Dr. SHARAD SHARMA

Associate Dean of Research
Sinha Endowed Professor, Department of Data Science   **1–734 358 3842 (C)**
College of Information   **1-940-565-2605 (O)**
University of North Texas, Denton, Texas 76203-5017   **sharad.sharma@unt.edu**

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Research Laboratory
Data Visualization and Extreme Reality (DVXR) Lab: https://ci.unt.edu/dvxr/

Research Interests
- Data Science (DS) and Data Visualization (DV)
- Software Engineering (SE) and Artificial Intelligence (AI)
- Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), and Extreme Reality (XR)
- Human Computer Interaction (HCI) and Health Informatics (HI)
- Gaming, Fuzzy Logic (FL) and Brain Computer Interface (BCI)

Professional Preparation
1. Ph.D., Computer Engineering, Wayne State University, Detroit, MI,   Graduated: 2006
   Area: Software Engineering and Artificial Intelligence
   Dissertation Title: Modeling and Simulation of Multi-Agent Systems for Emergency Scenarios
   Department: Electrical and Computer Engineering

2. M.S., Architecture, University of Michigan, Ann Arbor, MI,   Graduated: 2003
   Area: Computer-Aided-Design
   Master's Thesis Title: Collaboration, Simulation and Graphic Design in Java and C++
   Department: Architecture

3. B.Arch. Birla Institute of Technology, India,   Graduated:1999
   Bachelor's Thesis Title: Assam Capital Complex
   Department: Architecture

Professional Appointments

1. *Associate Dean of Research*	2025 – Present
Sinha Endowed Professor, Department of Data Science, College of Information	2025 – Present
University of North Texas (UNT), Denton, Texas,	
a. *Director of B.S in Data Science,* Department of Information Science, UNT	2022 – Present
b. *Director of* Data Visualization and Extreme Reality (DVXR) Lab., UNT	2022 – Present
c. Director of the Data Science and Industry Innovation (DSII) Center, UNT	2022 – Present
2. *Professor*, Department of Information Science, College of Information	2022 – 2025
University of North Texas (UNT), Denton, Texas,	
a. *Director of B.S in Data Science,* Department of Information Science, UNT	2022 – Present
b. *Director of* Data Visualization and Extreme Reality (DVXR) Lab., UNT	2022 – Present
c. Director of the Data Science and Industry Innovation (DSII) Center, UNT	2022 – Present
3. *Professor*, Department of Computer Science,	
Bowie State University, Bowie, MD,	2019 – 2022.
a. *Graduate Coordinator,* Department of Computer Science, BSU	2019 – 2022
b. *Director of* Virtual Reality (VR) Laboratory, BSU	2007 – 2022
4. *Associate Professor*, Department of Computer Science,	
Bowie State University, Bowie, MD, (**Tenured and Promoted** in **2013**)	2013 – 2019.
5. *Assistant Professor*, Department of Computer Science,	
Bowie State University, Bowie, MD,	2007 – 2013.
6. *Research /Teaching Assistant*, Department of Electrical and Computer Engineering,	
Wayne State University, Detroit, MI,	2005 -2006.
7. *Research/Teaching Assistant/Programmer*, University of Michigan, Ann Arbor, MI,	2000-2004

Awards Won

- **Outstanding Mentor Award,** at UNT College of Information, December **2023 and 2024**
- **Faculty Excellence Award for Top 5 Recipients & Most Awarded Grants Award** at UNT COI 15th-anniversary event on Nov. 10, **2023**.
- **Presidential Achievement Award** in recognition of distinguished achievements in research and grants, Bowie State University, May 5th, **2022**.
- **USM** (*University System of Maryland)* **Board of Regents' Faculty Award"** for **Excellence in Research and Scholarship,** April **2018**.
- TMCF-ARL **Summer Faculty Research Fellowship** selected by ARL research directors to collaborate for 8 weeks of summer at Aberdeen, MD in 2016.
- Won **Outstanding Researcher Award** for the year 2013 at Bowie State University. Awarded 30 April, 2013.
- Won **Outstanding Faculty Award** for the year 2012 in College of Arts and Science at Bowie State University. Awarded 27 April, 2012
- Won **Outstanding Researcher Award** for the year 2011 in College of Arts and Science at Bowie State University. Awarded 8 April, 2011
- Won **Outstanding Publication Award** for the year 2010 in College of Arts and Science at Bowie State University. Awarded 30 April, 2010
- Won **Outstanding Young Faculty Award** for the year 2009 in College of Arts and Science at Bowie State University. Awarded 17 April, 2009
- University **VIP Grants Award** for hard work and dedication, submitting the *most grant proposals* for the year 2008- 2009 academic year at Bowie State University.
- Won "**Outstanding Graduate/Professional Student Leadership Award**" for the year 2005-2006 at Wayne State University, Detroit, MI.

Grants Received [Over 4 Million dollars]

1. **PI- NSF:** "CISE-MSI: Emergency Response and Evacuation Training for Active Shooter Events", Division of Computer and Network Systems (CNS), Award Period: 10/01/2021 to 09/30/2025, Award Number: 2131116, New Award: 2319752, Award Amount: $300,000.00. [**Area: Virtual Reality, Artificial Intelligence]**
2. **Sub-Award, PI at UNT:** NSF HDR institute: iHARP- NSF HDR institute for Harnessing Data and Model Revolution in the Polar Regions, total award is $13M ($13,000,000.00) for 5 years, Award number #2118285, 01/01/2022 to 12/31/2026. [**Area: Area: Data Science, Data Visualization, Artificial Intelligence]**
3. **Co-PI- NSF:** Collaborative Research: Conference: NSF Computer and Information Science and Engineering Research Expansion Program (CISE MSI) 2024-2026 Aspiring Principal Investigators Workshop (CNS), Award Period: 08/01/2024 to 07/31/2026, Award Number: 2437481, Award Amount: $100,000.00. [**Area: Data Science, Data Visualization, Artificial Intelligence]**
4. **PI- NSF**: "FW-HTF-P: Immersive Virtual Reality Instructional Modules for Response to Active Shooter Events", funded by the National Science Foundation, Division: DRL, NSF 20-515 Future of Work at the Human-Technology Frontier: Core Research, Award Number: 2026412, New Award: 2321539, Award Period: 09/01/2020 to 08/31/2024. Award Amount: $132,352.00 [**Area: Virtual Reality, Artificial Intelligence]**
5. **PI- Industry (Channel Science) Award,** Agreement No. P-2025-0001, Data Science/ML techniques for waveforms from legacy magnetic tapes, Period: 05/01/2025 to 8/30/2025, Award Amount: $8,000.00. [**Area: Data Science, Artificial Intelligence, Machine Learning]**
6. **PI (UNT) -** NSF Grant: Harnessing the Data Revolution (HDR) Data Science Corps (DSC): Collaborative Research: Creating and Integrating Data Science Corps to Improve the Quality of Life in Urban Areas, Award Period: 1 October 2019 through 30 Sep 2024, Award #1923986, New Award Number: 2321574, PI: Gangopadhyay (UMBC), Amount: $180,000.00, Total Award Amount: $1,198,769.00 **[Data Science, Data Visualization, Artificial Intelligence, Virtual Reality]**

7. **Co-PI- NSF:** "RISE: High-Performance Intelligent Data-Science Institute (HIDI)", Division: Research Infrastructure for Science and Engineering (RISE), Award Period of Performance: 05/01/2021 - 04/30/2025, Award ID 2022981, Total Award Amount: $1,000,002.00 [**Area: Data Science, Data Visualization, Artificial Intelligence]**

8. **PI (BSU) -** NSF Grant: RAPID: Collaborative Research: VAPOC: Visualization, Analysis and Prediction of COVID-19, Award Period: June 1, 2020 through May 31, 2022, Award # 2032344, Award Amount: $40,000 (Total Amount: 100,000.00) **[Data Science, Data Visualization, Artificial Intelligence, Virtual Reality]**

9. **PI - ARL Grant:** Avatars to represent human behavior in a Collaborative Virtual Environment, under The **U.S. Army Research Laboratory (ARL)**, *Award: W911NF-17-S-0003*, funded by ARL-HRED division under Assessment and Analysis campaign. Award Period: 09/05/2018 to 08/28/2020, Award Amount: $85,000.00. **[Area: Artificial Intelligence, Behavioral modeling, Virtual Reality, & Data Visualization]**

10. **PI - ARL Grant:** Megacity: Avatars in Collaborative Virtual Environment (CVE) approach for Decision Making, under The **U.S. Army Research Laboratory (ARL)**, *Award: W911NF-17-2-0133*, funded by ARL-HRED division under Assessment and Analysis campaign. Award Period: 08/04/2017 to 08/03/2018, Award Amount: $85,000.00. **[Area: Collaborative Virtual Reality, Artificial Intelligence, & Data Visualization]**

11. **Army Research Laboratory Faculty Fellowship** at The U.S. Army Research Laboratory (ARL) at Aberdeen Proving Grounds (**APG**), MD, under SLAD (Survivability/Lethality Analysis Directorate) division at The Human Research and Engineering Directorate (HRED), 8 weeks in summer 2016., Award Period: May-July 2016, Award Amount: $20,000.

