VENU GOVINDARAJU
Vice President for Research and Economic Development
University at Buffalo, The State University of New York (SUNY)
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EDUCATION

1992	Ph.D. Computer Science, University at Buffalo, SUNY
1988	M.S. Computer Science, University at Buffalo, SUNY
1986	B.Tech. Computer Science and Engineering, Indian Institute of Technology Kharagpur

EXECUTIVE POSITIONS

University at Buffalo, SUNY

1/16 – Present	**Vice President for Research and Economic Development (VPRED)**
1/20 – Present	Operations Manager (OM), Research Foundation on SUNY Flagship UB Campus
1/23 – Present	Director/PI, NSF National AI Institute for Exceptional Education (9 university consortium)
7/13 – 8/15	Director, Computational Data Science and Engineering
1/07 – 8/15	Director, Strategic Strength in Information and Computing Technology
1/04 – Present	Director, Center for Unified Biometrics and Sensors (CUBS)
1/94 – 1/04	Associate Director, Center for Document Analysis and Recognition (CEDAR)

ACADEMIC POSITIONS

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

11/10 – Present	SUNY Distinguished Professor
09/08 – 11/10	UB Distinguished Professor
08/02 – Present	Full Professor
08/00 – Present	Associate Professor (Tenure)
06/92 – 8/00	CEDAR Research Scientist, Senior Scientist (1994) and Principal Scientist (1996)

STEERING COMMITTEES CHAIR (UB Provost charge)

2023 – 2024	Research Administration Steering Committee, "How to reduce administrative burden on PIs"
2022 – 2023	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 one-time, significant investments)
2018 – 2020	Safeguarding University faculty assets and interests

EXTERNAL LEADERSHIP

6/23 – Present	Co-chair, SUNY Artificial Intelligence Task Force
3/23 – Present	President's Delegate, AAU Task Force on Expanding U.S.-India University Partnerships
2020 – Present	Director, Empire Discovery Institute (Drug Discovery Consortium), New York State
2019 – Present	Advisor, SUNY-IBM Artificial Intelligence Research Alliance
2018 – 2020	Executive Committee, APLU Council on Research
2015 – 2024	Board Member, Hauptman Woodward Institute, NY
2015 – 2016	President, IEEE Biometric Council
2014 – 2021	Advisor, Institute for Development and Research in Banking Technologies, India

<div align="center">**KEY LEADERSHIP ACCOMPLISHMENTS**</div>

RESEARCH
- **Increased research:** Exceeded $475M in annual research expenditures (2021 NSF HERD Survey) with a 65% growth in sponsored research funding.
- **Research centers**: Established 12+ research centers to empower star faculty, including the Institute for Artificial Intelligence and Data Science (IAD) and the Center for Information Integrity, integrating STEM and non-STEM expertise.
- **Strategic investments**: Led a $30M university initiative, Communities of Excellence, tackling societal challenges in renewable energy, advanced manufacturing, global health, and precision medicine; bolstered core faculty strengths and recruited targeted hires to address critical gaps.
- **Infrastructure**: Established a $12M sustainable instrumentation fund to support shared use by PIs, enabling innovative research and strengthening competitive team proposals.
- **Seed funding**: Created a $3M annual fund to provide just-in-time support for investigator-led, multidisciplinary research tackling complex societal challenges.
- **Accreditations:** Facilitated successful renewals from AAHRPP (Human Research Protection Programs) and AAALAC (Laboratory Animal Care), ensuring compliance and research excellence.
- **Clinical research:** Founded the Clinical Research Office in collaboration with the Vice President for Health Sciences, implementing policies on budgeting, revenue sharing, and human subjects' compensation (2015). Introduced a Chief Compliance Officer role and formed a multidisciplinary committee of MDs and social scientists to streamline IRB management (2023).
- **Large federally funded competitive research centers**: Secured over a dozen competitive awards from agencies including EDA, IES, NSF, DoD, EPA, NNSA, and NIH where the awards range from $5M to $30M.

FACULTY DEVELOPMENT
- **New department creation**: Led the establishment of the Department of AI and Society, positioned across the School of Engineering and the College of Arts and Sciences, on behalf of the UB Provost.
- **Faculty recruitment:** Oversaw the recruitment of 19 interdisciplinary faculty members under the RENEW Institute initiative in the areas of environment, water, energy, and sustainability (2015–2020). -Chaired the search committee to hire 25 interdisciplinary faculty to strengthen expertise in Information Technologies during a prior role as Director (2008–2013).
- **High profile hires**: Identified priority departments and focus areas annually to align with UB's strategic vision, facilitating high-profile hires under SUNY's Empire Innovation Program. This initiative has represented an investment of $12M since 2015, carried out on behalf of the UB Provost.
- **Faculty retention:** Partnered with the Provost's Office to design and implement faculty retention packages, which included funding for laboratories, costly instrumentation, postdoctoral positions, and other resources to support faculty success.
- **Faculty advocacy**: Advocated for entrepreneurial faculty by encouraging the provost to consider community engagement and commercialization activities in promotion dossiers.
- **Disciplinary excellence**: Advised the Provost on strategic investments in STEM departments under the Disciplinary Excellence Initiative, enabling targeted funding for high-impact opportunities (2020–2021).

STUDENT FOCUS

- **Enrollment Success:** Actively supported the university-wide domestic undergraduate enrollment team by showcasing undergraduate research opportunities at "on-the-road" events, emphasizing the impactful programs facilitated by my office.
  -Played a key role in graduate student yield efforts, joining UB teams at international venues to highlight the university's strengths and attract top-tier talent.

- **Experiential Learning**: Partnered with the Dean of Undergraduate Education to develop a portal connecting students with both credit-bearing and non-credit experiential learning projects.
  Launched the e-Law Clinic in collaboration with UB's School of Law, providing students with hands-on experience by working directly with real businesses and high-growth ventures.

