Sreenivasan Ramasamy Ramamurthy (sreeni.ramamurthy@ieee.org)

CURRENT APPOINTMENT

Assistant Professor of Computer Science (Tenure-Track) (Aug 2022 - Present)
Bowie State University

CONTACT INFORMATION

14000 Jericho Park Rd, Room 219,
Computer Science Building, Bowie, MD, 20715.

E: sreeni.ramamurthy@ieee.org
W: https://sreeniramamurthy.github.io

INTERESTS

Human-Centered Intelligent Systems, Embodied AI and Robotics, Edge Intelligence, Human-Machine Teaming

EDUCATION

University of Maryland, Baltimore County, **USA**
Ph.D. in Information Systems
Advisor: Dr. Nirmalya Roy
Thesis Title: Counterfactual Verified Semi-Supervised Learning Framework for Older Adults' Functional and Cognitive Health Assessment

Vellore Institute of Technology, Vellore, India
Master of Technology in Biomedical Engineering (2014 - 2016)

Amrita Vishwa Vidyapeetham, Coimbatore, India
Bachelors in Electronics and Instrumentation Engineering (2008 - 2012)

GRANTS

[External and Competitive]
PI (BSU) – DOE RENEW: Mobilizing the Emerging Diverse AI Talent (MEDAL) through Design and Automated Control of Autonomous Scientific Laboratories, Jul'23 – Jun'26
Department of Energy, ASCR-RENEW (BSU: $599,990.02, Total: 5.4M), PI: Sumit JHA (FIU)

Co-PI, Self-Adaptive Autonomous Systems, Nov'22 - May'25
ArtIAMAS - Cooperative Agreement between the University of Maryland and Army Research Lab ($506,365), PI: Darsana Josyula (BSU)

PI, Systems Modelling for Cybersecurity, Sep'21 – Apr'23
NAVAIR AirTalent UG Capstone Project Grant ($15,000)

[Internal]
PI, Advancing AI through Digital Twins and Embodied Intelligence, May'25 – Aug '25
Summer/Semester Based Undergraduate Research Program, Bowie State University ($15,750)

PI, LLM-based Autonomous Unmanned Aerial Vehicle for Situational Awareness May'24 – Apr '25
Summer/Semester Based Undergraduate Research Program, Bowie State University ($23,250)

AWARDS AND HONORS

Dean's Early Career Faculty Award, Bowie State University (2025)
Best Faculty Collaborator, Student Success Center (Provost's Office), Bowie State University (2023)
Best Paper Award (IEEE CHASE 2022)
NSF Student Travel Award (IEEE SmartComp 2021, ACM/IEEE CHASE 2021)
Conference Travel Award (ACM HotMobile 2018)

Teaching experience

At Bowie State University (Instructor)

COSC 429/629 – Data Visualization (Spring 2026)
COSC 874 Deep Learning II (Fall 2025)
COSC 719 Image Processing (Spring 2025)
COSC 431/531 Database Management (Spring 2026 [2 sections], Fall 2025, Spring 2025, Fall 2024)
COSC 428/528 Design and Analysis of Algorithms (Fall 2023)
COSC 112 - Computer Science I (Introduction to Java Programming) (Fall 2024 [1 section + course coordinator], Fall 2023 [1 section + course coordinator], Fall 2022 [2 sections + course coordinator])
COSC 113 - Computer Science II (Advanced Java Programming) (Spring 2023 [2 sections + course coordinator])
COSC 111 – Fundamentals of Computer Science and Data Concepts (Spring 2024, Fall 2023)

At UMBC (Teaching Assistant)

IS 733 – Data Mining (Spring 2021)

Articles Under Review

Key: [S] Under Review, [J] Peer Reviewed Journals, [C] Peer Reviewed Conference, [W] Workshop, [P] Posters. Students I have advised are underlined.

[S1] **Ramamurthy, S.R.**, Manjitha, A., Radhakrishnan, M., and Jayarajah, K. SVLM-FeedbackBench: Benchmarking Real-Time Robotic Feedback using Small Vision-Language Models for Human Manipulation.
[S2] Trivedi.D., Agada, R., and **Ramamurthy, S.R.**, VIGIL: Securing VLM Controlled Robots Against Cyberattacks.
[S3] Brown, M., Olivers, S., Srinivasan, S., **Ramamurthy, S.R.** MARSys: Multi-Agent Recommendation System with Knowledge Graph Coordination and Bayesian Trust.