12. **Space Act Agreement** (SAA5-17-02-N25423) between NASA GSFC Applied Engineering and Technology Directorate and Bowie State University (VR Lab) to collaborate on the development of Virtual Reality/Augmented Reality (VR/AR) technologies. This agreement involves collaboration on multiple VR and AR pilots (and their follow-ons) that target engineering, operations, and sciences, Technical Points of Contact: Thomas Grubb (NASA) & Dr. Sharad Sharma (BSU), Period: 2/27/2018 - 2/26/2021. **[Area: Virtual Reality & Augmented Reality]**

13. **PI- NSF**: "A Problem-Based Learning Approach to Teach Gaming and Development of **Gaming Instructional Modules** to Enhance Student Learning in Lower Level Core Courses", funded by the National Science Foundation. Award Number: HRD-1238784, Award Period: 10/01/2012 to 10/01/2015. Award Amount: $299,500. [**Area: Gaming, Virtual Reality, Artificial Intelligence]**

14. **PI- NSF**: "Increasing Expertise of Minority Students by Development of a **Virtual and Augmented Reality Laboratory for Research** and Education at Bowie State University", funded by the National Science Foundation. Award Number: HRD-1137541, Award Period: 09/15/2011 to 08/31/2014. Award Amount: $299,489. **[Area: Virtual Reality & Augmented Reality]**

15. **PI- DHS**: DHS Scientific Leadership Award, "Developing Homeland Security Expertise to Support **Emergency Evacuation Research** (HS-SEER)", Award Number: 2011-ST-062-000050, Award Period 09/01/2011 to 08/31/ 2015. Award Amount: $249, 901.29. **[Area: Artificial Intelligence, Evacuation, Emergency Response and Decision making]**

16. **NASA**: "Modeling and Simulation of Emergency Behavior in Virtual Reality for Airport Safety" funded by NASA Langley, under CIBAC grant. Award Period: Academic Year: 2011-2012.

17. **PI- TEDCO/ USAMRMC** BAA-08-1 grant for "*Voice FMC: A speech recognition, speech synthesis, and natural language processing system*", Year: Dec. 2009 - Dec. 2010 (AMOUNT: $55,000.00). **[Area: Artificial Intelligence, Machine Learning, Pattern Recognition, Software Engineering]**

18. BETTER , "*Virtual Reality as a tool for learning and education*", (Year: 2008, 2009, 2010), Department mini grant (AMOUNT: $15,000.00 /year).

19. NASA: CIBAC , "*Simulation and Modeling for Aircraft Safety*", (Year: 2008, 2009, 2010), Department mini grant. (AMOUNT:1-month summer, 25%-time release).

20. Thurgood marshal college funds, TMCF/DOE HBCU technology graduate student award, "*Online Data Backup System*", Year: 2009-2010. (AMOUNT: $5,000.00).

21. NSF Cyberwatch sub-contract, "*CUTS: (CyberWATCH Underground System)A Proposal for a Cooperative Testbed Network to Facilitate Information Assurance Education and Cooperation*", Year: Summer 2009. (AMOUNT: $19,286.81).

Publications
Books Edited/ Book Chapters:
1. **Sharma, S,** Dronavalli, S.C., Chellatore, M.P., Pesaladinne R., "Interactive Visualizations for Crime Data Analysis by Mixed Reality", Springer Nature Switzerland AG, in J. Y. C. Chen and G. Fragomeni (Eds.): HCII 2024, https://doi.org/10.1007/978-3-031-61047-9_19, Lecture Notes in Computer Science (LNCS)14708, pp. 1-18, **2024**.
2. Chellatore, M.P., **Sharma, S,** "Mobile application for identifying anomalous behavior and conducting time series analysis using heterogeneous data", Springer Nature Switzerland AG, in J. Wei and G. Margetis (Eds.): HCII 2024, https://doi.org/10.1007/978-3-031-60458-4_12, Lecture Notes in Computer Science (LNCS) 14737, pp. 1-16, **2024**.
3. **Sharma S.,** Ali, S., "Multi-agent Crowd Simulation in an Active Shooter Environment", Springer Nature Switzerland AG, https://doi.org/10.1007/978-3-031-06015-1_8, In J. Y. C. Chen and G. Fragomeni (Eds.): Virtual, Augmented and Mixed Reality: Applications in Education, Aviation and Industry, LNCS 13318, pp. 1–13, **2022**.
4. **Sharma S.,** Bodempudi S.T., Reehl A. "Real-Time Data Analytics of COVID Pandemic Using Virtual Reality", In: Chen J.Y.C., Fragomeni G. (eds) Virtual, Augmented and Mixed Reality. HCII 2021. Lecture Notes in Computer Science, vol 12770. Springer, Cham. https://doi.org/10.1007/978-3-030-77599-5_9, **2021**.
5. **Sharma, S**, "Improving emergency response training and decision making using collaborative virtual reality environment for building evacuation", In Virtual, Augmented and Mixed Reality. Multimodal Interaction, HCII 2020. vol 12428, pp. 1–12, https://doi.org/10.1007/978-3-030-59990-4_17, Springer Nature, **2020**.
6. **Sharma, S,** Bodempudi S.T., Scribner D., Grynovicki J., Grazaitis P., "Emergency Response Using HoloLens for Building Evacuation", In Virtual, Augmented and Mixed Reality. Multimodal Interaction. HCII 2019. Lecture Notes in Computer Science, vol 11574, pp 299-311, https://doi.org/10.1007/978-3-030-21607-8_23, Print ISBN 978-3-030-21606-1, Springer, Cham, **2019**.
7. Frederick C Harris, Jr., Sergiu M. Dascalu, and **Sharad Sharma** (eds), Proceedings of the 28th International Conference on Software Engineering and Data Engineering, SEDE 2019, San Diego, CA, USA, September 30 - October 2, 2019.
8. Frederick C Harris, Jr., Sergiu M. Dascalu, and **Sharad Sharma** (eds), Proceedings of the 27th International Conference on Software Engineering and Data Engineering, SEDE 2018, New Orleans, LA, USA, Oct 8-10, 2018.
9. Frederick C Harris, Jr., Sergiu M. Dascalu, and **Sharad Sharma** (eds), Proceedings of the 26th International Conference on Software Engineering and Data Engineering, SEDE 2017, San Diego, CA, USA, Oct 2-4, 2017.

Journals
1. Sharma, S and Pesaladinne R., "Spatial Analysis and Visual Communication of Emergency Information through Augmented Reality", Journal of Imaging Science & Technology (JIST), JIST, Vol. 67, Issue 6, December **2023**.
2. Arteaga, C., Park, J.W, Morris, B.T, **Sharma, S.,** "Effect of trained evacuation leaders on victims' safety during an active shooter incident", Elsevier Safety Science, ISSN 0925-7535, https://doi.org/10.1016/j.ssci.2022.105967, Volume 158, 105967, **2023**.
3. Rajeev,S., Sharma, S, "Evaluation of Game-Theme Based Instructional Modules for Data Structure Concepts", International Journal of Computers and their Applications, IJCA, Vol. 27, No. 1, pp 24-34, March **2020**.
4. Stigall, J., Bodempudi, S.T., **Sharma, S,** Scribner, D., Grynovicki, J., Grazaitis, P., "Use of Microsoft HoloLens in indoor evacuation", International Journal of Computers and their Applications, IJCA, Vol. 26, No. 1, March **2019**.
5. Frederick C. Harris, Jr., Sergiu M. Dascalu, Sharad **Sharma** (eds), "Guest Editorial: Special Issue from ISCA, 2019 SEDE Conference, "International Journal of Computers and Their Applications, Vol 27, No 1, pg 2-3, March **2020**.
6. Frederick C Harris, Jr., Sergiu M. Dascalu, and Sharad **Sharma** (eds), Special Issue of International Journal of Computers and their Applications, IJCA, ISSN 1076-5204, Vol. 26, No. 1, March **2019**.
7. Frederick C Harris, Jr., Sergiu M. Dascalu, and Sharad **Sharma** (eds), Special Issue of International Journal of Computers and their Applications, IJCA, Vol. 25, No. 1, March **2018**.
8. Oladunni, T., **Sharma, S.,"**H2O Deep Learning for Hedonic Pricing", International Journal of Computers and their Applications, IJCA, Vol. 25, No. 1, March **2018.**
9. **Sharma, S.,** Ogunlana, K., P., Scribner, P., Grynovicki, "Modeling human behavior during emergency evacuation using intelligent agents: A multi-agent simulation approach", Springer special issue of Information Systems Frontiers on Disaster Management and Information Systems. Springer, DOI: 10.1007/s10796-017-9791-x, [http://rdcu.be/vjtS], August, **2017**.
10. **Sharma, S**., "A Collaborative Virtual Environment for Safe Driving in a Virtual City by Obeying Traffic Laws", Journal of Traffic and Logistics Engineering (JTLE, ISSN: 2301-3680), pp. 84-92, Volume 5, No. 2, **2017**.
11. Onodueze, F, **Sharma, S.,** "Rijndael Algorithm for Database Encryption on a Course Management System", International Journal of Computers and their Applications, IJCA, Vol. 24, No. 1, March **2017**.
12. Oladunni, T, **Sharma, S.,**" Predicting Fair Housing Market Value: A Machine Learning Investigation", International Journal of Computers and their Applications, IJCA, Vol. 23, No. 3, Sept. **2016**.

13. **Sharma, S.,** and Ogunlana, K., "Using Genetic Algorithm & Neural Network for modeling learning behavior in a Multi-Agent System during Emergency Evacuation", International Journal of Computers and their Applications, IJCA, Vol. 22, No. 4, page 172-182, Dec. **2015**.
14. **Sharma, S.**, Doswell, J., "Pattern matching and information extraction in a software system for a battlefield environment", Journal of Computational Methods in Science and Engineering, Volume 12, No.3, Supplement 1, page S113-S118, ISSN: 1472-7978, **2012**.
15. **Sharma, S**., "Use of Favorite Goal in Agent Based Modeling and Simulation", International Journal of Computers and their Applications, IJCA, Vol. 19, No. 1, March **2012**.
16. Lohgaonkar, **Sharma, S.**, "Online Assessment System with Offline Capabilities", Journal of Computer Technology and Application (JCTA-E20111006-1), Vol.3, No.1, **2012**.
17. **Sharma, S**., "Fuzzy approach for predicting probability of reaching a target in a battlefield environment", International Journal of Computers and their Applications, IJCA, Vol. 17, No. 1, March **2010**.
18. **Sharma, S**., "Military route planning in battle field simulations for a multi-agent system", Journal of Computational Methods in Science and Engineering, Volume 10, No.1,2, page. S97-S105, ISSN: 1472-7978, **2010**.
19. **Sharma, S**., "Avatarsim: A multi-agent system for emergency evacuation simulation", Journal of Computational Methods in Science and Engineering, Volume 9, No. 1,2, page S13-S22, ISSN 1472-7978, **2009**.
20. **Sharma, S**., Singh, H., Prakash, A., "Multi-agent modeling and simulation of human behavior in aircraft evacuations", IEEE Transactions on Aerospace and Electronic Systems, Vol.44, No.4, October **2008**.
21. **Sharma, S**., Turner, J., "An object oriented approach to simulating agent-based behavior", SIGraDi, CUMINCAD Journal, page 310-312, Brazil, 10-12 November **2004**.