- **Research abroad**: Established unique undergraduate research abroad summer program, matching students with international mentors for personalized experiential opportunities and cultural immersion.

- **Co-op programs**: Facilitated internships by pairing undergraduate students with local companies, resulting in employment pathways post-graduation.
  -Introduced students to entrepreneurship as a career path via hands-on training, business plan competitions, networking events, and startup support.

- I**nterdisciplinary curriculum development**:
  - Revamp the bioinformatics undergraduate major (2007) in partnership with Biological Sciences and Computer Science & Engineering Departments.
  - Launch the PhD program in Computational Data Science with integrated partner MS departments (2013–2014).
  - Develop new graduate certificates in Genomic Literacy, Advanced Manufacturing, and Robotics (2015–2020).
  - Master's program in Artificial Intelligence and Data Science (2020).

INNOVATION AND PARTNERSHIPS

- **Industry engagement:** Developed the UB SWIFT program to streamline negotiations by encouraging licensing terms at the project planning stage. Introduced an incentive plan with pre-packaged templates and expedited agreements to simplify the licensing process.
  -Quadrupled SBIR/STTR projects by incentivizing faculty-company partnerships, securing large multi-phase federal funding.

- **Economic development:** Facilitated the creation of nearly 2,000 jobs in Western NY over four years. Oversaw 150 commercialization-ready technologies, supported 50 active startups, and established two incubators with co-working spaces to foster connections within a diverse entrepreneurial network.

- **Consortiums**: Founded the Empire Discovery Institute in collaboration with Roswell Park Cancer Institute, University at Buffalo, and University of Rochester to transform scientific breakthroughs into viable pharmaceuticals, addressing critical challenges in drug discovery.

- **Federal Initiatives**: Partnered on the $40M EDA Tech Hub award for the Buffalo-Rochester-Syracuse Semiconductor SMART I-Corridor (2024).
  -Played a leadership role in the $160M NSF Engines initiative on "AI and Health Innovation" to build regional coalitions in Western New York, driving economic and societal impact (2025).
  -Spearheaded the creation of a world-class NSF I-Corps innovation hub to cultivate a pipeline of visionary leaders advancing technologies for societal benefit (2017–present).

ADMINISTRATION
- **Leadership**: Chairing a high-level team of vice provosts, deans, and senior staff to establish UB as a leader in integrating scholarship, innovation, and industry needs with commercialization and workforce diversity, fostering a regional tech hub in Western New York.
  - **New Policies:** Developed policies on research data storage, security, and accessibility for government-funded projects, in collaboration with libraries and the CIO.
  - **Safeguarding Faculty Assets:** Guided faculty and staff in mitigating undue foreign influence in research (2018–20).
  - **SUNY AI Task Force:** Led efforts to leverage AI research, discovery, and education, ensuring New York State's workforce remains resilient and adaptable to emerging technological landscapes.

- **Operational efficiency:** Effectively Utilizing Resources for Cost-Effective and Sustainable Solutions
  - **Sponsored Projects Services**: Reorganized by adding new liaison FTEs to enhance faculty support, implementing a hybrid central-decanal staffing model to reduce attrition, improve work-life balance, streamline workflows, and boost staff morale (2024).
  - **Salary Review:** Conducted a comprehensive salary review for research administration staff, addressing disparities compared to AAU public university benchmarks (2021).
  - **Faculty Research Hub:** Established a one-stop hub to streamline pre- and post-award operations, proposal preparation, contracts, compliance, and computing support (2016).
  - **Redefining VPRED Roles:** Restructured units under VPRED to improve efficiency, ensure fiscal self-sufficiency, and adapt to evolving faculty and student research needs.
  - **Technology Transfer Reorganization**: Optimized collaboration between community-facing units and internal support services, reorganizing 40 staff to align with strategic goals.
  - **Addictions Research Institute:** Restructured the institute to integrate research, education, and clinical services, adopting a holistic approach to address the addiction crisis and leveraging opportunities from new laws governing medicinal use of controlled substances (59 staff reorganized).

- **Stakeholders' engagement and advocacy:**
  - Provided critical leadership in New York Governor's $400M AI initiative.
  - Conduct educational bootcamps for state legislators and executive staff on "AI for Public Good."

PHILANTHROPY
- **Endowed Professorships**: Collaborated with successful Computer Science alumni to secure support for recruiting top AI faculty, enhancing infrastructure, and developing an integrated AI curriculum.
- **Student Scholarships**: Partnered with local companies to package scholarships, internships, and other incentives, effectively competing with peer universities to attract top graduate students, particularly from out of state.
- **Industry Support**: Worked with the advancement office to secure high-level investments from major companies (IBM, Amazon, Lockheed, 2024). Secured gifts from leading tech companies (Adobe, eBay, Fujitsu, Google, IBM) as director of the CUBS research center to support students and projects.
- **Signature Asks**: Collaborated with the Office of Advancement to develop a $100M proposal targeting an engineering alumnus and CEO of a billion-dollar global company (2018).

ADMINISTRATIVE EXPERIENCE
VICE PRESIDENT, RESEARCH & ECONOMIC DEVELOPMENT (VPRED)

VPRED is key to UB's strategic plan for becoming a model 21st-century institution and among the nation's highly ranked public research universities. The mission is to:
- *Advance* Research & Scholarly Excellence through the cultivation of a world-class research support infrastructure.
- *Contribute* to Job Growth and a Diversified Economy through innovation, economic development, and commercialization.
- *Ensure* Compliance in a Regulatory Environment that operates through ethical compliance and a lens of diversity, equity, and inclusion.

A. Management

The VPRED supervises the following units, centers, and communities. While the enterprise employs nearly 150 staff, the total number of members – when considering research centers – nears 300 staff members. VPRED's operating budget is approximately $150M. Supervision of these units includes all administrative decision-making such as budget allocation, discretionary salary increases, hiring, appointment of new leadership, space management, and other operational matters.

