Pattern Recognition*, Pergamon Publishers, Vol. 33, No. 12, pp. 1967-1974, 2000.
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1999

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1998

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79. G. Sheikoasami, S. Srihari, and V. Govindaraju, "Computer-aided graphology and Persian handwriting", *Computer Magazine*, Vol. 9, No. 61, pp. 43-46, 1998. (in Arabic).

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81. G. Kim and V. Govindaraju, "A lexicon driven approach to handwritten word recognition for real-time applications", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, IEEE Computer Society Press, Vol. 19, No. 4, pp. 366-379, 1997.
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1996

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166. P. Mansukhani and V. Govindaraju, "Selecting optimal classification features for SVM based elimination of incorrectly matched minutiae", 5th SPIE Symposium on Biometric Technology for Human Identification, Orlando, FL, 2008.
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174. J. Li, S. Tulyakov, and V. Govindaraju, "Verifying fingerprint match by local correlation methods", 1st IEEE Conference on Biometrics: Theory, Algorithms, and Systems, Washington, D.C., pp. 1-5, 2007. (Oral presentation acceptance rate = 25%).
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356. V. Govindaraju, R. Srihari, D. Sher, and S. Srihari, "Locating human faces in newspaper photographs", IEEE Conference on Computer Vision and Pattern Recognition, IEEE Computer Society Press, San Diego, CA, pp. 278-281, 1989.

PATENTS (6)

1. US 8,005,277: "Secure fingerprint matching by hashing localized information", S. Tulyakov, F. Farooq, S. Chikkerur, and V. Govindaraju, 2011.
2. US 7,689,006: "Biometric convolution using multiple biometrics", V. Govindaraju, V. Chavan, and S. Chikkerur, 2010.
3. US 7,580,551. "Method and apparatus for analyzing and/or comparing handwritten and/or biometric samples", S. Srihari, V. Govindaraju, et. al. 2009.
4. US 20080260212. "System for indicating deceit and verity", V. Govindaraju, J. Holsopple, M. Moskal, P. Kilinskas, and T. Slowe, 2008.
5. US 20080220984. "Method for diagnosis of physiological states by detecting patterns of volatile analytes", F. Bright, A. Cartwright, V. Govindaraju, W. Hicks, and A. Titus, 2008.
6. US 5,515,455: "System for recognizing handwritten words of cursive script", V. Govindaraju, D. Wang, and S. Srihari, 1996.

Grants & Research Projects Support

Total Sponsored Funding: \$97M

Projects	Government	PI: V. Govindaraju Co-Is	Awards	Period
Collaboration on Renewable Integration & System Optimization	NYPA		\$823,000	2025-26
Center for Identification Technology Research (CITeR) Phase III	NSF	Setlur	\$346,798	2025-29
Center for Identification Technology Research (CITeR) Phase III Program Income	Public Safety Canada	Setlur	\$346,798	2025-29
Center for Identification Technology Research (CITeR) Phase III Program Income	DRDC, Canada	Setlur	\$45,000	2025-29
NY SMART I-Corridor Commercialization & Collaboration Center (C3)	Economic Development Administration	Stromhaug	\$935,000	2024-28
NSF & IES AI Institute for Transforming Education for Children with Speech and Language Processing Challenges	National Science Foundation (NSF)	Xiong Setlur (MD)	\$20,000,000	2023-27
Autonomous Target Recognition System for Thermal Infrared Spectrum	US Air Force Research Laboratory (AFRL)	Mitin	\$100,000	2022-23
Biometric Recognition and Identification at Altitude and Range (BRIAR)	Intelligence Advanced Project Activity (IARPA)	Setlur	\$682,367	2021-24
Center for Identification Technology Research (CITeR) Phase II	NSF	Setlur	\$500,000	2018-25
CITeR Government (MIPR via NSF) Phase II	Dept of Homeland Security (DHS)	Setlur	\$368,871	2018-24
CITeR Program Income (via WVU/Clarkson) Phase II	DFBA, DHS-Cyber	Setlur	\$700,000	2018-24
CIF21 DIBBs: EI: Data Laboratory for Materials Engineering	NSF	Setlur, Rajan, Furlani	\$2,909,772	2016-22
Janus - Face Recognition	IARPA	Setlur	\$1,300,000	2014-18

Long term active authentication using multi- modal user profiles	NSF	Setlur, Upadhyaya, Nwogu	\$1,200,000	2013-16
Center for Identification Technology Research (CITeR) Phase I	NSF	Setlur, Nwogu	\$300,000	2013-18
CITeR (Government via MIPR) Phase I	DHS	Setlur, Nwogu	\$175,744	2013-18
CITeR (Government via WVU) Phase I	National Security Agency (NSA)	Setlur, Nwogu	\$77,480	2013-18
Planning I/UCRC Grant	NSF	Setlur	\$12,997	2012
Privacy Preserving Biometric Templates & Efficient Indexing	NSF	Rudra	\$514,788	2011-14
Identifying Accents in Handwritten Scripts	NSF		\$150,000	2010-12
Transcript Mapping in Indic Scripts	NSF		\$94,234	2008-10
Health Card Biometrics	NY Science & Technology Advanced Research (NYSTAR)		\$25,000	2008
Multilingual Document Classification	Defense Advanced Project Agency (DARPA)	Setlur	\$3,277,393	2007-13
Person Specific Behavioral Dynamics	NSF	Frank	\$852,649	2007-10
Sanskrit Digital Library	NSF		\$202,888	2005-08
Advanced Biometrics	Dept. of Defense (DoD)	Moskal	\$1,585,884	2005-07
Multimodal Biometric Systems	Army Research Labs (ARL)		\$265,714	2004-06
Disease Surveillance Informatics	NSF	Setlur	\$450,000	2004-08
Arabic Handwritten OCR	Directorate of Central Intelligence (DCI)		\$240,000	2004-06
Smart Card Biometrics	NYSTAR		\$100,000	2004-05
Automation of Medical Forms	NSF		\$50,000	2003-04
Cognitive Recognition Models	NSF		\$99,731	2002-03
Devanagari OCR	NSF		\$487,319	2002-04
Total Federal/State Funding as PI			\$39,219,427	