Conferences (Peer Reviewed)

2025
1. Sharma, S, Summitt, A., "A Mobile Augmented Reality Application for Indoor Emergency Evacuation and Navigation", Proceedings in Electronic Imaging (EI 2025), pp 170-1 - 170-6, https://doi.org/10.2352/EI.2025.37.13.ERVR-170, 2025.
2. Sharma, S, Moses, P., "A Collaborative Virtual Reality Environment Module for Active Shooter Response Training and Decision Making", Proceedings of the IS&T International Symposium on Electronic Imaging (EI 2025) in the Engineering Reality of Virtual Reality Conference, February 2-6, 2025.
3. Omary, D., Gamineedi, S.K., Shareef, A., and Sharma, S., "Virtual Reality Fire Drill for Campus Evacuation", Proceedings of the 22nd International Conference on Information Technology - New Generations (ITNG), Las Vegas, Nevada, USA, April 13-16, 2025.
4. Sharma, S., Moses, P., "Immersive Active Shooter Response Training and Decision Making Environment for a University Campus Building", Proceedings of the 27th International Conference on Human-Computer Interaction (HCI International 2025), Thematic Area: Virtual, Augmented and Mixed Reality, Gothenburg, Sweden, 22 - 27 June 2025.
5. Summitt, A., Bhatt, B.J., Sharma, S.,"Emergency Assistive Mobile Application with Digital Twin for Real-Time 3D Navigation in Indoor Environments", Proceedings of the 23rd IEEE/ACIS International Conference on Software Engineering, Management and Applications (SERA 2025), Las Vegas, USA, May 29-31, 2025.

2024

6. Sharma, S., Dronavalli, S.C., "Data analysis and visualization of crime data", Proceedings of the IS&T International Symposium on Electronic Imaging (EI 2024) in the Visualization and Data Analysis Conference, DOI:10.2352/ei.2024.36.1.vda-364, January 21-25, 2024.
7. Sharma, S., Pesaladinne R., "Spatial Analysis and Visual Communication of Emergency Information through Augmented Reality", Proceedings of the IS&T International Symposium on Electronic Imaging (EI 2024) in the Engineering Reality of Virtual Reality Conference, January 21-25, 2024.
8. Chellatore,M.P., Pesaladinne R., and Sharma, S., "Time Series Analysis for Detecting Anomalous Behavior using a Mobile Device", Proceedings of the 22nd International Conference on Embedded Systems, Cyber-physical Systems, & Applications (ESCS'24), IEEE-CSCI conference, Las Vegas, USA, July 22-25, 2024.
9. Chellatore, M.P., Sharma, S, "Mobile application for identifying anomalous behavior and conducting time series analysis using heterogeneous data", Proceedings of the 26th International Conference on Human-Computer Interaction (HCI International 2024), Thematic Area: Virtual, Augmented and Mixed Reality, Copenhagen, Washington Hilton Hotel, Washington DC, USA, 29 June - 4 July 2024.
10. Dronavalli, S.C.., Sharma, S, "Interactive Visualizations for Crime Data Analysis by Mixed Reality", Proceedings of the 26th International Conference on Human-Computer Interaction (HCI International 2024), Thematic Area: Virtual, Augmented and Mixed Reality, Copenhagen, Washington Hilton Hotel, Washington DC, USA, 29 June - 4 July 2024.

2023

11. Pesaladinne, R., Chellatore, M.P.,Dronavalli,S., Sharma, S., "Situational awareness and feature extraction for indoor building navigation using mixed reality", Proceedings of the IEEE International Conference on

Computational Science and Computational Intelligence, (IEEE-CSCI), Research Track on Big Data and Data Science (CSCI-RTBD), Las Vegas, USA, December 13-15, 2023.

12. Dronavalli,S. Pesaladinne, R., Sharma, S., "Crime Data Visualization Using Virtual Reality and Augmented Reality", Proceedings of the IEEE International Conference on Computational Science and Computational Intelligence, (IEEE-CSCI-RTSC), Las Vegas, USA, December 13-15, 2023.

13. Tack, N, Williams, R, Holschuh, N, Sharma, S, Engel, D, "Visualizing the Greenland ice sheet in VR using immersive fence diagrams", (ACM-PEARC 23), Conference on Practice and Experience in Advanced Research Computing, Portland, OR, USA, ACM ISBN 978-1-4503-9985-2/23/07, https://doi.org/10.1145/3569951.3603635, July 23–27, **2023**.

14. Tack, N, Holschuh, N, Sharma, S, Williams, R, Engel, D, "Development and initial testing of XR-based fence diagrams for polar science", Proceedings of the IEEE International Geoscience and Remote Sensing Symposium (IGARSS 2023), Pasadena, California, 16-21 July **2023**.

15. Sharma, S, "Mobile Augmented Reality System for Emergency Response", Proceedings of the 21st IEEE/ACIS International Conference on Software Engineering, Management and Applications (SERA 2023), Orlando, USA, May 23-25, **2023**.

16. **Sharma, S.,** Park, J.W, Morris, B. T, "Immersive security personnel training module for active shooter events," Proceedings of the IS&T International Symposium on Electronic Imaging (EI 2023) in the Engineering Reality of Virtual Reality Conference, January 15-19, 2023.

17. **Sharma, S.,** Engel, D., "Mobile augmented reality system for object detection, alert, and safety", Proceedings of the IS&T International Symposium on Electronic Imaging (EI 2023) in the Engineering Reality of Virtual Reality Conference, January 15-19, 2023.

2022

18. Mannuru, N. R., Kanumuru, M., and **Sharma, S.,** "Mobile AR application for navigation and emergency response", Proceedings of the IEEE International Conference on Computational Science and Computational Intelligence, (IEEE-CSCI-RTMC), Las Vegas, USA, December 14-16, 2022.

19. **Sharma, S.,** Ali, S., "Multi-agent Crowd Simulation in an Active Shooter Environment", Proceedings of the 24th International Conference on Human-Computer Interaction, Thematic Area: Virtual, Augmented and Mixed Reality, LNCS 13318, pp. 1–13, Washington DC, 26-1 July 2022.

20. Sahu, A, Williams, C, Rajeev, S, **Sharma, S.,** "AI-based recipient blood type matching blood transfusion medical device design system", Proceedings of IEEE Integrated STEM Education Conference (IEEE - ISEC), March 26, 2022. (Submitted)

21. **Sharma, S**, Bodempudi, S.T., "Immersive Virtual Reality Training Module for Active Shooter Events", IS&T International Symposium on Electronic Imaging (EI 2022), in the Engineering Reality of Virtual Reality, Burlingame, California, January 2022.

22. Reehl, A., **Sharma, S.,** "Data Visualization of Crime Data using Immersive Virtual Reality", IS&T International Symposium on Electronic Imaging (EI 2022), in the Engineering Reality of Virtual Reality, Burlingame, California, January 2022.

2021

23. Walker.T., **Sharma, S,** "Data analysis of crime and rates of hospitalization due to COVID-19", Symposium of Big Data and Data Science (CSCI-ISBD), The 2021 International Conference on Computational Science and Computational Intelligence, (CSCI'21), Las Vegas, USA, December 15-17, 2021.

24. Walker.S., **Sharma, S,** " Data visualization tool of Covid-19 and crime data ", Symposium of Big Data and Data Science (CSCI-ISBD), The 2021 International Conference on Computational Science and Computational Intelligence, (CSCI'21), Las Vegas, USA, December 15-17, 2021.

25. **Sharma, S.**, Bodempudi, S.T., Reehl A, "Real-time Data Analytics of COVID Pandemic using Virtual Reality", Proceedings of the 23rd International Conference on Human-Computer Interaction, Thematic Area: Virtual, Augmented and Mixed Reality, J. Y. C. Chen and G. Fragomeni (Eds.): HCII 2021, LNCS 12770, pp. 106–116, Washington DC, 24-29 July **2021**.

26. **Sharma, S**, Bodempudi, S.T., Reehl, A., "Virtual Reality Instructional (VRI) module for Training and Patient Safety", IS&T International Symposium on Electronic Imaging (EI 2021), in the Engineering Reality of Virtual Reality, Burlingame, California, https://doi.org/10.2352/ISSN.2470-1173.2021.13.ERVR-178, pp. 178-1-178-6(6) **2021**.

27. **Sharma, S.,** Bodempudi, S.T., "Situational Awareness of COVID Pandemic data using Virtual Reality", IS&T International Symposium on Electronic Imaging (EI 2021), in the Engineering Reality of Virtual Reality, Burlingame, California, https://doi.org/10.2352/ISSN.2470-1173.2021.13.ERVR-177, pp. 177-1-177-6(6), **2021**.

2020

28. **Sharma, S,** Bodempudi, S.T., Reehl, A. "Real-Time Data Visualization to Enhance Situational Awareness of COVID pandemic", Proceeding of the IEEE International Conference on Computational Science and Computational Intelligence (CSCI'20), Las Vegas, Nevada, USA, Dec 16-18, DOI: 10.1109/CSCI51800.2020.00066 , **2020**.

29. Rayan, T., Brown,A., Carillo, A., **Sharma, S**, "The Effect of COVID-19 on Various Racial Demographics in the United States", Proceeding of the IEEE International Conference on Computational Science and Computational

Intelligence (CSCI'20), Las Vegas, Nevada, USA, Dec 16-18, DOI: 10.1109/CSCI51800.2020.00068, ISBN:978-1-7281-7624-6, **2020**.