Office Units
- **Business and Entrepreneur Partnerships** (BEP, staff: 25)
  Bridge research and economic development on campus.
- **Clinical Research Office** (CRO, staff: 20)
  Office charged with administrative oversight for all clinical research activities at the university (2015-22).
- **Comparative Medicine Laboratory Animal Facilities** (CM-LAF, staff: 13)
  Centralized service responsible for the animal care-and-use program campus wide.
- **Office of Research Advancement** (ORA, staff: 10)
  Help faculty create highly competitive proposals to support research and advance UB initiatives.
- **Office of Research Compliance** (ORC, staff: 17)
  Oversight of Institutional Review Board, Institutional Animal Care and Use, financial conflicts of interest, responsible conduct of research and export controls.
- **Research Information Systems** (RIS, staff: 8)
  Provide integrated information services, resources, and technologies to the UB community.
- **Social and Behavior Research Support Office** (BRO, staff: 1)
  Supports investigators who conduct studies in non-clinical areas.
- **Sponsored Projects Services** (SPS, staff: 60)
  Submit proposals for funding, provide stewardship of awarded funds, and ensure compliance.
- **Technology Transfer** (staff: 10)
  Guide researchers as their discoveries and inventions become new products and services.

Interdisciplinary STEM Centers
- **Center for Post-Acute COVID Sequelae** (PASC)
  Recovery by multidisciplinary approach to caring for those suffering from long COVID.
- **Center for Cannabis and Cannabinoid Research** (CeCaR)
  Improve the scientific understanding of the components of cannabis, patterns of use by various populations, health and medical benefits, adverse reactions, including addiction.

- **Center for Information Integrity** (CI)
  Combating online disinformation to improve user awareness and resilience.
- **Institute for Artificial Intelligence and Data Science** (IAD)
  Innovative human-machine partnerships in health and autonomous systems.
- **Center for Computational Research** (CCR)
  Provide faculty with access to high-performance computing, data, and visualization resources.
- **Center for Hearing and Deafness**
  Focus on clinical and research approaches to solve the problems of hearing loss.
- **Center for Integrated Global Biomedical Sciences**
  Hub for non-traditional approaches to address regional and global health challenges.
- **Clinical Research Institute on Addictions** (CRIA)
  Advance the knowledge of the causes, consequences, prevention, and treatment of substance use disorders.
- **Institute for Lasers, Photonics, and Biophotonics** (ILPB)
  Multidisciplinary research in Medicine, Dental Biology, Engineering, Physics, and Chemistry.
- **NYS Center of Excellence in Bioinformatics and Life Sciences** (CBLS)
  Hub for life sciences innovation and technology-based economic development.
- **NYS Center of Excellence in Materials Informatics** (CMI)
  Leverage UB's materials science, big data analytics, and advanced manufacturing expertise to impact private sector growth.
- **UB RENEW: Research and Education in eNergy, Environment and Water Institute**
  Inter-disciplinary focus on energy and environmental issues and their social and economic ramifications.
- **UB Microbiome Center**
  Conduct research to improve health care, boost food production and restore the environment.

Non-STEM Centers
- **Creative Arts Institute** (CAI)
  Dedicated to the creation and production of new work, upholding the highest artistic standards of excellence and fostering a complementary atmosphere of creative investigation and engagement among students, faculty, visiting artists, and the community.
- **Humanities Institute** (HI)
  Provides a forum for conversations among humanists of all disciplines to question, comprehend, and transform an increasingly complex world.

Collaborative Research Centers
- **Biology with X-ray Free Electron Lasers** (BioXFEL)
  A NSF Science and Technology Center to enhance understanding of molecular machines.
- **Buffalo Institute for Genomics & Data Analytics** (BIG)
  Transforms genomic medicine nationally while building the healthcare economy regionally.
- **Clinical Translational Research Center**
  Improves health and reduces health disparities in our community.
- **START-UP NY**
  Gives companies the opportunity to operate state and local tax-free on/near a UB campus.
- **UB CAT: Center for Advanced Biomedical & Bioengineering Technology**
  Focuses on the intersection of big data and health sciences, particularly as it relates to drug development, medical devices, diagnostic tools, and healthcare IT.

- **UB Incubators**
Support the creation of new companies by providing affordable business services to entrepreneurs.
- **WNY Innovation Hot Spot**
Help incubator ventures grow quickly, achieve greater profitability, and become more attractive to investors.
- **Women's Health Initiative (WHI)**
Focus on strategies for preventing heart disease, breast and colorectal cancer, and osteoporosis in postmenopausal women.

Communities of Excellence
Analogous to the concept of *Convergence* in NSF, the idea of "Communities" differs from "Centers" as the pivoting is not necessarily on research but a seamless integration of research, education, and community engagement dedicated to solving a societal challenge. Given that real life problems are not cast in silos, the solutions must necessarily be not so either, but rather should be interdisciplinary in their multi-dimensional approach.

- **Genome, Environment and Microbiome** (GEM)
GEM community is advancing genomic science and increasing genomic literacy through research, education and community outreach. This collaboration among the sciences, social sciences, arts, and humanities will empower all people in society's shift to more personalized medicine.
- **Sustainable Manufacturing and Advanced Robotic Technologies** (SMART)
Collaborate with area companies in advanced manufacturing and design to help shape education and national policy. The SMART Community focuses on next generation technologies and processes for customizable production.
- **Community for Global Health Equity** (GHE)
GHE focuses on the social, economic, political, and environmental factors that contribute to global health inequities. Its aim is to influence policymakers, funders, and practitioners in addressing problems ranging from child survival, growth and development to refugee health and wellbeing.