Center for Identification Technology Research (CITeR) Phase III Program Income	PrivateID, ACV Auctions	Setlur	\$90,000	2025-29
AI for Monitoring of Students with Writing Disabilities	Google		\$100,000	2025-26
CITeR Industry Phase II	Qualcomm, ACV, Zoloz	Setlur	\$520,000	2018-25
Preparation of Data Sets	Lockheed	Setlur	\$130,000	2014-15
Automated Package Processing System (APPS) Support	Lockheed	Setlur	\$54,571	2013-14
CITeR Industry Phase I	Raytheon, CUBRC, Qualcomm, Zoloz	Setlur, Nwogu	\$350,000	2013-18
ML in NLP	Digilant		\$30,000	2012-13
Scene Text OCR	eBay		\$50,000	2012-13
Handwriting Datasets	Google		\$50,000	2012-13
Soft Biometrics	CUBRC		\$200,000	2011-12
Machine Learning	Fujitsu		\$55,000	2011
Pen, Touch, and Hand Gestures	HP Labs	Corso	\$150,000	2008-10
Processing Hand-Annotated Documents	HP Labs	Setlur	\$185,000	2008-11
Smart Card Biometrics	Health Networks		\$75,000	2008
GUI for DAQ	ACIS	Setlur	\$40,000	2008
Barcodes project	Matrix	Setlur	\$161,663	2008-10
Arabic OCR	Applied Media Analysis		\$150,000	2008-10
Document Classification	Coppanion		\$20,000	2007-08
Student Doctoral Fellowship	IBM		\$55,314	2007-09
RCR Truthing	Lockheed	Setlur	\$1,094,900	2007-14
Behavioral Dynamics	CUBRC		\$31,000	2007
NY State Medical Forms	Buffalo Graphics		\$60,000	2005-07
Information Retrieval for HW Documents	Google		\$50,000	2005-06
Biometric Fusion	CUBRC		\$25,000	2005
Friction Ridge Analysis	CUBRC		\$25,000	2005-06
Face Recognition	CUBRC		\$25,000	2005
Multimodal Biometrics	CUBRC		\$25,000	2005
CAPTCHAS for Web Security	CUBRC		\$25,000	2004-05
Smart Card Biometrics	U-Scan		\$50,000	2004
Biometric Access Control System	International Graphics Inc.		\$235,000	2003-04
Automatic Fingerprint Identification Systems	Ultra-Scan	Bartnik, Setlur	\$1,246,333	2002-05

Medical Forms Reading	CUBRC		\$25,000	2003-04
Forms Reading	CUBRC		\$25,000	2003-04
Biometrics	CUBRC		\$5,000	2003-04
HWAI Plus	Siemens	Srihari	\$317,000	2002-03
Parcel Recognition (PARS	Siemens	Srihari	\$90,000	2002
Student Support Fellowship	IBM		\$21,000	2001-02
Canadian Postcode Interpretation	Siemens	Srihari	\$50,000	2000-01
Handwritten Address Interpretation	Siemens	Srihari	\$300,000	2000-01
Canadian Postcode Recognition	Systems House Ltd.	Srihari	\$10,000	1994
Recognition of Hand Printed Forms	Readers Digest	Srihari	\$10,000	1994
Document Analysis and Recognition	Xerox	Srihari	\$70,000	1993-00
Total Industry Funding			\$6,281,781	
Total Funding as PI			\$45,501,208	
Non-Postal Funding as Co-PI				
OCR Solutions	FBI (via WVURC)	Setlur	\$298,786	2022-24
AI Driven Adaptive Sensors for Object Recognition	Army Research Labs	Mitin, Oktyabrsky	\$500,000	2021-23
Odor Typing for Disease Detection	Oishei Foundation	Bright, Cartwright, Titus	\$400,000	2006-07
The LitGloss Project	National Endowments for Humanities (NEH)	Jameson	\$196,938	2003-05
Unobtrusive Biometrics Systems	NYSTAR	Bright, Titus, Cartwright	\$153,360	2003-04
Handwritten Text Recognition	NSA	Chin, Srihari	\$532,939	1994-96
Handwriting Individuality	National Institute of Justice (NIJ)	Shin, Srihari	\$428,328	1999-00
Total Funding as Co-PI (Non- Postal)			\$2,510,351	
Govindaraju Co-PI	Postal	PI		
IES Enhancements, Test Decks, Truthing for PARS V	USPS	Setlur	\$398,000	2016-20
Image Scoring Perf Eval APBS Program	USPS	Setlur	\$26,983	2015

Flats RECO 2	USPS	Setlur	\$38,548	2014
Prep of TD14 Test Deck for Comp Eval DQI Recognition Program	USPS	Setlur	\$224,016	2014-15
Perf Eval for DQI Recognition Program	USPS	Setlur	\$575,462	2013-15
DQI TD13 Test Deck Creation Support	USPS	Setlur	\$249,127	2013-14
Evaluation of Flat Mail Recognition Improvements	USPS	Setlur	\$256,165	2013-14
Image Scoring and Evaluation Support (APPS)	USPS	Setlur	\$77,897	2012-13
DQI Evaluation	USPS	Setlur	\$359,921	2012-13
Cancellation Mark Readability	USPS	Setlur	\$26,974	2012
Test Deck, RCR Development Support	USPS	Setlur, Srihari	\$690,009	2011-12
APBS Parcel Project	USPS	Setlur	\$95,489	2010-11
OCR Assist	USPS	Setlur	\$46,051	2009-10
DQI Evaluation Support	USPS	Setlur, Srihari	\$2,253,975	2008-11
PRIP, FRIP and FSS Evaluation	USPS	Setlur, Srihari	\$786,069	2008-10
Intelligent Mail Technologies	USPS	Setlur, Srihari	\$30,918	2009
Flats Image Collection and Truthing	USPS	Setlur, Srihari	\$1,950,533	2003-08
Digital Camera use in Barcode Imaging	USPS	Setlur, Srihari	\$409,867	2003-07
Image Collection and Truthing	USPS	Setlur, Srihari	\$4,368,541	2003-08
Alternate Keying Strategies	USPS	Srihari	\$165,000	2004-05
Reply Card Scanning	USPS	Srihari	\$210,000	2003-04
Personal Name Lookups	USPS	Setlur, Srihari	\$166,000	2003
Comparison Study of Barcodes	USPS	Setlur, Srihari	\$470,000	2003-05
UK Address Interpretation Project	Lockheed	Setlur, Srihari	\$15,000	2003
Image Evaluation System- Flats	USPS	Setlur, Srihari	\$340,000	2002-03
Micropayment Processing	USPS	Srihari	\$1,204,000	2001-03
Mailpiece Library	USPS	Setlur, Srihari	\$190,000	2002
Evaluation of ID Codes	USPS	Srihari	\$133,000	2001
Return Merchandise System	USPS	Bartnik, Srihari	\$300,000	2001-02
Image Evaluation System	USPS	Setlur, Srihari	\$1,850,583	1999-03
Information Based Indicia	USPS	Srihari	\$300,000	1999-01
UK Address Interpretation Project	Lockheed	Setlur, Srihari	\$1,245,000	2000-02
RCR/HWAI	Lockheed	Srihari	\$660,000	2000-01
Directory Generation	Lockheed	Setlur, Srihari	\$44,235	2000-01
Image Truthing	USPS	Setlur, Srihari	\$1,102,000	2000-02
Address Interpretation for UK	Lockheed	Setlur, Srihari	\$1,224,367	2000