30. **Sharma, S**, Bodempudi, S.T., "Improving emergency response training and decision making using collaborative virtual reality environment for building evacuation", Proceedings of the 22nd International Conference on Human-Computer Interaction (HCI International 2020), Thematic Area: Virtual, Augmented and Mixed Reality, Copenhagen, Denmark, 19-24 July, HCII 2020, LNCS 12428, pp. 1–12, **2020**.

31. **Sharma, S,** Stigall, J., Bodempudi, S.T., "Situational awareness-based Augmented Reality Instructional (ARI) module for building evacuation", Proceedings of the 27th IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW), doi: 10.1109/VRW50115.2020.00020, Atlanta, GA, USA, pp. 70-78, **2020**.

32. **Sharma, S.,** Bodempudi, S.T., "Identifying anomalous behavior in a building using HoloLens for emergency response", IS&T International Symposium on Electronic Imaging (EI 2020), in the Engineering Reality of Virtual Reality, DOI: https://doi.org/10.2352/ISSN.2470-1173.2020.13.ERVR-224, 26 January- 30 January **2020**.

33. **Sharma, S.,** Bodempudi, S.T., "Active Shooter response training environment for a building evacuation in a collaborative virtual environment", IS&T International Symposium on Electronic Imaging (EI 2020), in the *Engineering Reality of Virtual Reality*, DOI: https://doi.org/10.2352/ISSN.2470-1173.2020.13.ERVR-223, 26 January- 30 January **2020**.

2019

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Posters and Student Presentations

1. Andrew Summitt, Geospatial Mobile Application for Navigation and Emergency Response using Google Photorealistic 3D Tiles and Cesium for Unity, Advisor: Dr. Sharad Sharma, Day of Health Informatics and Data Science, UNT Frisco, September 20, **2024**.
2. Pranav Moses, Active Shooter Response Training for Discover Park Building, Advisor: Dr. Sharad Sharma, Day of Health Informatics and Data Science, UNT Frisco, September 20, **2024**.
3. Ian Abeyta and Jason Weinstein, Human Biomechanics as a Digital Twin & Real-time Motion Capture in Unity 3D Game Engine, Advisor: Dr. Sharad Sharma, Day of Health Informatics and Data Science, UNT Frisco, September 20, **2024**.

4. Bhoj Raj Bhatt and Dr. Sharad Sharma, "Mobile App for Object Tracking and Location-Based Data for Time Series Analysis", special celebration for the 15th anniversary event, College of Information (COI) at the University of North Texas, November 10, **2023**. **(1st Place Award)**

5. Sri Chandra Dronavalli and Dr. Sharad Sharma, "Crime Data Analysis and Visualization through HoloLens 2 and Oculus Quest Pro", special celebration for the 15th anniversary event, College of Information (COI) at the University of North Texas, November 10, **2023**. (**2nd Place Award)**

6. Maruthi Prasanna and Dr. Sharad Sharma, "Mobile Application for Identifying Anomalous Behavior and Conducting Time Series Analysis using Parking Lot Data", special celebration for the 15th anniversary event, College of Information (COI) at the University of North Texas, November 10, **2023**.

7. Suruthi Selvam and Dr. Sharad Sharma, "Real Time Object Detection and Emotion Detection via Camera using React Native, Python Flask, Coco Dataset and OpenCV", special celebration for the 15th anniversary event, College of Information (COI) at the University of North Texas, November 10, **2023**.

8. Rishitha Reddy Pesaladinne and Dr. Sharad Sharma, "Situational Awareness-based Augmented Reality Instructional (ARI) Module for Building Evacuation", special celebration for the 15th anniversary event, College of Information (COI) at the University of North Texas, November 10, **2023**.

9. Dinali Jayawardana and Dr. Sharad Sharma, "AR-DETECT- Object Detection Mobile Augmented Reality Application integrated with Global Positioning System", 2nd Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 29, 2022.

10. Tanviben Patel and Dr. Sharad Sharma, "Mobile Application to detect Brain Tumor, Lung Carcinoma, Breast Cancer and Covid-19 from Magnetic Resonance Imaging and Ultra Sound Imaging using Artificial Neural Networks", 2nd Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 29, 2022.

11. Dinali Jayawardana and Dr. Sharad Sharma, "i-DETECT- Object Detection Mobile Augmented Reality Application integrated with Global Positioning System", Virtual Grants Expo and Research Week, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 18-22, 2022.

12. Tanviben Patel and Dr. Sharad Sharma, "Mobile Application to detect Brain Tumor, Lung Carcinoma, Breast Cancer and Covid-19 from Magnetic Resonance Imaging and Ultrasound Imaging using Artificial Neural Networks ", Virtual Grants Expo and Research Week, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 18-22, 2022.

13. Aishwarya Reehl and Dr. Sharad Sharma, "Data Visualization of Baltimore Crime Data Using Virtual Reality", Inaugural Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 30, **2021**.

14. Sri Teja Bodempudi and Dr. Sharad Sharma, "Extended Reality (XR) Application for Building Evacuation Using HoloLens", Inaugural Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 30, **2021**. [Best paper award]

15. James Stigall and Dr. Sharad Sharma, "Evaluation of Virtual Reality Instructional (VRI) Modules for Teaching Basic Programming Concepts", Inaugural Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 30, **2021**.

16. Ibeawuchi Anokam and Dr. Sharad Sharma, "Bulldog Alert: Alert and Notification Application Development", Inaugural Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 30, **2021**. [Best paper award]

17. Syltinsy Jenkins, "Mobile AR COVID-19 Preparations Reminder", Inaugural Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 30, **2021**.

18. Veronica Boateng and Dr. Sharad Sharma, "Mobile Augmented Reality Application for COVID-19 Preventive Measures", Inaugural Graduate Research Workshop, Bowie State University, Bowie, MD, USA, April 30, **2021**.

19. James Stigall and Dr. Sharad Sharma, "Evaluation of virtual reality instructional modules based on student assessment and learning gains" Black History Month Observance at the National Institute of Standards and Technology (NIST), February 6, **2020**.

20. James Stigall and Dr. Sharad Sharma, "Virtual Reality Instructional Modules for Teaching Programming" at 12th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 17, **2019**. [**Won First Prize**]

21. Nada Chaoui and Dr. Sharad Sharma, "BSU Emergency Response Training for Active Shooter Events" at 12th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 17, **2019**.

22. Sri Teja Bodempudi and Dr. Sharad Sharma, "HoloLens for building evacuation" at 12th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 17, **2019**.

23. James Stigall and Dr. Sharad Sharma, "Virtual Reality Instructional Modules for STEM Education" at the 2019 Capital PKAL Regional Network Meeting at Bowie State University, Bowie, MD 20715, March 15, **2019**.

24. James Stigall and Dr. Sharad Sharma, "Mobile augmented reality application for building evacuation", Poster Presentation, 11th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 10, **2018**. **[Won first Prize]**

25. Sarika Rajeev and Dr. Sharad Sharma, "Game Theme Based Instructional Module to teach Binary Trees based on usability and likability", Poster Presentation, 11th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 10, **2018**.

26. Diliorah Arah and Dr. Sharad Sharma, "Work Fitness App in Android", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on March 2-4, **2017**.

27. Phillip Devreaux and Dr. Sharad Sharma, "Collaborative virtual environment for training emergency response officials and civilians in big city using Unity 3D gaming engine", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on March 2-4, **2017**.

28. Emmanuel Ossuetta and Dr. Sharad Sharma,"Megacity: A Collaborative Virtual Reality Environment for Emergency Response, and Decision Making", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on March 2-4, **2017**.

29. James Stigall and Dr. Sharad Sharma, "Mobile Augmented Reality Application (MARA) for Building Evacuation", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on March 2-4, **2017**.

30. Diliorah Arah and Dr. Sharad Sharma, "A Fitness Application For Increasing Productivity In The Workplace", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on February 25-27, 2016.

31. Phillip Devreaux and Dr. Sharad Sharma, "Virtual Tour of University Campus Using Oculus Rift", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on February 25-27, 2016.

32. Swetha Sree and Dr. Sharad Sharma, "Modeling Evacuation behavior using fuzzy logic in a multi-agent system", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on February 25-27, 2016.

33. Veda Lakshmi Swetha Dasari and Dr. Sharad Sharma, "Augmented Reality (AR) mobile application for campus building evacuation", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on February 25-27, 2016.

34. James Stigall and Dr. Sharad Sharma, "Modeling stress and panic in emergency situation", Oral Presentation, at the Emerging Researchers National (ERN) Conference in STEM, hosted by AAAS, EHR and NSF, on Washington DC, on February 25-27, 2016.

35. Kourtney Ramseur and Dr. Sharad Sharma, "Urban emergency evacuation environment" , Poster Presentation, 8th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 20-21, 2015.

36. Usha Govindaraju and Dr. Sharad Sharma, "Emergency Evacuation in Thurgood Marshall Library" , Poster Presentation, 8th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 20-21, 2015.

37. Pranay Rajeev and Dr. Sharad Sharma, "Augmented Reality Mobile Application for emergency Evacuation in BSU library" , Poster Presentation, 8th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 20-21, 2015.

38. James Stigall and Dr. Sharad Sharma, "Game Theme-based educational Modules for introductory programming" , Poster Presentation, 8th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 20-21, 2015.

39. Isaac Amo-Frempong and Dr. Sharad Sharma, "Virtual Evacuation Drill in a Multi-user Environment", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

40. Shanmukha Jerripothula and Dr. Sharad Sharma, "Immersive Virtual Reality Environment for Airplane Emergency Evacuation", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

41. James Stigal and Dr. Sharad Sharma, "Game Theme-Based Educational Modules for Introductory Programming Courses", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

42. Dexter Ballerda and Dr. Sharad Sharma, "Augmented Reality Application for Campus Navigation and Learning", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

43. Phillip Devreaux and Dr. Sharad Sharma, "Immersive Multi-User Campus Platform", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

44. Jeff Ruffin Jr and Dr. Sharad Sharma, "Game Theme Based Educational Module for Inheritance", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

45. Stephon Mackey and Dr. Sharad Sharma, "Virtual Reality Subway Evacuation Drill with Multi-User Environment", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.