B. Responsibilities

Scholarly Excellence
Advance research and creative activities in response to the challenging societal problems of our times.
- Identify promising new projects to seed and stay ahead of the curve.
- Conduct internal competitions for limited submission calls.
- Pursue suitable funding opportunities in industry, government, and philanthropy.
- Provide comprehensive administrative and technical assistance to develop proposals.
- Support proposal development, review, and submission
- Manage research awards for the life of the project.
- Forge strategic partnerships with institutions and investigators.
- Provide shared equipment and facilities to the research community.
- Enhance and maintain a rich IT infrastructure in support of faculty grants activity.
- Communicate results, expertise and stories to multiple audiences and stakeholders.

Economic Development
Transform the economies of Buffalo-Niagara, New York State, and beyond by helping UB achieve its full impact as a major economic engine.

- Bridge research and economic development by leveraging the knowledge, resources and expertise necessary for an innovation economy.
- Create regional attraction for the US workforce to locate in Western New York.
- Connect businesses with university resources and facilities.
- Engage entrepreneurs and facilitate entrepreneurial ecosystems.
- Disseminate information for economic development agencies.
- Advocate for technology that can be licensed by entrepreneurs and companies.
- Encourage and reward invention, collaboration, and community.
- Assist with technology transfer, licensing, and commercialization.
- Protect UB intellectual property (IP).
- Manage royalty distributions.
- Handle transfer disclosure and non-disclosure agreements.
- Take UB research from lab to market and assist with all the opportunities in between.
- Support startups that locate in Western New York.
- Innovate for business growth - particularly in the Western New York region.
- Develop a workforce that connects industry with student interns and talented graduates.
- Conduct employee training workshops to enable industry workforce to stay current.
- Develop consultation and support programs for businesses.

Compliance in a Regulatory Environment
- Provide administrative oversight for all research activities of the university's faculty members.
- Facilitate compliant, meaningful research within the institution.
- Unify policies governing research conducted across all university schools and departments.
- Be cognizant of all policies from sponsoring agencies.
- Implement federal regulations and university guidelines.
- Provide tools, systems, and processes for maintaining research compliance.
- Negotiate contracts to establish the legal parameters of an agreement.
- Develop budgets to schedule and identify the charges to be assessed to a funding entity.
- Assist protocol development for submission to the Institutional Review Board (IRB).
- Review clinical research studies for operational feasibility.
- Offer wide range of pharmacy-related services for investigators and staff.
- Protect human subjects in clinical, social, and behavioral research and clinical trials.

University's Research Centers and Institutes
Academic, discipline-based research is key to the university's mission. Interdisciplinary research centers expand on that mission by addressing societal issues and new learning from multiple perspectives.
- Formulate policies for creating interdisciplinary centers.
- Conduct annual internal review and periodic external review of center.
- Appoint leadership for certain centers based on strategic considerations.
- Conduct external searches and hiring at all levels.
- Make the case for annual allocations to the Central Financial Planning.

Annual Resource Planning Process (ARPP)

ARPP is a framework to review UB's financial capacity, evaluate current activities, identify, and assess potential areas for new investment that continue to elevate the university.

- *Provide* inputs to the Senior Leadership annually to enable a predictable and transparent planning process.
- *Propose* and justify resources to support research administration infrastructure including investments to advance university and unit strategic goals.
- *Make the case* for additional recurring and non-recurring funds, based on emerging needs.
- *Request* exceptions when unanticipated needs arise outside of the annual planning process.

Fundraising

The "Campaign for UB" (Boldly Buffalo, 2018-24) seeks to raise $1B to deliver transformative changes for the public research university, Western New York, and the world."

- *Support* the University Advancement Office in its philanthropic and development efforts.
- *Cultivate* high profile alumni to partner in the vision of UB.
- *Spread* the word about the campaign, encourage participation, and thank those who contribute.
- *Engage* with industry to make the case for "gift funding" on disciplinary projects that are aligned with mutual interests.

Capital Planning

Member of the capital planning committee, which works as an internal team and together with external partners as necessary to achieve effective capital plan implementation.

- *Guide* long-range campus development, including buildings, land use, and capital infrastructure.
- *Initiate* strategic efforts required to implement the comprehensive physical master plan.
- *Make* recommendations regarding the university's capital plans and priorities.

Student Experience

Provide experiential learning outside the classroom under the undergraduate scholar's program.

- Program supports students during Summer to conduct research at Cambridge University and Oxford University at labs with UB faculty partnership.
- Encourages students' postgraduate pursuit, cultural mixing, and international experience.
- The Entrepreneurship Law Center engages students to provide quality legal services for early-stage entrepreneurs and startups who are not yet ready or able to engage outside legal counsel.
- Enable business' means to recruit interns, post a job, search and message students, interview on-campus, or consult with talent experts to develop a long-term recruitment strategy.
- Enable businesses to sponsor an event, speak in a class, host students for a half day to highlight their company, or visit the campus to gain access to future graduates.
- Enable businesses to tap into groups of students to gain innovative solutions or find a student to conduct a research project on a company initiative.

Transparency and Shared Governance

The authority for major changes and new initiatives in the university's research enterprise rests with the OVPRED strategic group chaired by the VPRED. The group includes the associate vice presidents, the unit chief of staff, and the unit financial officer.

- Annual retreat camps held with participation from all the center directors and unit heads reporting to the VPRED to allow free exchange of ideas and transparency on all initiatives.

- Monthly meetings of all Associate/Assistant Deans for Research of the decanal units (12) to vet new policies, respond to faculty needs, and keep the channel of communications with the academic mission of the university open and effective.
- Present regularly at the Deans and Vice Presidents meetings upon the request of the provost and the president on topics that impinge upon the academic enterprise.
- Attend the president's cabinet weekly meetings and the provost's council meetings monthly.