HWAI Control Strategy	Lockheed	Srihari	\$129,190	1999-00
PROZE Character Recognition	Lockheed	Srihari	\$128,395	1999-00
VRR Word Recognizer	Lockheed	Srihari	\$42,590	1999-00
Foreign Address Processing	Lockheed	Setlur, Srihari	\$101,417	1999-00
RCR/HWAI Improvements	Lockheed	Srihari	\$503,480	1999-00
UKAI Parsing and Resolution	Lockheed	Setlur, Srihari	\$152,442	1999-00
HWAI Australian, Release 4	Lockheed	Srihari	\$240,000	1999-00
Truthing for RIP	USPS	Setlur, Srihari	\$75,000	1999-00
Truthing and Analysis	USPS	Setlur, Srihari	\$290,636	1999-00
New Image Evaluation System	USPS	Setlur, Srihari	\$395,257	1999-00
Semi-automated Encoding	USPS	Setlur, Srihari	\$185,261	1999-00
Sender Information Processing	USPS	Setlur, Srihari	\$134,167	1999-00
Equipment Grant	USPS	Srihari	\$46,200	1999-00
Travel Grant	USPS	Srihari	\$34,103	1999-00
HWAI of Australia, Release 3	Lockheed	Srihari	\$218,333	1999
Last Line, Foreign Processing	Lockheed	Srihari	\$100,412	1999
Image Processing Functions	Lockheed	Srihari	\$69,156	1999
Control Strategy	Lockheed	Srihari	\$101,468	1999
Word Recognizer	Lockheed	Srihari	\$46,541	1999
New Character Recognition	Lockheed	Srihari	\$45,019	1999
HWAI of Australia, PIP -1	Lockheed	Srihari	\$230,000	1999
HWAI of Australia, PIP	Lockheed	Srihari	\$89,959	1999
Gray Scale Investigation	USPS	Srihari	\$790,000	1998-00
Address Truthing Analysis	USPS	Srihari	\$1,424,641	1998-00
HWAI Control Structures	Lockheed	Srihari	\$79,200	1998-99
Database Enhancement	Lockheed	Srihari	\$52,500	1998-99
New Parsing Technique	Lockheed	Srihari	\$77,500	1998-99
New Word Recognition	Lockheed	Srihari	\$132,000	1998-99
New Character Recognition	Lockheed	Srihari	\$88,000	1998-99
RCR/HWAI Improvements	Lockheed	Srihari	\$400,000	1998-99
Firm name Recognition	Lockheed	Srihari	\$70,738	1998-99
RCR/ HWAI Improvements	Lockheed	Srihari	\$568,538	1998-99
Port HWAI to NT	Lockheed	Srihari	\$28,586	1998-99
HWAI Recognition Co- processor	USPS	Srihari	\$650,000	1998
HWAI of Australia	Lockheed	Srihari	\$1,144,418	1997-98
RCR/ HWAI Integration	Lockheed	Srihari	\$1,500,000	1997-98
HWAI PC Integration	USPS	Srihari	\$494,924	1997-98
HWAI/RCR Research	Lockheed	Srihari	\$550,860	1997
HWAI/RCR	Lockheed	Srihari	\$407,686	1997
Directory Compression	USPS	Srihari	\$37,959	1997
Image Analysis	USPS	Srihari	\$40,722	1997
Evolutionary Computing	USPS	Srihari	\$57,410	1997

HWAI PC Porting	USPS	Srihari	\$215,497	1997
HWAI/RCR Research	Lockheed	Srihari	\$585,924	1996-97
HWAI/RCR Integration	Lockheed	Srihari	\$596,474	1996-97
HWAI PC Integration, Task 1	USPS	Srihari	\$255,076	1996-97
HWAI Integration Testing	USPS	Srihari	\$99,750	1996-97
Improvements in HWAI	USPS	Srihari	\$2,510,680	1993-96
Reply Card Processing - Phase III	USPS	Srihari	\$1,388,534	1995-96
Reply Card Processing PIMS	USPS	Srihari	\$1,435,416	1993-95
Interactive Service Research	USPS	Srihari	\$1,299,519	1993-96
Supplemental Activities	USPS	Srihari	\$750,000	1991-95
HWAI Research	USPS	Srihari	\$3,256,837	1991-94
Total Postal Funding Co-PI			\$46,832,145	
TOTAL FUNDING (PI /Co-PI)			\$94,843,704	
MIMS OCR	USPS	Setlur	\$92,738	2023-25
SCC-PG: Sustainable & Connected Community-Scale Food System	NSF	Kennedy (PI), Setlur (Co-PI)	\$150,000	2021-23
AFSM100-TR2-FPARS	USPS	Setlur	\$95,440	2023-25
Package Reco R2P2	USPS	Setlur	\$138,785	2022-25
Dangerous goods label detection pilot	USPS	Setlur	\$150,184	2022-23
Informed Address	USPS	Setlur	\$65,000	2021-22
Package Reco R2	USPS	Setlur	\$83,460	2021-22
AMP Audio ML	ACV Auctions	Setlur	\$14,000	2020
EPPS OCR	USPS	Setlur	\$80,000	2019-20
RCR TD19 Evaluation	USPS	Setlur	\$289,121	2019-20
COA Forms Processing	USPS	Setlur	\$123,456	2019-20
Letter Mail Forward Intercept System	USPS	Setlur	\$64,470	2018-19
AFSM100-TR1	USPS	Setlur	\$91,536	2018-19
Interactive Document Processing	W. Interactive	Setlur	\$25,815	2018-19
APPS-SSIU Performance Evaluation	USPS	Setlur	\$82,847	2017-18
RAPTIR	USPS	Setlur	\$169,003	2017
DSS OCR	USPS	Setlur	\$42,315	2016-17
DSS/PASS	USPS	Setlur	\$19,365	2016
Package Reco	USPS	Setlur	\$28,670	2016
RCR, APPS and SSIU Evaluation	USPS	Setlur	\$279,675	2016-17
Flats Recognition	USPS	Setlur	\$48,660	2015-16
DSS	USPS	Setlur	\$50,360	2015
PRES	USPS	Setlur	\$20,011	2015
SSIU-PRES	USPS	Setlur	\$71,226	2014

Other funding at CUBS	\$2,276,137
TOTAL FUNDING (PI /Co-PI + Other CUBS Funding)	\$97,119,841

Mentorship

Post-Doctoral Fellows (6)

2023-24	S. Suresh (Amrita PhD)	• Handwriting Recognition and Dyslexia
2017-20	K. Davila (RIT PhD)	• Equations OCR and Understanding
2017-18	R. Subramanian (UB PhD)	• Materials Discovery and Machine Learning
2015-16	Y. Zhou (UB PhD)	• Deep Learning
2006-07	S. Tulyakov (UB PhD)	• Fusion of Classifiers
2004-06	L. Lorigo (MIT PhD)	• Arabic Handwriting Recognition

Major Advisor of Doctoral Students Graduated (47)