Peer-Reviewed Journal, Conference & Workshop Publications

[J8] Ghosh, I., Chakma, A., Anwar, M.S., **Ramamurthy, S.R.,** and Roy, N., 2026. SkillNet: Human Actions Assessment via Human-AI Collaboration. ACM Transactions on Multimedia Computing Communications and Applications (ACM TOMM).
Impact Factor: 6.0

[C9] Houkpati, Y., M'Bale, K., Conn, M., Goldman, G., Tran-Luu, T., **Ramamurthy, S.R.**, Josyula, D., 2023. Siamese Networks for Autonomous Classification of Battlefield Ground Vehicles Using Acoustic Data. In 2023 International Conference on Computational Science and Computational Intelligence (CSCI).
Acceptance Rate: 23%

[C8] Ghosh, I., Goldstein, A., Chakma, A., Freeman, J., Gregory, T., Suri, N., **Ramamurthy, S.R.** and Roy, N., 2023. HeteroSys: Heterogeneous and Collaborative Sensing in the Wild. In 2023 IEEE International Conference on Smart Computing (SMARTCOMP).

[J7] Ghosh, I., **Ramamurthy, S.R.**, Chakma, A. and Roy, N., 2023. Sports Analytics Review: Artificial intelligence applications, emerging technologies, and algorithmic perspective. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery.
Impact Factor: 11.7

[W3] Chowdhury, D., Roy, A., **Ramamurthy, S.R.** and Roy, N., 2023. CHARLIE: A Chatbot That Recommends Daily Fitness and Diet Plans. In 2023 IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops).

[C7] Anwar, M.S., Dey, E., Devnath, M.K., Ghosh, I., Khan, N., Freeman, J., Gregory, T., Suri, N., Jayarajah, K., **Ramamurthy, S.R.** and Roy, N., 2023. HeteroEdge: Addressing Asymmetry in Heterogeneous Collaborative Autonomous Systems. In 2023 IEEE 20th International Conference on Mobile Ad Hoc and Smart Systems (MASS).

[C6] Ghosh, I., Chakma, A., **Ramamurthy, S.R.**, Roy, N. and Waytowich, N., 2022. PerMTL: A Multi-Task Learning Framework for Skilled Human Performance Assessment. In 2022 21st IEEE International Conference on Machine Learning and Applications (ICMLA).

[J6] **Ramamurthy, S.R.**, Ghosh, I., Gangopadhyay, A., Galik, E. and Roy, N., 2022. STAR-Lite: A light-weight scalable self-taught learning framework for older adults' activity recognition. Pervasive and Mobile Computing.
Impact Factor: 4.7

[J5] Ghosh, I., **Ramamurthy, S.R.**, Chakma, A. and Roy, N., 2022. DeCoach: Deep learning-based coaching for badminton player assessment. Pervasive and Mobile Computing.
Impact Factor: 4.7

[C5] Hasan, Z., Dey, E., **Ramamurthy, S.R.**, Roy, N. and Misra, A., 2022. RhythmEdge: Enabling contactless heart rate estimation on the edge. In 2022 IEEE International Conference on Smart Computing (SMARTCOMP).
Best Paper Award

[C4] Ghosh, I., Ivler, M., **Ramamurthy, S.R.** and Roy, N., 2022. SpecTextor: End-to-End Attention-based Mechanism for Dense Text Generation in Sports Journalism. In 2022 IEEE International Conference on Smart Computing (SMARTCOMP).

[C3] **Ramamurthy, S.R.**, Chatterjee, S., Galik, E., Gangopadhyay, A., Roy, N., Mitra, B. and Chakraborty, S. CogAx: Early assessment of cognitive and functional impairment from accelerometry. In 2022 IEEE International Conference on Pervasive Computing and Communications (PerCom 2022).
Acceptance Rate ≈ 10.67%

[J4] Hasan, Z., **Ramamurthy, S.R.** and Roy, N., 2022, CamSense: A camera-based contact-less heart activity monitoring. Smart Health.

[C2] **Ramamurthy, S.R.**, Ghosh, I., Gangopadhyay, A., Galik, E. and Roy, N., 2021. STAR: A scalable self-taught learning framework for older adults' activity recognition. In 2021 IEEE International Conference on Smart Computing (SMARTCOMP).

[W2] Ghosh, I., **Ramamurthy, S.R.** and Roy, N., 2020, March. StanceScorer: A data driven approach to score badminton player. In 2020 IEEE international conference on pervasive computing and communications workshops (PerCom Workshops).

[J3] Md Faridee, A.Z., **Ramamurthy, S.R. (*Co-primary)** and Roy, N., 2019. Happyfeet: Challenges in building an automated dance recognition and assessment tool. GetMobile: Mobile Computing and Communications.