C. Accomplishments

Large Scale Awards
FEDERAL
- National Institute of Health (NIH), Clinical and Translational Science Award (CTSA) - $28.3M (2025-29)
- Center for Early Literacy and Responsible AI (CELaRAI): Innovating Beginning Reading Instruction for Culturally and Linguistically Diverse Learners -$10M (2024-29)
- Buffalo-Rochester-Syracuse Tech Hub for semiconductor manufacturing and innovation - $9.5M (of $40M) (2024-28)
- Institute of Educational Sciences (IES), National Center for Early Literacy and Responsible AI - $10M (2024-28)
- National Science Foundation (NSF), National AI Institute for Exceptional Education - $20M (2023-27)
- Air Force Research Labs (AFRL), Space University Research Institute on Space Domain Awareness - $5M (2022-27)
- National Nuclear Security Administration (NNSA), Center for Exascale Simulation of Hybrid Rocket Motors - $8.5M (2020-25)
- National Institute of Health (NIH), Clinical and Translational Science Award (CTSA) - $23M (2019-23)
- National Science Foundation (NSF) Science and Technology Center (STC) on Biology with X-Ray Free Electron Lasers (BioXFEL) - $23M (2018-22)
- National Institutes of Health (NIH), Clinical and Translational Science Award (CTSA) - $38M (2014-23)

NY STATE
- Empire Discovery Institute (EDI) to support moving PI-developed drug targets to proof of concept in animals and then to commercialize - $35M (2018-24)
- Awarded NYSTAR matching funds to support industry R&D with faculty in area of big data and health - $10M over 10 years (2018)
- Innovation Hub Commercialization for technology commercialization fund, programs, and experts in commercialization and incubation space - $32M (2018-22)
- Awarded NSF I-Corps grants to PI's to support customer discovery - $500,000 (2017)

FOUNDATIONS
- JPB Foundation in support of environmental justice - $9M (29017-26)
- Mellon Foundation in support of community-engaged study of healthcare that centers on historically marginalized voices - $2.7M (2023)
- Mellon Foundation in support of Indigenous Studies - $3M (2020)
- Community Foundation for Greater Buffalo, East Side Corridor Economic Development -$3.2M (2022)

Faculty Recruiting

Empire Innovation Program (EIP) is a SUNY-funded grant program dedicated to recruiting and retaining excellent faculty to the SUNY system. On behalf of the UB Provost's office, the VPRED annually identifies the departments and areas that match the strategic vision of growth and sustainability at UB. Too, led a systematic analysis of STEM departments to inform university investments primarily for faculty recruiting.

- $1M- to hire faculty experts in Trustworthy Ai to address critical and emerging problems in Trustworthy AI and training our computer scientists and engineers (2023-24)
- $1M – to hire scientists with expertise in computational pathology, clinical biomarker discovery, and microfluidics to create the "Core to Compute" initiative (2023-24)
- $1.2M with Stony Brook to hire faculty in Cancer Nanotechnology and Nanomedicine (2019-20)
- $350K to hire faculty expert in science, engineering, human systems - transdisciplinary innovation for community resilience - CAS (2019-20)
- $1M to add faculty in Neurogenetics and Next Generation Therapeutic Proteins in Pharmacy (2017-18).
- $1M shared with Stony Brook University for recruiting to meet New York State's clean energy goals (2017-18).
- $3M to add faculty researchers who will build upon the university's existing expertise in artificial intelligence and robotics (2016-17).
- $1M to add faculty researchers in the field of systems pharmacology (2016-17).
- $500K to add faculty researchers to the National Science Foundation-funded BioXFEL – a research consortium led by UB that focuses on cutting-edge X-ray laser science (2016-17).
- $1M to add faculty in the newly formed Biomedical Engineering Department (2015-16).
- $1.3M to recruit faculty to the newly launched RENEW Institute (2015-16)

Hiring Upper Management Staff

Responsible for filling five Associate Vice President (Research and Economic Development) positions, and more than a dozen center director and office lead positions. Formed the appropriate search committees and charged the chairs of these committees with making recommendations for appointment with full cognizance of the university's unstinted commitment to diversity and inclusion.

- Created the following positions and made inaugural appointments:
    o Senior Associate Vice President for Economic Development (2024)
    o Director Innovation Initiatives (2024)
    o Director Workforce Development (2024)
    o Assistant Vice President for Communications Marketing and Digital Operations (2023)
    o Associate Vice President for Strategic Research Initiatives (2023)
    o Associate Vice President for Regulatory Support (2023)
    o Assistant Vice President for Communications, Marketing, and Digital Operations (2023)
    o Chief Compliance Officer (2023)
    o Assistant Vice President for Strategic Growth (2022)
    o Associate Vice President for Economic Development (2016)
    o Associate Vice President for Research Advancement (2015)

- Appointed the directors of the following centers in 2014-25:
    o Business Entrepreneur and Partnerships (BEP, 2024))
    o Institute for Artificial Intelligence and Data Science (IAD, 2020)

- o Institute for Research in Energy, Environment and Water (RENEW, 2015, 2020)
- o NYS Center of Excellence in Materials Informatics (CMI, 2016)
- o NYS Center of Excellence in Bioinformatics and Life Sciences (CBLS, 2016)
- o Center for Computational Research (CCR, 2020)
- o Office of Research Compliance (ORC, 20)
- o Lab Animal Facilities (LAF, 2020)
- o Business Entrepreneur and Partnerships (BEP, 2016)

New Initiatives
- Facilitated the purchase and maintenance of high-end equipment, distributing up to $1M/year in matching funds, at a 1:1 ratio with funds provided by faculty, departments, or units. Up to $100,000 is provided for qualifying purchases and up to $500,000 for maintenance. Equipment must be available to all researchers for at least two years from the date of the award (2023). $6M fund established for supporting purchase of expensive instruments over $2M.
- Launched the Buffalo Blue Sky program ($3M) to provide just-in-time seed funding for investigator-led, multidisciplinary research that pushes the boundaries to solve large and complex problems in any domain (2018; 2020).
- Created a faculty research hub for one-stop faculty support for pre- and post-award management, grant writing, financial reporting, and technology transfer (2016).
- Created UB SWIFT program to reduce transaction time with industry (and eliminate lengthy, costly negotiations) by empowering both parties to set research and licensing terms at the project planning stage (2016).
- Launched the faculty consulting program to stimulate industry engagement (2016).
- Launched the university's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs to stimulate industry engagement (2016).
- Developed dashboards featuring searchable information on proposals, awards, and research expenditures to anticipate research trends and measure research faculty productivity.
- Office of Research Advancement (ORA) to support the university's research and scholarly community in the pursuit of external grants and research funding. Comprehensive administrative and technical support are available to researchers as they form their research teams, identify collaborators, refine their projects and develop their proposals (2016).