2025	Bhavin Jawade <i>Netflix, CA</i>	Multimodal Contrastive Models through Zero-shot Training
2024	Dennis Fedorishin <i>ACV Auctions, NY</i>	• Listen and Learn: From Supervised to Contrastive Multi-Modal Audio Deep Learning
2023	Deen Dayal Mohan <i>Verizon, NY</i>	• Improving Representation Learning for Diverse Modalities and Distributions with Metric Learning
2023	Kyung Won Lee <i>Icahn School of Medicine, Mount Sinai, NY</i>	• Learning Appearance Features Using Soft-Biometrics for Long-term Person Re-identification
2021	Nagashri N. Lakshminarayana <i>Amazon, CA</i>	• Modeling Local Attention and Relations for Automated Facial Action Unit Recognition
2021	Nishant Sankaran <i>Amazon, CA</i>	• Feature Fusion for Deep Representations
2020	Bhargav Urala Kota <i>ACV Auctions, NY</i>	• Lecture Video Summarization by detection and representation of content
2019	Neeti Pokhriyal <i>NSF</i>	• Multiview learning via Gaussian processes with applications in biometrics and sustainability
2018	Neeti Narayan <i>Amazon, MN</i>	• Re-identification for online person tracking using spatio-temporal discrimination
2017	Rathin Radhakrishnan <i>Qualcomm, NY</i>	• An adaptive framework for metadata extraction and analysis from documents
2016	Rohit Pandey <i>Google, CA</i>	• Learning privacy preserving representations using deep neural networks
2016	Devansh Arpit <i>SalesForce, CA</i>	• Methodologies for learning data manifolds and robust feature representation
2015	Shounak Gore <i>Qualcomm, NY</i>	• Social networks analysis using game theory
2015	Yingbo Zhou <i>SalesForce, CA</i>	• Towards a globally optimal approach for learning deep unsupervised models

2015	Aarti Shivram <i>CUBRC, NY</i>	<ul style="list-style-type: none"> Dynamic hierarchical relational models for handwriting recognition on mobile devices
2015	Gaurav Kumar <i>Amazon, CA</i>	<ul style="list-style-type: none"> Bayesian approaches for word spotting
2014	Chetan Ramaiah <i>Google, CA</i>	<ul style="list-style-type: none"> Accents in handwriting: A hierarchical Bayesian approach to handwriting analysis
2014	Utkarsh Porwal <i>Walmart, CA</i>	<ul style="list-style-type: none"> A semi-supervised framework for handwriting analysis
2013	Manavender Malgireddy <i>Amazon, WA</i>	<ul style="list-style-type: none"> Language motivated approaches for human action recognition and spotting
2012	Xi Cheng <i>Google, CA</i>	<ul style="list-style-type: none"> A novel multi-sample fusion methodology for improving biometric verification
2012	Safwan Wshah <i>University of Vermont, VT</i>	<ul style="list-style-type: none"> Word spotting in multilingual handwritten documents using character recognition HMM models
2011	Ricardo Rodriguez <i>Universidade Federal do Rio Grande, Brazil</i>	<ul style="list-style-type: none"> Transfer Learning for probability density estimation
2011	D. You <i>University of Michigan, MI</i>	<ul style="list-style-type: none"> Methods for content extraction towards improved biomedical multimodal retrieval
2010	Xijun Peng <i>ISI, University of Southern California, CA</i>	<ul style="list-style-type: none"> Probabilistic Random Field based text identification
2010	Vivek Menon <i>(Co-advised)</i> <i>Amrita University, India</i>	<ul style="list-style-type: none"> Integrating Recognition and Reasoning for Identification and Tracking in Smart Environments
2010	Anurag Bhardwaj <i>Apple, CA</i>	<ul style="list-style-type: none"> Statistical techniques for efficient indexing and retrieval of document images
2010	Achint O. Thomas <i>Deep Science and Trusted Datasets, Canada</i>	<ul style="list-style-type: none"> Enhancing cyber security through synthetic handwritten CAPTCHAs
2009	Jiang Li <i>Quincy University, IL</i>	<ul style="list-style-type: none"> Integrating minutiae based fingerprint matching with local correlation methods
2009	Ifeoma Nwogu <i>University at Buffalo, NY</i>	<ul style="list-style-type: none"> Statistical modeling and inferencing techniques for medical image segmentation
2008	Zhi Zhang <i>J. P. Morgan Chase, NY</i>	<ul style="list-style-type: none"> Integrating facial expressions and skin texture in face recognition
2008	Huaigu Cao <i>ISI, University of Southern California, CA</i>	<ul style="list-style-type: none"> Enhancement and retrieval of low quality handwritten documents
2008	Faisal Farooq <i>LinkedIn, NY</i>	<ul style="list-style-type: none"> Use of language models and automatic topic categorization for indexing and retrieval of handwritten document images
2008	Praveer Mansukhani <i>Machinomatic Engineers, India</i>	<ul style="list-style-type: none"> A framework for efficient fingerprint identification using a minutiae tree

2008	Roman Yampolisky <i>University of Louisville, KY</i>	<ul style="list-style-type: none"> Intrusion detection using spatial information and behavioral biometrics
2008	Amalia Rusu <i>Fairfield University, CT</i>	<ul style="list-style-type: none"> Exploiting gap between human and machine in handwriting recognition
2007	Chaohong Wu <i>KLA-Tencor, CA</i>	<ul style="list-style-type: none"> Framework for fingerprint enhancement and feature detection
2007	Suryaprakash Kompalli <i>INSOFE, India</i>	<ul style="list-style-type: none"> Stochastic framework for font-independent Devanagari OCR
2007	Robert Milewski <i>@Hidden, Japan</i>	<ul style="list-style-type: none"> Automatic search engines for handwritten medical forms
2006	Sergey Tulyakov <i>University at Buffalo, NY</i>	<ul style="list-style-type: none"> A complexity framework for combining classifiers in biometric systems
2005	Tsai Yang Jea <i>Bloomberg, NY</i>	<ul style="list-style-type: none"> Minutiae-based partial fingerprint recognition
2005	Hansheng Lei <i>University of Texas, Rio Grande Valley, TX</i>	<ul style="list-style-type: none"> Sequential pattern classification without explicit feature extraction
2003	Ankur Teredesai <i>University of Washington, Tacoma, WA</i>	<ul style="list-style-type: none"> Use of genetic programming for advanced pattern recognition
2002	Hanhong Xue <i>Google, NY</i>	<ul style="list-style-type: none"> Stochastic models for handwritten word recognition
2000	Ianiev Krassimir <i>Fair Isaac, Inc., CA</i>	<ul style="list-style-type: none"> Organizing multiple experts for efficient pattern recognition
2000	Jaehwa Park (Co-advised) <i>Chung-Ang University, S. Korea</i>	<ul style="list-style-type: none"> Hierarchical character recognition in handwritten phrase recognition
1997	Sriganesh Madhvanath (Co-advised) <i>eBay, NY</i>	<ul style="list-style-type: none"> The holistic paradigm in handwritten word recognition and its applications
1996	Gyeonghwan Kim (Co-advised) <i>Sogang University, S. Korea</i>	<ul style="list-style-type: none"> Handwritten word recognition for real-time applications