46. Diliorah Arah and Dr. Sharad Sharma, "A Fitness Application for Increasing Productivity in the Work-place", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 19-21, 2015.
47. Shanmukha Jerripothula and Dr. Sharad Sharma, "Oculus Rift with Unity 3D" , 7th Annual Grant Expo, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 22, 2014.
48. Stephon Mackey and Dr. Sharad Sharma, "Virtual Reality Subway Evacuation Drill with Multi-User Environment", 7th Annual Grant Expo, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 22, 2014.
49. Roy B. Brown II and Dr. Sharad Sharma, "Emergency Response Simulation Using Virtual Reality", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 20-22, 2014.
50. Wenhao Chen and Dr. Sharad Sharma, "Kinect and Management Features in the Virtual Reality Classroom", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 20-22, 2014.
51. Jeff Ruffin Jr.and Dr. Sharad Sharma, "Educational Module: Programming Loops and Conditions Using Virtual Reality", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 20-22, 2014.
52. Emmanuel Ossuetta and Dr. Sharad Sharma, "Gaming Instructional Module for Array and Objects Using Virtual Reality", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 20-22, 2014.
53. Titus Thomas and Dr. Sharad Sharma, "3D Simulated Emergency Subway Evacuation", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 28th - March 2nd, 2013. [**Won Second Prize** in the oral section under category: Computer Sciences and Information Systems]
54. Stephen Otunba and Dr. Sharad Sharma, "Teaching Traffic Safety Through an Immersive Multiuser Environment", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 28th - March 2nd, 2013.
55. Antoine Lathon and Dr. Sharad Sharma, "Course Curriculum Module for Multidimensional Array and Linked List using Gaming Approach", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 28th - March 2nd, 2013.
56. Jeff Ruffin Jr. and Dr. Sharad Sharma, "Virtual Reality Classroom", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 28th - March 2nd, 2013.
57. Kim Ta and Dr. Sharad Sharma, "Gaming Approach to Learn Arrays In C++", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 28th - March 2nd, 2013.
58. Usha Govindaraju and Dr. Sharad Sharma, "Augmented Reality as a Tool for Learning and Safety", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Washington DC, February 28th - March 2nd, 2013.
59. Usha Govindaraju,Sailaja Adusumill and Dr. Sharad Sharma, "M-Evac: An Indoor Augmented Reality Mobile Evacuation System, Grant Expo, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 10, 2013
60. Stephen Otunba and Dr. Sharad Sharma, "Virtual City: Teaching Traffic Safety though an Immersive Multiuser Environment, Grant Expo, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 10, 2013
61. Jeff Ruffin and Dr. Sharad Sharma, "Virtual Reality Classroom as an Constructivist Approach, Grant Expo, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 10, 2013
62. Stephen Otunba and Dr. Sharad Sharma, "Evacuation Simulation in a Multiuser Virtual Reality Environment", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Atlanta, GA, February 23-25 2012.
63. Aaron Boothe and Dr. Sharad Sharma, "Emergency Airplane Evacuation Using Game Development Toolkit", Oral Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Atlanta, GA, February 23-25 2012. [**Won Second Prize** in the oral section under category: Computer Sciences and Information Systems and Computer Engineering]
64. Aaron Boothe, Mike Tice, Zachary Springer, and Dr. Sharad Sharma, "Multi-User Environment in VR for Evacuation Scenarios Using Gaming Metaphor", Poster Presentation, at the Emerging Researchers National (ERN) Conference in Science, Technology, Engineering and Mathematics (STEM), hosted by AAAS, EHR and NSF, Atlanta, GA, February 23-25 2012.
65. Jihad Ashkar and Dr. Sharad Sharma, "Information extraction and pattern matching for the voice field medical card in a battlefield environment", Poster presentation, 2011 Emerging Researchers National (ERN) conference in STEM, Feb 24-26, Washington DC, 2011.

66. Jihad Ashkar and Dr. Sharad Sharma, "Voice Field Medical Card for a Battlefield Environment", Juxtopia Urban Learning Technology (JULT) 2010 conference, December 8th, Morgan State University, Baltimore, Maryland, USA, 2010.
67. Jihad Ashkar and Dr. Sharad Sharma, Presented VOICE FMC project at the Community Activities Center at Fort Detrick (U.S. Army Medical Research and Materiel Command (MRMC)) as part of the TEDCO MRASC Symposium on Tuesday, October 26, 2010.
68. Student presentation in annual CIBAC meeting at University of Maryland Eastern Shore in year 2010.

M.S and Ph.D. Thesis
PhD Dissertation **Advisor**:
1) Dr. James Stigall, Dissertation Title: Virtual Reality and Augmented Reality Instructional Module for Education and Training (Defended Spring 2021) [**Won deans award**, doctoral research of the year award, 2021]
2) Dr. Sarika Rajeev, titled "*Game Theme based Instructional Modules based on Usability and Likability*", (defended September **2018**)
3) Dr. Timothy Oladuni, titled "*Hedonic Pricing Theory: A Machine Learning Investigation*", (*Defended Fall 2017*) [**Won deans award**, doctoral research of the year award, 2018.]
4) Dr. Kola Ogunlana titled "*Modeling and simulation of agent behavior in a goal finding application for evacuation*" (*Defended Fall 2015*) [**Won Best Dissertation of the year Award** in 2016, Total 10 dissertation candidates]

M.S Thesis **Advisor:**
1) Supriya Lohgaonkar, titled "*Online Assessment System with Offline Capabilities*", Department of Computer Science, Bowie State University, defended on April 2010.

PhD Dissertation Committee **member**
1) Dr. Juman Byun, The George Washington University, defended on 27th May, 2009.
2) Dr. Felix N. Njeh, BSU (Fall 2014).
3) Dr. Loubna Dali, BSU (Fall 2017).

University Services
- **Chair** for the 2nd Graduate Research Workshop (BSU GRW2022) at Bowie State University, April 29, 2022.
- **Chair** for the Inaugural Graduate Research Workshop (BSU GRW2021) at Bowie State University, April 30, 2021.
- **Chair** of Graduate School Research Committee to incorporate research culture to the BSU goal towards enhancing Bowie State University campus culture of diversity, inclusion and civic engagement, September **2020**.
- **Team Lead:** Organized **VR Lab Booth** to showcase Virtual Reality research in **1st Maryland STEM parade** at Bowie State University as part of the Maryland STEM festival on October 19, **2019**.
- **Team Lead:** Organized **VR Lab Booth** to showcase Virtual Reality research at BSU in **USA Science Festival for STEM** at Walter E. Washington Convention Center, Washington DC on April 7 & 8, **2018**.
- Chair of Faculty Incentive Award Committee to select faculty and staff who have demonstrated outstanding service to BSU, April 10, 2019.
- **Judge** in 12th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 17, 2019.
- Organized **VR Lab Booth** to showcase current research in VR lab for Patriots Technology Summit at Bowie State University, May 12th **2018**.
- Organized **VR Lab Booth** to showcase Virtual Reality research at BSU in **USA Science Festival for STEM** at Walter E. Washington Convention Center, Washington DC on April 16 & 17, **2016**.
- **Organized VR Lab Booth** at 19th Annual Youth Summit on Technology, Bowie State University, Bowie, MD, April 30, **2016**.
- **Conducted** *3D Modeling, Animation, and Gaming workshops* at the CPU summer camp for high school and middle school students at Bowie State University in Year 2009, 2010, 2011, and 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, and **2020**.
- Organized **Virtual Reality Laboratory booth** at the International Festival at Largo Town Center, Largo, MD on July 12-13th, **2014**.

- **Organized Virtual Reality Booth** (with Dean and colleagues at BSU) to showcase Virtual Reality research at BSU at **USA Science & Engineering Festival** at the Walter E. Washington Convention Center in Washington, D.C on April 26 & 27, **2014**.
- Advisory Board member, Center of Excellence in Teaching and Learning (CETL), Bowie State University, February 2012-present.
- Virtual Reality Laboratory research presentation to USM Board of Regents meeting at Bowie State University, 2012
- Chair of IEEE VIPRG Software/ System Architecture Sub-Committee.
- **Organized Virtual Reality Booth** (with Dean and colleagues at BSU) to showcase Virtual Reality research at BSU at *USA Science & Engineering Festival at the Walter E. Washington Convention Center in Washington, D.C* on April 27-29, **2012**
- Attended number (10+) of advisory board meetings for Cyber Watch at Prince George Community College, 2008-2011.
- College Committee for CAS Awards for year 2010-2011, 2011-2012, and 2012-2013.
- University elected faculty election committee member, 2013-till date.
- Chair of Faculty Incentive Award Committee to select faculty and staff who have demonstrated outstanding service to BSU, April 10, 2019.
- Member of University Space, Buildings and Grounds Committee, 2014-till-date.