Creation of New Centers
- Center for Advanced Semiconductor Technologies (CAST), to work collaboratively on cutting-edge research in microelectronics while training the next generation of leaders and engineers for the semiconductor industry (2024).
- Center for Autonomous Vehicles (CAV) focuses on fundamental issues at the forefront of autonomy and robotics (2024).
- Center for Distributed Robotics and Networked Embedded Sensing (DRONES, 2024)
- Center for Information Integrity to combat false news and propaganda by social platforms. (2021)
- Center for Cannabis and Cannabinoid Research to advance the understanding of all aspects of cannabis, its medicinal benefits, and addiction (2021).
- Institute for Artificial Intelligence and Data Science to tackle some of the world's biggest problems through groundbreaking research in the following areas: Media Forensics, Big Data, Mobile Computing, Machine Learning, Robotics, Autonomous Vehicles, Natural Language Processing, Human Machine Partnerships, and Law and Ethics (2021).

- Center for Ingestive Behavior Research to study the physiological, nutritional, developmental, genetic, sensory, and socio-economic determinants of food and fluid intake (2018).
- UB Microbiome Center to conduct research on the human microbiome - the collective microorganisms that live on and in the human body. The goal of research conducted at the center is to develop a base of knowledge about the human microbiome and its role in health (2016).
- UB Center for Integrated Global Biomedical Sciences uses education, training and research to promote novel discoveries, maximize technology and foster translation. It works with international partners in addressing global health challenges and in recognizing the important connections between health and sustainable economic development (2016).
- Communities of Excellence - $10M (2015-19).
  - Global Health Equity, which reflects an interdisciplinary approach to better promote the health and well-being of under-sourced populations.
  - Sustainable Manufacturing and Advanced Robotic Technologies, which leverage UB and regional strength in manufacturing, partner with regional companies.
  - Genome, Environment, and Microbiome to advance genomic science and increase genomic literacy through research, education, and community outreach.

- Research and Education in Environment, Energy and Water (RENEW) Institute (2015).
- Creative Arts Institute for creation production of highest artistic standards -$1M (2015-19).

Accreditation
UB follows rigorous standards for ethics, quality, and protections for human research and promotes humane and responsible research animal care.
- AAHRPP: Association for the Accreditation of Human Research Protection Program (2018; 2023)
- AAALAC: Association for Assessment and Accreditation of Laboratory Animal Care (2017; 2022; 2023)

Entrepreneurial Programming
- UB was ranked No. 41 overall in the 2025 Entrepreneur magazine/Princeton Review annual ranking, up three spots from last year. UB also ranked No. 22 among public universities and No. 7 in the Northeast.
- Enabled a non-job economic impact of $788M in western New York (2024). In the 2021-24 period, 1701 jobs were created and 285 startups supported.
- Connected dozens of incubator companies with UB talent via internships, competitions, consulting opportunities, speaking engagements, and enhanced career fair opportunities.
- Certified 22 incubator clients to leverage NYS Innovation Hot Spot tax incentives, adding money back to their balance sheets to fuel added growth.
- Paired 27 incubator clients with outside experts to lead them past milestones in their scalable development through UB's Embedded Consultants program.
- Buffalo Student Sandbox – WNY's first accelerator program – to help more than 40 teams of disruptive student entrepreneurs take giant leaps forward.
- *Piloted* and expanded "Inclusive Launch" - a first-of-its-kind diversity outreach program that provides crucial learning opportunities for underrepresented populations.

ACADEMIC CREDENTIALS
SUMMARY

Area: Artificial Intelligence; Document Analysis and Recognition; Biometrics

Publications:
- 475 reviewed technical papers
- 8 books
- 6 patents
- ~18,000 citations; h-index 72

;
Major Adviser:
- 6 postdocs (including from MIT and RIT)
- 50 doctoral students (46 graduated)
- 17 master's degree students graduated (thesis option)

Mentorship of Students:
- 18 academic institution placements, including tenure track faculty positions (in Cornell University and University of Washington)
- 4 placements in university research labs: Dartmouth, USC, UB, and University of Michigan
- 2 MS students went on to receive doctorate from MIT and University of Chicago
- Global placement of students in USA, Brazil, India, Japan, China, and S. Korea.

Research Grants: Total grants: $96M; Principal Investigator on $42M
Selected grants (from over 100)
- $160M NSF Engines, AI in Health Innovations (selected for final submission, 2024)
- $20M NSF AI Institute (2023-27)
- $2.9M NSF Data Laboratory in Materials Engineering (2016-22)
- $1.3M IARPA Janus Face Recognition (2014-17)
- $1.2M NSF Long term Biometric Authentication (2012-16)
- $3.2M DARPA Multilingual Document Classification (2007-13)
- $1.5M DoD Advanced Biometrics (2005-)

Teaching:
- Undergraduate classes: Introduction to Programming (Freshman), Data Structures (Junior)
- Graduate classes: AI, Pattern Recognition, Operating Systems, Biometrics
- Mentorship of the McNair Scholars

Service: Selected board memberships (of total 10)
- IEEE Biometrics Compendium (Editor-in-Chief, 2012-16)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (2001-05)
- IAPR International Journal of Document Analysis and Recognition (2003 – on)