Major Advisor of graduated master's students (17) with thesis option

2013	Nisha Bhaskaran <i>Time Inc., CA</i>	<ul style="list-style-type: none"> Facial Expressions and Deception
2009	Omar Mukhtar <i>Amazon, WA</i>	<ul style="list-style-type: none"> Language Modeling
2009	Bhaskar Purkayastha <i>Hughes Systems, MD</i>	<ul style="list-style-type: none"> Gesture Recognition
2008	Daemien Jose <i>Microsoft, WA</i>	<ul style="list-style-type: none"> Transcript Mapping
2006	Kartik Sridharan <i>Cornell University, NY</i>	<ul style="list-style-type: none"> Sematic Face Recognition
2006	Sankalp Nayak <i>Morgan Stanley, NY</i>	<ul style="list-style-type: none"> Devanagari OCR
2006	Shamalee Deshpande <i>Veritas Technologies, CA</i>	<ul style="list-style-type: none"> Accent in Speech

2005	Amit Mahtre <i>Amazon, WA</i>	<ul style="list-style-type: none"> • Hand Geometry Biometrics
2005	Sharat Chikkerur <i>Microsoft, MA</i>	<ul style="list-style-type: none"> • Fingerprint Verification
2004	Pawan Rudravaram <i>Qualcom, CA</i>	<ul style="list-style-type: none"> • Palmprint Recognition
2004	Sumeet Manocha <i>Patni Computers, India</i>	<ul style="list-style-type: none"> • Security of Biometrics Systems
2004	Viraj Chavan <i>Nividea, CA</i>	<ul style="list-style-type: none"> • Biometrics and Barcode Representation
2004	Srinivas Palla <i>Amazon, CA</i>	<ul style="list-style-type: none"> • Multimodal Biometrics
2003	Swapnil Khadekar <i>Bloomberg, NY</i>	<ul style="list-style-type: none"> • Devanagari OCR
2000	David Bartnik <i>Qualcom, NY</i>	<ul style="list-style-type: none"> • Video Surveillance
2000	Gaurav Pal <i>BMC Software India</i>	<ul style="list-style-type: none"> • Music Index on the Web
2000	F. Zhou <i>Panasonic, NJ</i>	<ul style="list-style-type: none"> • Thinning Algorithms

2000-14 **McNair Scholars program (post baccalaureate)**

HON 101: Presidential Scholars Development Seminar (undergraduates)		
11/3/2016	Experiential Learning Activities	16 students
11/5/2015	Experiential Learning Activities	19 students

- 18 academic institution placements, including tenure track faculty positions at Cornell University and University of Washington.
- 4 placements in top university research labs: Dartmouth, USC, UB, and University of Michigan.
- 2 MS students went on to graduate with doctorates from MIT and University of Chicago.
- Students placed in USA, Brazil, India, Japan, China, and S. Korea.

Teaching

Undergraduate Lower Division		Class size
Fall 94	Introduction to Programming	90
Spring 95	Introduction to Programming	90
Undergraduate Upper Division		
Summer 89	Introduction to Artificial Intelligence	30
Fall 96	Computer Architecture and Organization	98
Spring 97	Algorithms and Data Structures	40
Spring 98	Computer Architecture and Organization	100
Fall 98	Computer Architecture and Organization	94
Spring 99	Computer Architecture and Organization	67
Graduate core classes		
Spring 00	Operating Systems	59
Fall 00	Operating Systems	76
Advanced graduate classes		
Fall 00	Topics in Artificial Intelligence	8
Fall 03	Document Analysis and Recognition	6
Spring 03	Topics in Artificial Intelligence	13
Spring 04	Topics in Artificial Intelligence	13
Fall 04	Image Analysis	12
Spring 05	Topics in Artificial Intelligence	11
Fall 05	Topics in Artificial Intelligence	7
Spring 06	Biometrics	6
Spring 07	Topics in Artificial Intelligence	8
Fall 07	Biometrics	10
Spring 08	Topics in Artificial Intelligence	6
Fall 08	Biometrics	7
Spring 09	Markov Models	7
Fall 09	Biometrics	11
Spring 10	Machine Learning	9
Fall 10	Biometrics	10
Spring 11	Machine Learning	13
Fall 11	Machine Learning	17
Spring 12	Biometrics	9
Fall 13	Biometrics	13
Spring 14	Topics in Artificial Intelligence	16
Fall 15	Topics in Artificial Intelligence	7
Fall 16	Topics in Artificial Intelligence	7
Fall 17	Deep Learning	10
Fall 19	Biometrics and Machine Learning	13
Fall 21	Computational Vision	26

Professional Service

Professional Societies Activities		
• IEEE Biometrics Council	President	2015 - 16
• IEEE Biometrics Council Nominations Committee	Chair	2009 - 11, 17-19
• IEEE Biometrics Council (Education)	Member	2007 - 08
• IEEE Education Activities Board	SME	2007 - 08
• International Graphonomics Society (IGS)	Secretary	2007- 09

Editorial Boards	
• IEEE Access	2015 - 2020
• IDRBT Journal of Banking Technologies	2017 - on
• IEEE Transactions on Information Security and Forensics	2014 - 2016
• IEEE Biometrics Compendium (Editor-in-Chief)	2012 - 2016
• IET Biometrics Identification	2011 - on
• Journal of Technology Management for Growing Economies	2010 - on
• International Journal on Document Analysis and Recognition	2003 - on
• International Journal of Pattern Analysis and Applications	2004 - 2008
• IEEE Transactions on Systems, Man, and Cybernetics (B)	2000 - 2008
• IEEE Transactions on Pattern Analysis and Machine Intelligence	2001 - 2005
• The Journal of Pattern Recognition	1997 - 2005

Conference Leadership		
• General Co-Chair	SUNY AI Symposium, Buffalo, NY	Apr. 2025
• Executive Chair	IEEE International Conference on Document Analysis and Recognition, San Jose, CA	Aug. 2023
• General Chair	IEEE International Conference on Identity, Security, and Behavioral Analysis (ISBA), Hyderabad, India	Jan. 2019
• General Chair	IAPR International Conference on Frontiers of Handwriting Recognition, Niagara Falls, NY	Aug. 2018
• Honorary Chair	IEEE International Conference on Identity, Security, and Behavioral Analysis (ISBA), Singapore	Jan. 2018
• General Chair	IEEE International Conference on Identity, Security, and Behavioral Analysis (ISBA), New Delhi, India	Feb. 2017
• General Chair	IAPR Summer School on Document Analysis: Document Informatics, Jaipur, India	Jan. 2017
• General Chair	IEEE Biometrics, Theory, Algorithms, and Systems (BTAS), Niagara Falls, NY	Sept. 2016
• General Co-Chair	International Conference on Information and Systems Security (ICISS), Hyderabad, India	Dec. 2014
• Sponsorship Chair	International Joint Conference on Biometrics, Tampa, FL	Sept. 2014
• Area Co-Chair	International Conference on Pattern Recognition (ICPR), Stockholm, Sweden	Aug. 2014
• General Co-Chair	Int. Conf. on Document Analysis and Recognition, Washington, D.C.	Sept. 2013
• General Co-Chair	ICDAR Multilingual OCR Workshop, Washington D.C.	Aug. 2013