[J2] Hossain, H.S., **Ramamurthy, S.R.**, Khan, M.A.A.H. and Roy, N., 2018. An active sleep monitoring framework using wearables. ACM Transactions on Interactive Intelligent Systems (TiiS).
Impact Factor: 3.9

[J1] **Ramasamy Ramamurthy, S.** and Roy, N., 2018. Recent trends in machine learning for human activity recognition—A survey. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery. **Impact Factor: 11.7**

[W1] Faridee, A.Z.M., **Ramamurthy, S.R. (*Co-primary)**, Hossain, H.S. and Roy, N., 2018. Happyfeet: Recognizing and assessing dance on the floor. In Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications.

[C1] Nair, B.B., Patturajan, M., Mohandas, V.P. and **Sreenivasan, R.R.**, 2012. Predicting the BSE Sensex: Performance comparison of adaptive linear element, feed forward and time delay neural networks. In 2012 International Conference on Power, Signals, Controls and Computation.

Posters & Demos

[P4] **Ramamurthy, S. R.**, Arulraj, M., 2025. A Comparative Study of Vision-Language Models for Understanding Meteorological Visualizations. To appear in 2025 Fall Meeting, AGU, 15–19 Dec.

[P3] **Ramamurthy, S. R.**, Jha, S., and Ramanathan, A., 2024. Mitigating Hallucinations in Large Language Models Using Meta-Cognition. In SIAM Conference on Mathematics of Data Science (MDS24).

[P2] Hasan, Z., Dey, E., **Ramamurthy, S.R.**, Roy, N. and Misra, A., 2022. Demo: RhythmEdge: Enabling contactless heart rate estimation on the edge. In 2022 IEEE International Conference on Smart Computing (SMARTCOMP).

[P1] Faridee, A.Z.M., **Ramamurthy, S.R. (*Co-primary)**, Hossain, H.S. and Roy, N., 2018. HappyFeet: Recognizing and assessing dance on the floor. In Proceedings of the 19th International Workshop on Mobile Computing Systems & Applications.

Field Experiments and Datasets

Ramamurthy, S.R., Galik, E., Gangopadhyay, A. and Roy, N, 2021. Alzheimer's Activity Recognition Dataset for Older Adults. Protected under IRB.

- Designed and led the activity data collection experiment for 25 participants at a continuing care retirement community at individual houses for longitudinal functional and behavioral health assessment.

Hasan, Z., **Ramamurthy, S.R.**, and Roy, N, 2021. MPSC-rPPG Dataset. Available at: https://dx.doi.org/10.21227/ddgz-tx88.

Ghosh, I., **Ramamurthy, S.R.**, Chakma, A., Dey, E., Hasan, Z., Roy, N., 2020. Badminton Activity Recognition (BAR). Available at: https://dx.doi.org/10.21227/n1e0-7c60.

Invited talks

Early Assessment of Cognitive and Functional Impairment from Accelerometry, **School of Electronics Engineering (SENSE), VIT University**, Jul 2023.

Internet of Things for Smart Homes, Cities and Contested Environments, **Booz Allen Hamilton NeuroTech Exposition,** Jun 2023.

Internet of Things for Smart Homes, Cities and Contested Environments, **Department of Computer Science, Morgan State University**, Mar 2023.

Service to the University

Curriculum Development

- COSC 107 Computational Thinking for Problem Solving
- COSC 379 Robotic Operating System
- COSC 677 Robotic Perception
- COSC 678 Robotic Motion Planning
- COSC 507 Intensive Foundations of Computer Science
- COSC 508 Analytical Foundation in Computer Science

Committees Served

- University Curriculum Committee (Department Representative: 2025 – Present; Alternate Department Representative: 2024 – 2025)
- Institutional Review Board Member (Fall 2025 - Present)
- BS + MS in Artificial Intelligence (Summer 25; BS in Artificial Intelligence is approved)
- Designing MS in Computer Science Bridge Program (Summer 2024 – Spring 25)
- Office of Sponsored Research Grants Manager Search Committee (Spring 2024)
- Scheduling Committee (Fall 2024, Spring 2025)

Committees Chaired

- Bulldog Coders (Faculty Advisor; 2022 - 2025)
- Modernizing Gate Keeping Courses (Summer 2024)
- Department of Computer Science Scheduling Committee (Fall 2025)

External Service

Technical Program Committee: IEEE/ACM CHASE (2026), IEEE PerCom (2026), IEEE BigCyber Workshop (2024, 2025), IEEE ICMLA (2204 – 2025), IEEE TELMED (2024 – 2026), COMSNETS Graduate Forum (2022 – 2023)

Organizing Committee: IEEE PerCom (2025)