Selected conference and society leadership roles (of total ~50)
- President of the IEEE Biometric Council (2014-15)
- General Chair of International Conference on Document Analysis and Recognition (2023)

- General Chair of International Conference on Biometrics (2018)
- General Chair of International Conference on Document Analysis Recognition (2023)

Talks: Selected plenary talks (of total 150 seminars worldwide)
- IAPR International Conference on Document Analysis and Recognition (2024)
- G20 Conference on Digital Education form (2023)
- NRC Intelligence Committee on Science & Technology Investments (2013)

AWARDS & HONORS:
- *118th US Congressional Recognition* – Honorable Timothy M. Kennedy of New York (December 14, 2024)
- *New York State Assembly Citation* – Karen M. McMahon (December 14, 2024)
- *Office of the Erie County Executive Proclamation* – Honorable Mark C. Poloncarz (December 14, 2024)
- *Proclamation by Town Supervisor* – Amherst, NY, Brian J. Kulpa (December 14, 2024)
- *Honorary Professor of Computer Science and Engineering* – Indian Institutes of Science Education and Research, Berhampur (July 12, 2024)
- *Person of the Year* – Council of Heritage and Arts of India (2024)
- *President's Medal* – University at Buffalo (2024)
- *Fellow of the AAIA* – Asia-Pacific Artificial Intelligence Association (2022)
- *Fellow of the AP Academy of Sciences* (2016)
- *Excellence in Graduate Student Mentoring Award* – University at Buffalo, SUNY (2016)
- *Fellow of National Academy of Inventors* (2015)
- *ICDAR Outstanding Achievements* (2015) – "For pioneering contributions to pattern recognition"
- *Distinguished Alumnus Award* (2014) – Indian Institute of Technology Kharagpur
- *Fellow of SPIE* – Society for Optics and Photonics (2013), "For contributions to Biometrics"
- *Fellow of AAAS* – American Association for the Advancement of Science (2010), "For outstanding contributions in biometrics and document retrieval"
- *IEEE Technical Achievement Award* (2010) – "For pioneering contributions to handwriting systems"
- *Fellow of ACM* – Association of Computing Machinery (2009), "For contributions to handwritten document image analysis, recognition, and retrieval"
- *SUNY Chancellor's Award* (2007) – "In recognition of outstanding scholarship and creative productivity"
- *Fellow of IEEE* – Institute of Electrical and Electronics Engineers (2006), "For contributions to handwriting recognition"
- *Fellow of IAPR* – International Association of Pattern Recognition (2004), "For contributions to advances in handwriting recognition"
- *MIT Global Indus Technovator Award* (2004) – "For pioneering endeavors at the frontiers of technological innovation," MIT Indian Business Club, Cambridge, MA
- *Fellow of IETE* – *Institution of Electronics and Telecommunication Engineers* (2002)
- *IAPR/ICDAR Outstanding Young Investigator Award* (2001) – "For visibly demonstrating the utility of pattern recognition algorithms and for outstanding scientific productivity"

IMPACT:
- Designed an early AI success story by making postal address recognition and deployment of engineered systems a reality, saving the postal services of US, UK, and Australia, hundreds of millions of dollars.
- Computing Research that Changed the World: "…Using a learning-based system developed at UB by Venu Govindaraju and colleagues, 25 billion letters a year are processed automatically by the US postal service - bar-coded for precise delivery- saving hundreds of millions of dollars..." Computing Consortium 2009.

APPENDIX
(Faculty Curriculum Vitae)

A. Publications

h-index 72; total citations: ~18,000

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 (7)

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

JOURNAL PAPERS (89)

2024

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

2023

3. 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

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

2020

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7. 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.
8. N. Sankaran, D.D. Mohan, N. N. Lakshminarayana, S. Setlur, V. Govindaraju, Domain adaptive representation learning for facial action unit recognition, Pattern Recognition, Volume 102, 2020.

2019

9. N. Narayan, N. Sankaran, S. Setlur, V. Govindaraju, "Learning Deep Features for Online Person Tracking Using Non-Overlapping Cameras: A survey, *Image Vision and Computing*, pp. 222-235, 2019.
10. B. Urala Kota, K. Davila, A. Stone, S. Setlur, 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.

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11. 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.*

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12. 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.
13. Gaurav Kumar, Venu Govindaraju, "Bayesian background models for keyword spotting in handwritten documents", *Pattern Recognition* 64: 84-91, 2017.

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14. 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.
15. 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.

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16. 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.
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18. 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.
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6. US 5,515,455: "System for recognizing handwritten words of cursive script", V. Govindaraju; D. Wang; and S. Srihari, 1996.

B. Grants & Research Projects Support

Total Sponsored Funding: $95.2M

Projects	Government	PI: V. Govindaraju Co-Is	Awards	Period
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	$400,000	2018-24
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	$799,000	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			**$37,656,831**	
CITeR Industry Phase II	Qualcomm, ACV, Zoloz	Setlur	$520,000	2018-24
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	Digiliant		$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	Copanion		$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			**$6,091,781**	
Total Funding as PI			**$42,813,612**	
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

Project	Sponsor	PI	Amount	Year
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)			**$93,091,108**	
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	$55,325	2022-24
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			**$2,099,939**	
TOTAL FUNDING (PI /Co-PI + Other CUBS Funding)			**$95,191,047**	