• General Co-Chair	Int. Conf. on Information Assurance and Management, Buffalo, NY	Aug. 2013
• Industry Chair	IAPR International Conference on Biometrics (ICB), Madrid, Spain	Jun. 2013
• Program Co-Chair	CVPR Biometrics Workshop, Portland, OR	Jun. 2013
• Tutorials Co-chair	IAPR International Conference on Biometrics (ICB), Spain	Jun. 2013
• Track Chair	Int. Conf. on Pattern Recognition, Tsukuba City, Japan	Nov. 2012
• Program Chair	CVPR Biometrics Workshop, Providence, RI	Jun. 2012
• Advisory Board	International Conference on Information Systems for Indian Languages, Patiala, India	Dec. 2011
• Area Chair	Indian Conference on Computer Vision and Image Processing, Chennai, India	Dec. 2011
• General Co-chair	Multilingual OCR Workshop, Beijing, China	Sept. 2011
• Program Chair	CVPR Workshop, Colorado Springs, CO	Jun. 2011
• Advisory Board	Multimedia Signal Processing	Apr. 2011
• Tutorials Chair	Int. Conf. on Handwriting Recognition, Kolkata, India	Oct. 2010
• General Co-Chair	1 st International Workshop on Emerging Techniques and Challenges for Hand-based Biometrics, Istanbul, Turkey	Aug. 2010
• General Co-Chair	International Workshop. Document Analysis Systems, Boston, MA	Jun. 2010
• Program Chair	CVPR Biometrics Workshop., San Francisco, CA	Jun. 2010
• Steering Committee	Computational Modeling of Objects Presented in Images: Fundamentals, Methods, and Applications, NY	May. 2010
• General Co-Chair	Multilingual OCR Workshop., Barcelona, Spain	Jul. 2009
• Program Chair	CVPR Biometrics Workshop., Miami, FL	Jun. 2009
• Program Co-Chair	Document Analysis Track (ICPR) Tampa, FL	Dec. 2008
• Awards Committee	IEEE Biometrics Symposium, Tampa FL	Sept. 2008
• Program Co-Chair	2 nd IEEE Conf. on Biometrics: (BTAS), DC	Sept. 2008
• Program Chair	CVPR Biometrics Workshop., Anchorage, AL	Jun. 2008
• Program Co-Chair	International Conference on Cognition and Recognition, India	Apr. 2008
• Steering Committee	Indo-US Symposium on Data Info Knowledge Spectrum	Dec. 2007
• Program Co-Chair	1 st IEEE Conf. on Biometrics (BTAS), DC	Sept. 2007
• Program Chair	CVPR Biometrics Workshop., Minneapolis, MN	Jun. 2007
• Program Chair	CVPR Multi-biometric Workshop., NY, NY	Jun. 2006
• General Co-Chair	Int. Conf. on Cognition and Recognition, India	Dec. 2005
• General Chair	4 th IEEE Int. Workshop. on AutoID, NY	Oct. 2005
• Program Co-Chair	Int. Conf. Document Analysis and Recognition, Korea	Oct. 2005
• General Co-Chair	Int. Workshop. on DIAL, Palo Alto, CA	Jan. 2004
• General Co-Chair	Int. Workshop. on Document Analysis and Retrieval, WI	Jun. 2003
• Publicity Chair	New York State Cyber-Security Symposium, Utica	Feb. 2003
• Program Co-Chair	International Workshop. on Handwriting Recognition	Sept. 2002
• Technical Committee	IEEE SMC (B) for Pattern Recognition	1998- 02

Invited Talks

Keynotes, Plenary Talks, and Distinguished Lectures (65)	
12/13/25	10th International Conference on Computer Vision and Image Processing (CVIP), IIT Ropar, Punjab, India
09/18/25	International Congress of Civil Engineering (COICI), Pan-American Academy of Engineering, Panama City, Panama
09/10/25	Back-To-School Summit," hosted by Holon IQ, New York, NY
07/09/25	National College Testing Association Annual Conference, Buffalo, NY
06/12/25	Symposium on special education, IIIT Hyderabad, India
05/30/25	National Conference on AI for Empowering Persons with Disabilities, Amrita University,
05/10/25	Amrita Institute of Advanced Research Lecture Series
04/24/25	Finger Lakes Science and Technology Showcase, University of Rochester
04/05/25	Amrita Research and Innovation Symposium for Excellence, Amrita University, Kelera India
03/04/25	Innovation and Responsibility in AI-supported Education (iRAISE), American Association of Artificial Intelligence, Philadelphia, PA
12/04/24	International Conference on Pattern Recognition, Kolkata, India
09/12/24	How AI is Transforming Healthcare, Buffalo, NY
10/04/24	University of Notre Dame, Lucy Family Institute for Data & Society, South Bend, Indian
01/09/24	Amrita Research and Innovation Symposium for Excellence, Amrita University, Kelera India
12/22/23	AI in Education, International Conference on Computational Intelligence, Networks, and Society (ICCINS), Mylavaram, India
11/02/23	Transforming UB into an Engine for Entrepreneurial Growth and Commercialization, MedTech, New York's Life Sciences Conference, Buffalo NY
10/12/23	AI in Education, Michigan State University, East Lansing, MI
05/21/23	AI for Exceptional Education, G20 Conference on Digital Education, Trivandrum, India
10/19/22	Inaugural Address, Amrita University, Amaravati, India
10/11/22	IEEE Biometrics Council, Biometrics and Systems Week, Houston, TX
04/29/22	Indian Institute of Technology, Jodhpur, India
12/04/21	International Conference on Computer Vision and Image Processing (CVIP), Ropar, India
07/03/21	International Conference on AI for Social Good (AISG), Amrita University, India
09/29/18	International Conference on Computer Vision and Image Processing, Jabalpur, India
07/14/17	International Conference on Computational Intelligence & Data Engineering, Amaravati, India
03/28/17	Open Cloud Institute, University of Texas, San Antonio, TX
06/23/17	International Conference on Biometric and Forensic Engineering, Singapore
02/22/17	International Symposium on Biometric Authentication, Delhi, India
12/19/15	National Conf. on Computer Vision, Pattern Recognition, and Image Processing, Patna, India
08/24/15	IAPR/ ICDAR Outstanding Achievements Award Keynote, Nancy, France
12/14/14	ICVGIP Document Analysis and Recognition Workshop, Bengaluru, India
12/14/14	ICVGIP Workshop on Applications of Computer Vision, Graphics, and Image Processing, Bengaluru, India
12/30/13	Statistics 2013, Advanced Inst. of Mathematical, Statistics, and Comp. Sciences, Hyderabad, India
12/20/13	National Conf. on Computer Vision, Pattern Recognition, and Image Processing, Jodhpur, India