Department Services
- **Director** of the **Bachelor of Data Science Program** since joining UNT in September 2022-Till Date.
- **Faculty Search Committee chair** for the appointment of new Tenure Track Assistant/Associate Professor position in Department of Information Science at University of North Texas (UNT), September 2023 –May 2024.
- **Faculty Search Committee chair** for the appointment of new Tenure Track Assistant/ Associate Professor position in Department of Information Science at University of North Texas (UNT), September 2022 –January 2023.
- Development of Twelve (12) new Courses at Graduate and Undergraduate level at UNT (2022-24)
  - DTSC 4777: Virtual Reality Applications
  - INFO 5777: Virtual Reality and Its Applications
  - DTSC 5777: Virtual Reality and Its Applications
  - INFO 5877: Advanced Virtual Reality
  - DTSC 5877: Advanced Virtual Reality
  - INFO 5900: Virtual Reality and Its Applications
  - DTSC 4565: Software Engineering for Data Science
  - DTSC 5565: Software Engineering for Data Scientists
  - DTSC 5566: Advanced Software Engineering for Data Scientists
  - DTSC 6990: Special Topic
  - DTSC 4900: Special Topic 1
  - DTSC 4901: Special Topic 2
- **Faculty Search Committee chair** for the appointment of two (2) new Tenure Track Assistant Professor position in Department of Computer Science at Bowie State University, September 2021 –July 2022.
- **Faculty Search Committee chair** for the appointment of new Tenure Track faculty in Department of Computer Science at Bowie State University, January –July 2021.
- **Chair** of BS Program Structure Working Group to reduce credit requirements and increase specializations, Bowie State University, Aug. 2021.
- Development of eleven new Courses at Graduate and Undergraduate level at BSU
  - Developed and taught new undergraduate course in Data Visualization (COSC 429)
  - Developed and taught new graduate course in Data Visualization (COSC 529)
  - Developed and taught new undergraduate course in Software Engineering (COSC 465)
  - Developed new undergraduate course in Advanced Software Engineering (COSC 475)
  - Developed and taught new graduate course on Software Engineering I (COSC 565)
  - Developed and taught new graduate course on Software Engineering II (COSC 665)
  - Developed and taught new undergraduate course in Virtual Reality (COSC 477).

- o Developed and taught new graduate course in Virtual Reality & its App. (COSC 729)
- o Developed and taught new graduate course on Advanced Virtual Reality (COSC 829)
- o Developed and taught new undergraduate course on gaming (COSC 209: Gaming II)
- o Developed a new undergraduate course on gaming (COSC 409: Gaming IV)
- Developed **new specialization for Master's** program in Computer Science as the graduate coordinator in 2020
  - o Data Science specialization in 2020
  - o Software Engineering specialization in 2020
- Developed **new specialization for undergraduate** program in Computer Science as the graduate coordinator in 2020
  - o VR and Gaming specialization in 2020
  - o Software development specialization in 2020
- Developed and submitted **new Master's program in Software Engineering** at BSU in 2020
- Developed and submitted **new Master's program in Data Science program** at BSU in 2020
- Developed and submitted **new Bachelors in Data Science program** at BSU in 2020
- Developed and submitted **new Bachelors in Virtual Reality and Gaming program** at BSU in 2020
- Department Webmaster for Computer Science Department website, 2009- 2013.
- Webmaster for College of Arts and Science (CAS) website, 2011- 2013.
- Department Search committee to hire System Administrator, 2007.
- Department member of X-seed (supercomputer) committee, 2007-2015.
- Chair of ABET Software development group committee, 2015-tilldate.
- Department member of committee for ABET: Systems group II committee, Graphics group committee, Software development group committee, 2015-tilldate.
- Collaborated with colleagues to develop a **new gaming track** in computer science program at BSU.
- Collaborated with colleagues to develop **Data Science and Artificial intelligence specialization** for M.S. in computer science program at BSU, 2018.
- Developed and proposed a new **M.S. in Software Engineering program** in Computer Science department at BSU, 2018.

Professional Services
- **Conference Chair,** IS&T International Symposium on Electronic Imaging (EI 2025) in the Engineering Reality of Virtual Reality (ERVR) Conference, February 2 - 6, **2025**.
- **Workshop Chair** of NSF CISE MSI Aspiring PI Workshop at UNT on Dec 12-13, **2024**.
- **Conference Chair** for Conference on Engineering Reality of Virtual Reality, IS&T International Symposium on Electronic Imaging (EI 2024), January 21-25, **2024**.
- **Publication Chair**, 6th IFIP International Internet of Things Conference (IFIP-IoT), Dallas-Fort Worth Metroplex, USA, https://ifip-iotconference.org/, 2-3 NOV **2023**.
- **HDR Conference** planning and organizing committee member, 2023 NSF HDR Ecosystem Conference, https://www.mines.edu/id4/hdr-conference/, Golden, CO at October 16-18, **2023**.
- **Workshop Chair** of the Graduate Research Workshop at Bowie State University on April, 2022.
- **Workshop Chair** of the Inaugural Graduate Research Workshop at Bowie State University on April 30, 2021.
- **Program Chair** the Twenty Eighth International Conference on Software Engineering and Data Engineering (SEDE-2019), CA (International Society for Computers and their Applications), at Sheraton San Diego Hotel & Marina, San Diego, CA, USA, September 30 - October 2, **2019**.
- **Program Chair,** for the Twenty Seventh International Conference on *Software Engineering and Data Engineering (SEDE-2018)*, ISCA (International Society for Computers and their Applications), Holiday Inn Downtown, New Orleans, LA, USA, October 8-10, **2018**.
- **Program Chair,** for the Twenty Sixth International Conference on Software Engineering and Data Engineering (SEDE-2017), ISCA (International Society for Computers and their Applications), Hilton San Diego Airport/Harbor Island, San Diego, CA, USA, October 2-4, **2017**.
- **TPC Co-Chair of IEEE-RDCAPE-2017** conference, **2nd** International Conference on Recent Developments in Control, Automation & Power Engineering, Noida, India, 26-27 October, **2017**.

- **Program Committee Chair,** 2013 International Symposium on Intelligent System Engineering (ISISE 2013), Abu Dhabi, UAE, November 15-16, 2013.
- **Technical Program Chair**, International Conference on Mobility in Computing (ICMiC13), Kerala, India, December 17-19, 2013
- **Conference General Chair** of "2012 8th International Conference on MEMS NANO, and Smart Systems (ICMENS 2012) November 3-4, 2012.
- **Key Note Address and Panelists at the Conferences**
  - *Keynote:* 22nd International Conference in Information Technology OCIT 2024 Conference https://oits-icit.org, Title: "Augmented Reality and Virtual Reality Applications for Situational Awareness and Emergency Response using AI and Machine Learning", SRM University, Amaravati, AP, December 12-14, **2024**.
  - *Keynote:* 2022 IEEE International Mobile and Embedded Technology Conference (MECON - 2022), Title: Mobile Augmented Reality and Virtual Reality applications for situational awareness and emergency response., Amity University Uttar Pradesh, Noida, India, 10-11 March **2022**.
  - Mock NSF Panel Review: Simulated Review of Sample Proposals with Discussion, NSF CISE Research Expansion Proposal Development Workshop (CISE MSI: PDW), December 6, **2024**.
  - Mock NSF Panel Review: Simulated Review of Sample Proposals with Discussion, NSF CISE Research Expansion Proposal Development Workshop (CISE MSI: PDW), January 13, **2023**.
  - Invited Panelists at The Future of Telemedicine in Emergency Medicine and Training Workshop (FTEMST 2021), June 3rd and 4th, 2021
- *Invited Talks/Demo*
  - NSF Workshop on Industry 4.0 and Data Analytics/Machine Learning. Title: Immersive VR Instructional Modules for Active Shooter Events using AI Agents & User Controlled Agents, August 10, **2023**.
  - Research talk on Virtual Reality research at Survey of Emerging media (COM 242) Class at BSU (requested by Dr. Lucy W. W. Gichaga, Department of Communications) on 9th September **2021**.
  - Research talk titled "VRI and ARI Modules for Teaching and Training" in the Three-day Online Faculty Development Program on "E-Learning and Recent Trends in Electrical Engineering" at Amity University, Uttar Pradesh, Noida, INDIA, via Microsoft Teams, held from 20th - 22nd May, **2020**.
  - Demo on HoloLens research for building evacuation at NASA-AI Workshop, from 5:30 to 6:30 PM at NASA Goddard Space Flight Center, 8800 Greenbelt Rd, Greenbelt, MD 20771 on November 28, **2018**.
  - Research talk at Virtual Reality Lab, Bowie State University, visit for RISE Academy Fellows, Requested by Ms. Debbie O'Banion, College of Education, (On behalf of Dr. William Drakeford) 10AM to 12PM, July 26, **2018**.
  - Talk on "Virtual reality environments for emergency response, training, and decision making" at STIx, (Science Technology & Innovation Exchange), event organized by **DOD Basic Research Office at Arlington, VA,** Thursday August 24, **2017**.
  - Talk on "Modeling and Simulation of Multi-User Virtual Reality Environments for Emergency Evacuation Drills with Dr. Sharad Sharma from Bowie State University", CINO Working Groups, **Internet2 Collaborative Innovation Community**, June 2, **2017**. [Recording from 6/2/17 CINC UP Call]
  - Talk on "Virtual and Augmented reality: Applications in emergency fire evacuation for training and education", for **Safety Event at the Smithsonian**, at The Smithsonian National Museum of African Art. 950 Independence Ave. SW Washington, DC, November 18, **2016**.
  - Invited talk on "Virtual and Augmented Reality: Applications in Emergency Evacuation and Decision Making for Training and Education" **at NASA The Goddard Space Flight Center (GSFC),** Software Engineering Division, Building 23, Greenbelt, Maryland, U.S, Thursday June 25, **2015**.
  - Invited talk on "Modeling and Simulation of Human Behavior in Aircraft Evacuations using Multi-Agent System and Virtual Reality Environment" at University of Maryland Baltimore County (UMBC) on 18th April **2014**.