C. 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 Adviser of Doctoral Students (46)

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

2015	Aarti Shivram *CUBRC, NY*	• Dynamic hierarchical relational models for handwriting recognition on mobile devices
2015	Gaurav Kumar *Amazon, CA*	• Bayesian approaches for word spotting
2014	Chetan Ramaiah *Google, CA*	• Accents in handwriting: A hierarchical Bayesian approach to handwriting analysis
2014	Utkarsh Porwal *Walmart, CA*	• A semi-supervised framework for handwriting analysis
2013	Manavender Malgireddy *Amazon, WA*	• Language motivated approaches for human action recognition and spotting
2012	Xi Cheng *Google, CA*	• A novel multi-sample fusion methodology for improving biometric verification
2012	Safwan Wshah *University of Vermont, VT*	• Word spotting in multilingual handwritten documents using character recognition HMM models
2011	Ricardo Rodriguez *Universidade Federal do Rio Grande, Brazil*	• Transfer Learning for probability density estimation
2011	D. You *University of Michigan, MI*	• Methods for content extraction towards improved biomedical multimodal retrieval
2010	Xijun Peng *ISI, University of Southern California, CA*	• Probabilistic Random Field based text identification
2010	Anurag Bhardwaj *Apple, CA*	• Statistical techniques for efficient indexing and retrieval of document images
2010	Achint O. Thomas *Deep Science and Trusted Datasets, Canada*	• Enhancing cyber security through synthetic handwritten CAPTCHAs
2009	Jiang Li *Quincy University, IL*	• Integrating minutiae based fingerprint matching with local correlation methods
2009	Ifeoma Nwogu *University at Buffalo, NY*	• Statistical modeling and inferencing techniques for medical image segmentation
2008	Zhi Zhang *J. P. Morgan Chase, NY*	• Integrating facial expressions and skin texture in face recognition
2008	Huaigu Cao *ISI, University of Southern California, CA*	• Enhancement and retrieval of low quality handwritten documents
2008	Faisal Farooq *LinkedIn, NY*	• Use of language models and automatic topic categorization for indexing and retrieval of handwritten document images
2008	Praveer Mansukhani *Machinomatic Engineers, India*	• A framework for efficient fingerprint identification using a minutiae tree
2008	Roman Yampolisky *University of Louisville, KY*	• Intrusion detection using spatial information and behavioral biometrics

2008	Amalia Rusu *Fairfield University, CT*	• Exploiting gap between human and machine in handwriting recognition
2007	Chaohong Wu *KLA-Tencor, CA*	• Framework for fingerprint enhancement and feature detection
2007	Suryaprakash Kompalli *INSOFE, India*	• Stochastic framework for font-independent Devanagari OCR
2007	Robert Milewski *@Hidden, Japan*	• Automatic search engines for handwritten medical forms
2006	Sergey Tulyakov *University at Buffalo, NY*	• A complexity framework for combining classifiers in biometric systems
2005	Tsai Yang Jea *Bloomberg, NY*	• Minutiae-based partial fingerprint recognition
2005	Hansheng Lei *University of Texas, Rio Grande Valley, TX*	• Sequential pattern classification without explicit feature extraction
2003	Ankur Teredesai *University of Washington, Tacoma, WA*	• Use of genetic programming for advanced pattern recognition
2002	Hanhong Xue *Google, NY*	• Stochastic models for handwritten word recognition
2000	Ianiev Krassimir *Fair Isaac, Inc., CA*	• Organizing multiple experts for efficient pattern recognition
2000	Jaehwa Park (*Co-advised*) *Chung-Ang University, S. Korea*	• Hierarchical character recognition in handwritten phrase recognition
1997	Sriganesh Madhvanath (*Co-advised*) *eBay, NY*	• The holistic paradigm in handwritten word recognition and its applications
1996	Gyeonghwan Kim (*Co-advised*) *Sogang University, S. Korea*	• Handwritten word recognition for real-time applications

Major Adviser of graduated Masters students (17) with thesis option

2013	Nisha Bhaskaran *Time Inc., CA*	• Facial Expressions and Deception
2009	Omar Mukhtar *Amazon, WA*	• Language Modeling
2009	Bhaskar Purkayastha *Hughes Systems, MD*	• Gesture Recognition
2008	Daemien Jose *Microsoft, WA*	• Transcript Mapping
2006	Kartik Sridharan *Cornell University, NY*	• Sematic Face Recognition
2006	Sankalp Nayak *Morgan Stanley, NY*	• Devanagari OCR
2006	Shamalee Deshpande *Veritas Technologies, CA*	• Accent in Speech

2005	Amit Mahtre *Amazon, WA*	• Hand Geometry Biometrics
2005	Sharat Chikkerur *Microsoft, MA*	• Fingerprint Verification
2004	Pawan Rudravaram *Qualcom, CA*	• Palmprint Recognition
2004	Sumeet Manocha *Patni Computers, India*	• Security of Biometrics Systems
2004	Viraj Chavan *Nividea, CA*	• Biometrics and Barcode Representation
2004	Srinivas Palla *Amazon, CA*	• Multimodal Biometrics
2003	Swapnil Khadekar *Bloomberg, NY*	• Devanagari OCR
2000	David Bartnik *Qualcom, NY*	• Video Surveillance
2000	Gaurav Pal *BMC Software India*	• Music Index on the Web
2000	F. Zhou *Panasonic, NJ*	• 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 in Cornell University and University of Washington.
- 4 placements in top university research labs: Dartmouth, USC, UB, and University of Michigan.
- 2 MS students went to graduate with doctorate from MIT and University of Chicago.
- Students placed in USA, Brazil, India, Japan, China, and S. Korea.

D. **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

E. **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

• 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	1st 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	2nd 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	1st 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	4th 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

F. Invited Talks

Keynotes, Plenary Talks, and Distinguished Lectures (52)

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
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	5th International Conference on Information Systems Security, Kolkata, India
09/11/09	HP Technology Summit, Bangalore, India
07/24/09	3rd Workshop on Analytics for Noisy Unstructured Text Data, Barcelona, Spain
03/15/09	11th 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	13th 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 (33)

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

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, IIIT 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	2nd Census OCR Conference, National Institute of Standards, Bethesda, MD

Invited Talks at UB (26)

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 21st 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)

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 (3)	
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)