12/07/13	Large Scale Visual Commerce Workshop, at Int. Conf. Computer Vision, Sydney, Australia
02/22/13	International Conclave on Innovations in Engineering and Management, Patna, India
07/27/12	International Joint Conference on e-Business and Telecommunications, Rome, Italy
12/16/12	Distinguished Lecture Series, Adobe Inc., Bengaluru, India
02/03/12	TACTIC Smart Facilities, Hyderabad, India
12/17/11	IEEE India Conference (INDICON), Hyderabad, India
04/07/11	TACTIC Conference, Trivandrum, India
03/09/11	International Conference on Information Systems for Indian Languages, India
12/15/10	TACTIC Security Conference, Hyderabad, India
05/06/10	Computational Modeling of Objects Presented in Images, Niagara Falls, NY
02/01/10	Government of Jamaica Seminar on National Identification System, Jamaica.
12/21/09	International Conference on Recent Advances on Mathematical Sciences and Applications, Visakhapatnam, India
12/19/09	Workshop on Image and Speech Processing (WISP), Hyderabad, India
12/18/09	International Conference on Pattern Recognition and Machine Intelligence, Kolkata, India
12/14/09	5 th International Conference on Information Systems Security, Kolkata, India
09/11/09	HP Technology Summit, Bangalore, India
07/24/09	3 rd Workshop on Analytics for Noisy Unstructured Text Data, Barcelona, Spain
03/15/09	11 th International Conference on Technology, Policy, and Innovation, Delhi, India
12/30/08	International Conference on Business Data Mining, Hyderabad, India
12/16/08	Indian Conference on Vision and Image Processing, Bhubaneswar, India
07/21/08	Intensive Workshop on Indic Document Recognition, Delhi, India
07/09/08	Lockheed BEACON Center, Rockville, MD (broadcast to 8 remote centers)
02/12/08	IDGA's Military Biometrics Summit 2008, Washington, DC
01/02/08	Platinum Jubilee Conference, Indian Statistical Institute, Kolkata, India
09/29/06	IEEE Western New York Image Processing Workshop, Rochester, NY
12/23/05	International Conference on Cognition and Recognition, Mysore, India
12/15/05	13 th International Conference on Advanced Computing and Comm., Coimbatore, India
01/03/05	Amrita University, Coimbatore, India
09/11/04	World Hindi Conference, Amherst, NY
05/09/03	Rochester Institute of Technology, Rochester, NY

Colloquium Talks (38)

02/04/26	IISER Berhampur, India
01/02/26	GITAM Visakhapatnam, India
06/10/25	Institute for Development & Research in Banking Technology (IDRBT), Hyderabad, India
06/09/25	GITAM Visakhapatnam, India. Presentation
03/21/25	Indian Institute of Science Education and Research, Berhampur, India
02/06/24	GITAM Visakhapatnam, India
12/15/23	IIT Ropar, India
08/09/23	University of Minnesota, Minneapolis, MN
10/20/22	University of Central Florida, Center for Computer Vision, Orlando, FL
10/25/17	National Cancer Institute, Biomedical Informatics and Info Technology, Washington DC
12/22/14	Jawaharlal Nehru Technological University, Hyderabad, India
01/16/13	Accelerated Discovery Lab, IBM Almaden, CA
03/29/13	IBM Almaden, CA
03/01/13	SRC, Syracuse, NY
03/07/12	Syracuse University, Syracuse, NY*
12/23/11	HP, Bangalore, India
10/08/10	Fujitsu Inc, Sunnyvale, CA

10/04/10	Department of Computer Science and Engineering, Lehigh University, PA
07/10/09	Machine Learning Lab, Stanford University, Palo Alto, CA
12/15/08	IEEE Bangalore Chapter, India
05/20/08	École de Technologie Supérieure, Montréal, Québec (IEEE Chapter on CI)
01/28/08	University of California, Riverside, CA
11/09/07	University of New South Wales, Sydney, Australia
02/22/07	Carnegie Mellon University, Pittsburgh, PA
12/01/06	University of Maryland, College Park, MD
04/28/05	Korea Advanced Institute of Science and Technology, Seoul, S. Korea
01/16/05	Brown University, RI
10/10/03	Concordia University, Montreal, Canada
08/14/03	IBM TJ Watson Research Center, Yorktown Heights, NY
05/09/03	Rochester Institute of Technology, Rochester, NY
04/16/03	Wayne State University, Detroit, MI
10/13/02	University of Massachusetts, Amherst
10/09/00	IBM TJ Watson Research Center, Yorktown Heights, NY
06/15/00	Xerox Palo Alto Research Center (PARC)
12/03/99	Xerox, Webster Research Center, Rochester, NY
11/23/99	University of Maryland, College Park, MD
06/28/99	Kent Research Digital Labs, Singapore
03/27/97	Wayne State University, Detroit, MI
12/16/94	University of Michigan, Dearborn, MI

Panel and Roundtable Participation (7)

02/27/26	Embodied AI, Stony Brook University, New York
02/13/26	United States Embassy, New Delhi, India
12/19/25	Odisha AI Summit, Impact of AI Research and Innovation, Bhubaneswar, India
12/18/25	Odisha AI Symposium, AI and Education, Bhubaneswar, India
02/21/25	State of Maryland AI Roundtable, Annapolis, MD
11/20/24	SUNY Research Council, New York, NY
11/09/24	International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM), Berhampur University, India
10/28/24	NYS Innovation Summit, Syracuse, NY
10/17/23	Association of Research Libraries, Washington, DC

Invited Conferences Talks (22)

12/19/16	International Workshop on Pattern Recognition Applications, Kolkata, India
12/17/15	BB Chaudhuri Conference, Indian Statistical Institute, Kolkata, India
10/29/13	NRC Intelligence Committee Workshop on Science & Tech Investments, Washington DC
06/19/13	International Program on Information Assurance and Management, Buffalo, NY
08/22/12	CAPTCHAs for Remote Cyber Security in Banks, IPIAM, Buffalo, NY
12/20/12	Tutorial Lecture on Machine Learning, Amrita University, India
11/03/08	ROBUST Biometrics Conference, Hawaii
05/16/08	International Sanskrit Digital Library Workshop, Brown University
02/07/07	NYSTAR University Technology Showcase, Rochester, NY
11/17/06	NSF Workshop on International Sanskrit Digital Library Integration, Providence, RI
09/28/06	Summit on Arabic and Chinese Handwriting Recognition, College Park, MD
05/07/05	Workshop on Tools for Indian Digital Libraries, IIT Hyderabad, India
11/14/03	Griffis Institute Cyber Security Conference, New Paltz, NY