- o Invited talk on "Virtual Reality Laboratory Research, at Research-In-Progress Conference at Faculty Institute, Bowie State University on January 17, 2013.
  - o Invited Demo Speaker on title "Multi-agent Modeling and Simulation of Human Behavior in Aircraft Evacuations" at the IEEE, International Workshop on Collaboration in Virtual Environments (CoVE -2012), as part of The 2012 International Conference on Collaboration Technologies and Systems (CTS 2012), Denver, Colorado, USA, May 21-25, 2012.
  - o Invited demo presentation to USM (University System of Maryland) Board of Regents on Virtual Reality Laboratory research in special collection room, Thurgood Marshal Library at Bowie State University, September 28, 2012.
- *Judge*
  - o USM COVID App Challenge Competition by The USM (University System of Maryland) COVID Research & Innovation Task Force, July 2, 2020.
  - o 12th Annual Grant Expo and Research day, Office of Research and Sponsored Programs (ORSP), Bowie State University, April 17, 2019.
  - o 5th Innovative STEM Conference & Junior Science and Humanities Symposium, Mar 11, 2012.
  - o 4th Innovative STEM Conference, 21th Junior Science and Humanities Symposium, Mar 2011.
  - o Emerging Researchers National (ERN) conference in STEM, Feb 24 Washington DC, 2011.
  - o 3rd Innovative STEM Conference, 20th Junior Science and Humanities Symposium, Mar, 2010.
  - o 2nd Innovative STEM Conference, 19th Junior Science and Humanities Symposium, Apr, 2009.
  - o 1st Innovative STEM Conference, 18th Junior Science and Humanities Symposium, Apr, 2008.
  - o *MIE Judge* at the BSU (Bowie State University) research showcase, 2008.
  - o Emerging Researchers National (ERN) conference in STEM (organized by AAAS and NSF) in Washington DC, February 24-26, 2011.
- *Panel Review Board (NSF, NASA, DOD, DTRA)*
  - o NSF-INCLUDES-2024, NSF HCC CAREER 2023, NSF's SBIR-STTR2023, NSF- FW-HTF-2023, MIPS 2023, NSF-AIICE-STE-Visit-2023.
  - o NASA-AIST-2022,
  - o NSF CNS - REU Site 2022, 2021
  - o NSF- Future of Work at the Human-Technology Frontier (FW-HTF)-2021
  - o NSF-SBIR/STTR program (ENG/IIP Program), 2020
  - o NSF- HBCU-UP Targeted Infusion Projects (TIP) 2020
  - o MIPS 2021, 2022.
  - o NSF-Adhoc-SBIR-VR-2022
  - o NSF- Decision, Risk, and Management Sciences program (DDRIG) -2019
  - o NSF- Future of Work at the Human-Technology Frontier (FW-HTF)-2018
  - o DTRA Basic Research review panel -2018 (DOD)
  - o NSF-GRFP, CS Panel 2018 and 2020
  - o NSF-EAPSI ENG Panel, 2016
  - o NSF EAPSI CISE Panel, 2015, 2014, 2013
  - o NSF-AISL panel, 2015
  - o NSF-CNIC SBE and EHR – Panel 2014
- *Faculty Mentor*
  - o Proposal Development Workshop: NSF CISE Research Expansion Proposal Development Workshop (CISE MSI: PDW): 35 faculty participated from different universities, October 11, 2024, October 25, 2024, November 8, 2024, November 22, 2024, December 6, 2024**.**
  - o NSF CISE MSI Aspiring PI Workshop at UNT on Jan 6-7, 2025.
  - o NSF CISE MSI Aspiring PI Workshop at UNT on Dec 12-13, 2024.
  - o Proposal Development Workshop for Capacity building for research at minority serving institutions infrastructure research readiness (CYBR-MSI: IRR), program is supported by the NSF Award No. CNS-2233087, January 19, February 16, March 15, April 19, May 17, June 21, 2024.
  - o Proposal Development Workshop for "NSF Capacity Building for Research at Minority Serving Institutions (NSF: CyBR-MSI- 2023)", organized by American Society for Engineering Education (ASEE) and NSF on December 2, 2022, December 9, 2022, December 16, 2022, Janurary 6, 2023, January 13, 2023.

- o Proposal Development Workshop for "NSF Capacity Building for Research at Minority Serving Institutions (NSF: CyBR-MSI- 2022)", organized by American Society for Engineering Education (ASEE) and NSF on November 30, 2021, December 3, 2021, December 10, 2021, January 7, 2022, January 14, 2022.
- *Tenure and Promotion Evaluator*
  - o School of Information, University of Arizona. (2024)
  - o UMBC's Department of Computer Science and Electrical Engineering. University of Maryland, Baltimore County. (2024)
  - o Department of Electrical & Computer Engineering at the University of Iowa. (2024)
- *Session Chair for Conferences*
  - o Session Chair for Virtual Reality I in joint session between Conference on Stereoscopic Displays and Applications and Conference on Engineering Reality of Virtual Reality at IS&T International Symposium on Electronic Imaging (EI 2024), Jan 24 2024.
  - o Session Chair for Virtual Reality II in Conference on Engineering Reality of Virtual Reality (ERVR) at IS&T International Symposium on Electronic Imaging (EI 2024), Jan 24 2024.
  - o Session *Chair* the Twenty Eighth International Conference on Software Engineering and Data Engineering (SEDE-2019), CA (International Society for Computers and their Applications), at Sheraton San Diego Hotel & Marina, San Diego, CA, USA, September 30 - October 2, 2019.
  - o Session Chair, Twenty Seventh International Conference on *Software Engineering and Data Engineering (SEDE-2018)*, ISCA (International Society for Computers and their Applications), Holiday Inn Downtown, New Orleans, LA, USA, October 8-10, 2018.
  - o Session Chair, International Conference on Intelligent Traffic and Transportation (ICITT 2017), Zurich, Switzerland, September 1-3, 2017.
  - o Session Chair, 24th International Conference on Software Engineering and Data Engineering, SEDE, San Diego, California, USA, USA on October 12-14, 2015
  - o Session Chair, IEEE International Conference on Collaboration Technologies and Systems (CTS 2015), Atlanta, Georgia, USA, June 01-05, 2015.
  - o Paper Session Chair, IEEE SoutheastCon 2013, Jacksonville, Florida, April 4th - 8th, 2013.
  - o Paper Session Chair, IEEE, International Workshop on Collaboration in Virtual Environments (CoVE -2012), as part of The 2012 International Conference on Collaboration Technologies and Systems (CTS 2012), Denver, Colorado, USA, May 21-25, 2012.
  - o Paper Session Chair, *International Conference on Software Engineering and Data Engineering*, SEDE, June 20- 22, Las Vegas, Nevada, USA, 2011.
  - o Paper Session Chair, *IEEE SoutheastCon Conference*, March 18-21, Charlotte-Concord, NC, 2010.
  - o Associate Chair and Special Session Chair, 19th International Conference on Software Engineering and Data Engineering, San Francisco, California, USA, June 16-18, 2010.
  - o Paper Session Chair, International Conference on Software Engineering and Data Engineering, SEDE, June 22- 24, Las Vegas, Nevada, USA, 2009.

- *Editor for Journals & Proceedings*

  - o Associate Editor of the Journal Computer Animation and Virtual Worlds (CAVW), published by John Wiley, 2023- till-date.

  - o Editor: Frederick C Harris, Jr., Sergiu M. Dascalu, Sharad Sharma, and Rui Wu (eds), Proceedings of the 28th International Conference on Software Engineering and Data Engineering, SEDE2019, San Diego, CA, USA, Sept 30-Oct 2, 2019.

  - o Editor: Frederick C Harris, Jr., Sergiu M. Dascalu, and Sharad Sharma (eds), Proceedings of the 27th International Conference on Software Engineering and Data Engineering, SEDE 2018, New Orleans, LA, USA, Oct 8-10, 2018.

  - o Editor: Frederick C Harris, Jr., Sergiu M. Dascalu, and Sharad Sharma (eds), Proceedings of the 26th International Conference on Software Engineering and Data Engineering, SEDE 2017, San Diego, CA, USA, Oct 2-4, 2017.

- *Program Committee* Member *for Conferences*

- HCII 2024: International Conference on Virtual, Augmented and Mixed Reality (VAMR), HCI International, Washington DC, USA, June 29-4 July, 2024.
- DSIT 2024: 7th International Conference on Data Science and Information Technology, 20-22 Dec 2024.
- DSIT 2024: 2024 7th International Conference on Data Science and Information Technology, November 5, 2024.
- ITNG 2024: 21st Conference on Information Technology- New Generations, Las Vegas, Nevada, USA, April 14-16, 2024.
- CASA 2023: 36th International Conference on Computer Animation and Social Agents, 29-31 May 2023.
- ICVR 2023: 9th International Conference on VR, May 12-14, 2023.
- ICDCN'23: 24th International Conference on Distributed Computing and Networking, 4-7th January, 2023.
- MDSIS 2023: 2023 Asia Conference on Mathematics, Data Science and Information System, Oct. 27-29, 2023.
- 9th International Conference on Virtual Reality, (ICVR 2023), Xianyang, China // May 12-14, 2023.
- 24th International Conference on Distributed Computing and Networking, 4-7th January, 2023.
- 8th International Conference on Virtual Reality, (ICVR 2022), Nanjing, China, May 26-28, (http://www.icvr.org/), 2022.
- 19th International Conference on Information Technology: New Generations ITNG 2022, (https://www.itng.info/), April 10-13, 2022.
- 23rd International Conference on Distributed Computing and Networking, New Delhi, 4-7th January, (https://icdcn2022.iiitd.edu.in/), 2022.
- 35th International Conference on Computer Animation and Social Agents, (CASA 2022), Nanjing, China,(http://www.casa2022.org), July 5-7, 2022.
- 14th International Conference on Virtual, Augmented and Mixed Reality (VAMR 2022) in 24th International Conference on Human-Computer Interaction (HCI International 2022), 26 June - 1 July 2022.
- 23rd International Conference on Distributed Computing and Networking (ICDCN 2022), Indraprastha Institute of Information Technology, Delhi, India, http://www.icdcn.org/, January 4 - 7, 2022.
- 8th International Conference on Virtual Reality, ICVR 2022, Nanjing, China, May 26-28, 2022.
- ITNG 2020 (17th Int'l Conference on Information Technology- New Generations 2020), Las Vegas, NV, USA, Apr 5, 2020 - Apr 8, 2020.
- The 35th International Conference on Computers and Their Applications (CATA 2020), Crowne Plaza Hotel, San Francisco Airport, California, March 23-25, 2020.
- 16th International Conference on Information Technology: New Generations, ITNG 2019, Las Vegas, Nevada, USA, April 1-3, 2019.
- ISCA 33rd International Conference on Computers and Their Applications (CATA 2019), Waikiki Beach Marriott Resort, Honolulu, Hawaii, March 18-20, 2019.
- ISCA 33rd International Conference on Computers and Their Applications CATA-2018, Flamingo Hotel, Las Vegas, Nevada, March 19-21, 2018.
- International Program Committee member, The 4th International Workshop on Collaboration and Virtual Environments (CoVE-2016) at the IEEE International Conference on Collaboration Technologies and Systems (CTS 2016), Orlando, Florida, USA, October 31 - November 04, 2016.
- ISCA 25th International Conference on Software Engineering and Data Engineering (SEDE-2016), Marriott Tech Center, Denver, USA, Sep. 26-28, 2016.
- ISCA 30th International Conference on Computers and Their Applications (CATA 2016), Las Vegas, NV, USA on April 4-6, 2016.
- IEEE Third International Workshop on Collaboration and Virtual Environments (CoVE-2015) as part of International Conference on Collaboration Technologies and Systems (CTS 2015), Atlanta, Georgia, USA,June 1-5, 2015.