Reviewer: Elsevier Pervasive and Mobile Computing (2018 - Present), Cognitive Systems Research (2023), Embedded Computing Systems (2023), Parallel Computing (2023), AAAI (2022 – 2023), IEEE SmartComp (2019), IEEE IE (2018)

Technical Program Committee co-chair: IEEE SmartSys (2023)

Web Co-chair: IEEE SmartComp (2019)

Publicity Co-chair: IEEE SmartSys (2017 – 2018)

Local Organizing Student Co-chair: IEEE WoWMoM (2019), IEEE SmartComp (2019)

Student Mentoring

Graduated Students

Akif Muhtasim (M.S.), BSU, Advisor, Jan 2023 – Jan 2024, *now at Microsoft*
Miles Brown (Undergrad), BSU, Advisor, May 2025 – Dec 2025

Current Students

Starfranklyn Obieze Olivers (D.Sc.), BSU, Advisor, Jan 2023 – Present
Jerry Diabor (D.Sc.), BSU, Advisor, May 2025 – Present
Ixchel Flores (Undergrad), BSU, Advisor, May 2024 – Present
Ayomide Aisida (Undergrad), BSU, Advisor, May 2025 - Present

Other Mentees

Leslie Selorm Afeawo (Undergrad), BSU, Advisor, May 2024 – Dec 2025

Kamar Elijah Johnson (Undergrad), BSU, Advisor, May 2025 – Dec 2025
Johndominic Belcina Paja (Undergrad), BSU, Advisor, May 2025 – Dec 2025
Staphord Bengesi (D.Sc.), BSU, Advisor, Aug 2022 – Aug 2023
Michael Lewis Stewart (Undergrad), BSU, Advisor, Nov 2022 – Dec 2022
Micah James Alexander (Undergrad), BSU, Advisor, Nov 2022 – May 2023
Yao Houkpati (D.Sc.), BSU w/ Darsana Josyula, Jan 2023 – May 2025
Hubert Kyerematen-Boateng (D.Sc.), BSU w/ Darsana Josyula, Jan 2023 – May 2024
Francis Izuchukwu Onodueze (Post. Doc.), BSU w/ Darsana Josyula, Jan 2023 – May 2024
Mohammed Saied Anwar (Ph.D.), UMBC w/ Nirmalya Roy. Jan 2022 – Fall 2022
Adam Goldstein (Co-Mentor) w/Nirmalya Roy (NSF-REU 2022 @ UMBC)
Indrajeet Ghosh (Ph.D.), UMBC w/ Nirmalya Roy. Aug 2018 – Aug 2022, *PostDoc at UVA*
Zahid Hasan (Ph.D.), UMBC w/ Nirmalya Roy. Aug 2018 – Aug 2022, *NIH T15 research Fellow at the University of Buffalo*
Deepanjali Chowdhury (Mentor) w/ Nirmalya Roy (NSF-REU 2021@ UMBC)
Matthew Ivlar (Co-Mentor) (Mentor) w/ Nirmalya Roy (NSF-REU 2021@ UMBC)

Dissertation Committees:
Yao Houkpati (D.Sc. Candidate), Title: Multi-class Novelty Adaptation for Acoustic Data, Fall 2023.

Hubert Kyerematen-Boateng (D.Sc.), Title: Trustworthiness of Neural Network Predictions, Spring 2023.

Mahfoudh Mohammad Batarfi (D.Sc.), Title: Generating 3D Facial Models from Single-view Facial Images in the Wild using Deep Learning Networks, Spring 2023.

Abdullah Algahtani (D.Sc.), Title: Building an Intelligent Framework Using a Novel Combination of Ensemble Classification to Predict Heart Disease, Spring 2023.

Past Research Experience

Graduate Research Assistant, January 2017 - August 2022
Mobile, Pervasive and Sensor Computing Lab, UMBC
Advisor: Prof. Nirmalya Roy

Graduate Research Assistant, May 2021 - August 2022
Center for Distributed Sensing and Autonomy (CARDS), UMBC
Advisors: Prof. Nirmalya Roy and Prof. Aryya Gangopadhyay

Junior Research Fellow, October 2016 - November 2016
Indian Institute of Technology Bombay, India
Advisor: Prof. Deepthi Gupta

Visiting Researcher, December 2015 - April 2016
The University of Adelaide, Adelaide, Australia
Advisors: Prof. Said Al-Sarawi

In Media

US Congressmen Press Release, Hoyer, Adams Statement on New Department of Energy Funding for Bowie State University, August 2023
New Scientist, Check it out: Automated dance teacher tells you when your moves are wrong, March 2018