02/25/03	New York State Cyber-Security Symposium, Utica, NY
01/24/03	International Workshop on Technology Development in Indian Languages, Kolkata, India
04/24/01	Symposium for Document Image Understanding Technology (SDIUT), Annapolis, MD
03/29/01	International Workshop. on Technology Development in Indian Languages, Kolkata, India
06/22/00	International Workshop on Multiple Classifier Systems, Cagliari, Italy
05/19/99	National Postal Forum, San Antonio, TX
11/09/94	Digital Post Modernism, Nice, France
05/10/94	Digital Road Show, UK & France
02/15/94	2 nd Census OCR Conference, National Institute of Standards, Bethesda, MD

Invited Talks, UB (34)

02/26/26	AI and Society Workshop
01/04/26	Discover UB, Bengaluru, India
12/15/25	UB Council (presentation: AI at UB)
10/18/25	UB Fall Open House (presentation: "UB's AI Legacy and Leadership")
10/14/25	Indo-US Workshop on Higher Education
08/13/25	SUNY Chancellor: AI for the Public Good
01/23/25	AI Bootcamp for New York State legislators and staff
09/26/24	SUNY Research Foundation Board Meeting (presentation: "UB's AI Legacy and Leadership")
07/17/24	SUNY Chancellor, Legislators and Staff: AI for Public Good Bootcamp
03/02/23	UB Foundation Board of Directors (National AI Institute for Exceptional Education)
05/23/22	Health Equity Dimensions of a Changing Climate Workshop
12/04/17	UB Council (presentation: AI for Social Good; Vision for UB)
10/12/17	Honors College, Honors 101: Presidential Scholar Development Seminar
04/12/17	Department Chairs (presentation: Mentoring Faculty for Research Success)
11/09/16	College of Arts & Sciences* Deans and Directors Meeting (Building Research Capacity) *largest academic unit
08/26/16	School of Engineering and Applied Sciences, New Graduate Student Engagement, Professionalism and Ethics Orientation (Presentation: Beyond the lab and coursework: Your role and responsibilities as a UB SEAS graduate student)
03/22/16	UB Department Chair Leadership Program workshop: Enhancing Research Productivity in Your Department
10/23/15	UB Business Engagement Committee (Topic: New paradigm in economic development and higher education)
07/22/14	UB This Summer
07/22/14	UB This Summer
03/14/13	Pi Day: Biometrics and Privacy
10/08/13	UB Insights (Biometrics: Is Privacy a Bygone Concept in the 21 st century)
06/07/11	UB Postdoc Forum
03/31/11	UB Management School (Amrita)
07/25/09	UB Catholic Ministry, Newman Center
04/13/07	Guest Speaker, Information Assurance Class, School of Management
12/02/05	UB Friday Forum
09/30/05	IGERT Colloquium Series
07/21/05	UB This Summer
03/12/05	Engineering Seminar & Exhibition, University at Buffalo
07/23/03	UB This Summer
10/29/04	Guest Speaker, Information Assurance Class, School of Management

04/24/03	University at Buffalo, School of Engineering, Dean's Council, Buffalo, NY
11/19/99	Department of Computer Science & Engineering, University at Buffalo, NY
10/16/92	Department of Computer Science, University at Buffalo, NY
Other Seminars (47)	
03/13/25	Gian Chand Jain Memorial Lecture, Ambala Cantt, India
01/23/24	Convergence of AI, Buffalo Niagara Partnership
05/24/23	IDRBT, Hyderabad, India
04/22/22	IDRBT, Hyderabad, India
11/08/19	Barrett Women's Club, Buffalo, NY
03/25/19	Aditya Institute of Technology and Management, Tekkali, India
09/01/17	Microsoft Research, Redmond, WA
01/25/17	Manipal Institute of Technology, Jaipur, India
01/27/17	Birla Institute of Technology Mesra Campus, Jaipur, India
01/19/17	Indian Statistical Institute, Kolkata, India
12/18/13	Prime Minister's Office Complex, Delhi, India
02/20/13	IDRBT, Hyderabad, India
01/02/13	IDRBT, Hyderabad, India
04/02/12	IDRBT, Hyderabad, India
04/12/11	IIT Hyderabad, India
06/08/10	Jawaharlal Nehru Technological University, Hyderabad, India
06/06/10	College of Engineering, Andhra University, Visakhapatnam, India
12/31/09	Int. Conference on Interface Between Statistics and Sciences, Hyderabad, India
03/16/09	Windows to the World Series, Tata Indicom, Delhi, India
01/05/09	Indian Institute of Technology Madras, Chennai, India
12/29/08	Computer Maintenance Corporation, Tata Group, Hyderabad, India
12/15/08	Hewlett Packard Research, Bengaluru, India
12/04/08	University of Hyderabad, India
08/07/08	Satyam Computers, Hyderabad, India
08/05/08	Siddhartha Engineering College, Vijayawada, India
07/22/08	TIFAC, Dept. of Science and Technology, Delhi, India
01/30/08	Google, Inc, Mountain View, CA
01/04/08	HP Research Laboratories, India
01/03/08	Google Research, Bangalore, India
06/04/07	Motorola Labs, Hyderabad, India
05/26/07	IEEE Chapter of Hyderabad and University of Hyderabad, India
01/04/07	Gayatri Vidya Parishad, Visakhapatnam, India
12/30/06	PES College of Engineering, Bangalore, India
11/07/06	Indian Institute of Technology, Delhi, India
11/04/06	IEEE Chapter of Birla Institute of Technology, Ranchi, India
11/04/06	Birla Institute of Technology, Ranchi, India
07/04/06	International Institute of Technology, Hyderabad, India
06/23/06	HP Research, Bangalore, India
05/06/05	Center for Development of Advanced Computing, Hyderabad, India
01/04/05	HP Research Labs, Bangalore, India
12/30/04	Indian Institute of Technology, Chennai, India
07/24/04	AP State Education Council, Hyderabad India
12/30/03	Jawaharlal Nehru Technological University, Hyderabad, India

06/02/03	Tata Consulting Services, Hyderabad, India
07/08/02	International Institute of Information Technology, Hyderabad, India
08/09/01	Institution of Electronics and Telecommunication Engineers, Hyderabad, India
12/24/99	Indian Statistical Institute, Calcutta, India
Podcasts (5)	
09/25/25	The Academic Minute (NPR): Training to Spot Dyslexia
02/24/25	BRN: AI is a Game Changer for Students with Disabilities
12/27/24	Evolution of AI in Language Communication
08/08/23	Tech Talk podcast with UB Chief Information Officer (topic: AI research at UB and in education)
06/02/23	Achieving Joy and Mastery in Public Schools podcast series, Erie-Niagara Schools Superintendents Association (topic: National AI Institute for Exceptional Education)