- 24th International Conference on Software Engineering and Data Engineering, SEDE, San Diego, California, USA, USA on October 12-14, 2015
- 2015 International Conference on Information and Computer Technology (ICICT 2015), Dubai, UAE, November 12-13, 2015.
- 23rd International Conference on Software Engineering and Data Engineering, SEDE, New Orleans, Louisiana, USA on October 13-15, 2014.
- International Workshop on Big Data Analytics for Predictive Organization and Big Transformations, ASE/ IEEE International Conference on Big Data Science and Computing, Stanford, CA, USA, May 27 - May 31, 2014.
- 22nd International Conference on Software Engineering and Data Engineering, SEDE, Los Angeles, California, USA, September 25-27, 2013.
- 21st *International Conference on Software Engineering and   Data Engineering*, SEDE, Los Angeles, California, USA, June 27-29, 2012.
- 21st *International Conference on Software Engineering and Data Engineering*, SEDE, Los Angeles, California, USA, June 27-29, 2012.
- IEEE, International Workshop on Collaboration in Virtual Environments (CoVE -2012), as part of The 2012 International Conference on Collaboration Technologies and Systems (CTS 2012), Denver, Colorado, USA, May 21-25, 2012.
- *International Conference on Software Engineering and Data Engineering*, SEDE, June 20- 22, Las Vegas, Nevada, USA, 2011.
- 20th *International Conference on Software Engineering and Data Engineering*, SEDE, Las Vegas, USA, June 20-22, 2011.
- 19th *International Conference on Software Engineering and Data Engineering*, SEDE, San Francisco, California, USA, June 16-18, 2010.
- 8thACIS International Conference on Software Engineering Research, Management and Applications, SERA2010.
- *7thACIS International Conference on Software Engineering Research, Management and Applications*, SERA 2009.
- The 2008 International Conference on *Artificial Intelligence* (ICAI'08), Las Vegas, USA, July 14-17, 2008.
- The 2008 International Conference on *Genetic and Evolutionary Methods* (GEM'08), Las Vegas, USA, July 14-17, 2008.
- The 2008 International Conference on Software Engineering Research and Practice (SERP'08), Las Vegas, USA, July 14-17, 2008.
- The 2008 International Conference on *Modeling, Simulation and Visualization* Methods (MSV'08), July 14-17, 2008, Las Vegas, USA, 2008.
- International Conference on *Computer Graphics and Virtual Reality* (CGVR'08), Las Vegas, USA, July 14-17, 2008.

Certificates Received

- A Certificate of Entrepreneurial Mindset Facilitator Certification for successfully completing the Entrepreneurial Mindset Facilitator Certification Training by The Entrepreneurial Learning Initiative (ELI). This certificate authorizes to facilitate the Ice House Entrepreneurship Programs, July 21, **2021**.
- A Certificate of Induction to the Millionaire's Club presented to Dr. Sharad Sharma at 2021 Grants Expo and Research Week, Bowie State University, Bowie, MD, on Friday, April 23, **2021**.
- A Certificate of highest number of grant submissions presented to Dr. Sharad Sharma at 2021 Grants Expo and Research Week, Bowie State University, Bowie, MD, on Friday, April 23, **2021**.
- Certificate of Completion for successful completion of Quality Matters - Dedicated Online Workshop: Helping Learners Track Their Progress (WCHLTP), on Tuesday, 9:00 – 10:45am, August 4, **2020**.
- Certificate of Completion for successful completion of Quality Matters - Aligning Instructional Materials, Activities & Tools with Objectives (WCAMATO), on Wednesday, 9:00 – 10:45am, August 5, **2020**.

- Certificate of Completion for successful completion of Quality Matters - Dedicated Online Workshop: Active Learning Strategies (WCSA), on Thursday, 9:00 – 11:00am, August 6, **2020**.
- Certificate of Completion for successful completion of Quality Matters - Dedicated Online Workshop: How the Online Classroom is Different Training Type: WCHOC, on Friday, 9:00 – 11:00am, August 7, **2020**.
- Certificate of Completion for successful completion of Quality Matters - Dedicated Online Workshop: Using the Flipped Approach for Synchronous Online Learning, on Monday, 9:00 – 11:00am, August 10, **2020**.
- Certificate of Completion for successful completion of LOTTO I (Learning Online, teaching with Technology Online): Teaching Your Face-to-Face Course Online, Bowie State University, July 20 – Friday, August 7, **2020**.
- Certificate of Appreciation for delivering the talk titled "VRI and ARI Modules for Teaching and Training" in the Three-day online Faculty Development Program on "E-Learning and Recent Trends in Electrical Engineering" at AMITY UNIVERSITY, Uttar Pradesh, Noida, INDIA, held from 20th - 22nd May, 2020.

Professional Development

- UNT Training Certificates: Academic Workload Guidelines Training, UNT Ethics Training: Professional Standards in the Workplace, UNT Policies & Title IX Training, Introduction to Omni CMS training, UNT FERPA Training, Citi Program: Responsible Conduct of Research (RCR) training, Citi Program: Social & behavioral Research Training, **2024**.
- Recognized by a student in a 'Thank a Teacher' note for student support, COI, UNT, May **2024**.
- Attended 4-week Entrepreneurial Mindset Facilitator Certification Training by The Entrepreneurial Learning Initiative (ELI). This certificate authorizes you to facilitate the Ice House Entrepreneurship Programs, July 21, **2021**.
- Attended 3-week workshop on LOTTO I (Learning Online, teaching with Technology Online): Teaching Your Face-to-Face Course Online, through Bowie State University, July 20 – Friday, August 7, **2020**.
- Attended 4-week workshop on "Unity for Educators: A Beginner's Guide", via zoom Every Tuesday from July 14th to August 4, **2020**.
- Attended two-day xR Symposium at APL's The Kossiakoff Center, 11100 Johns Hopkins Road, Laurel, MD, 20723 on July 23 and 24, **2019**.
- Attended The IMAGINE: A Better World, A Global Education Conference, hosted by Amazon Web Services (AWS), at The Conference Center at the Washington State Convention Center in Seattle, WA, July 10 - Thursday, July 11, **2019**.
- Attended Rail-x-Tech meeting: technology driving the future of U.S. freight rail, at Kennedy Caucus Room, Russell Senate Office Building (SR-325), 2 Constitution Avenue NE, Washington, DC 20001, May 7, **2019**.
- Attended workshop focused on Strategic Leader communications to technical teams concerning the use of Artificial Intelligence and Machine Learning (AIML) for Critical Infrastructure Protection/Resilience (CIP/R), at the National Defense University (NDU), Washington, DC 20319-5066 on Thursday, 25 April **2019**.
- Attended round table meeting on programs and approaches for data science at the PhD level by NASEM, at National academy of Science building, Washington DC on **June 13, 2018**.
- Attended invited "Science Meets Congress" event on "AI robotics and your health" in the Rayburn building on Capitol Hill, Washington DC on June 14, **2018**.
- Attended QEM/NSF Outreach Forum on Building Research and Education Capacity in Computer and Information Science and Engineering (CISE) at Historically Black Colleges and Universities (HBCUs) conducted at the Hilton Baltimore BWI Airport, 1739 West Nursery Road, Linthicum Heights, MD, July 27 – July 28, **2018**.
- Attended Computer Science Faculty Innovation Summit workshop, at San Francisco, CA (Google, Facebook, Netapp, Goldman Sachs) on October 26-October 28, **2017**.

- Attended Workshop: on Application Builder and COMSOI server as a Tool for Teaching Students Workshop. Location: United States Naval Academy, Michelson Hall - Room 300, 572M Holloway Rd Annapolis, Annapolis, Maryland 21402 on June 6th **2017**.
- Attended *NASA, JPL, California Institute of Technology*, meeting for outreach initiative collaboration, at Los Angeles, CA on August 2-3, **2017**.
- Attended Maryland Research and education Network/Internet2 research and education day, at the University of Baltimore, Angeles Law Center, October 14, **2016.**
  Attended workshop on the "New Design for Learning: games and Gamification", Thursday, 8AM to 4PM, College Park Marriot Hotel and Conference room, September 29, 2016.

Teaching Experience

INFO 5501: Fundamentals of Data Analytics (UNT)	COSC 565: Software Engineering I
INFO 5900: Virtual Reality and its Applications (UNT)	COSC 590: Selected Topics: Virtual Reality
INFO 5777: Virtual Reality and its Applications (UNT)	COSC 503: Software Design and Development I
DTSC 5565: Software Engineering for DS (UNT)	COSC 477: Virtual Reality and its Principles
DTSC 4565: Software Engineering for DS (UNT)	COSC 475: Software Engineering
COSC 900-906: Dissertation	CTEC 396 Java Programming
COSC 898: Selected Topics: Software Environments	COSC 209: Gaming II
COSC 829: Advanced Virtual Reality Systems	CTEC 222 Unix Operating System
COSC 729: Virtual Reality and its Applications	COSC 112 Computer Science I
COSC 665: Software Engineering II	COSC 110 Computer Literacy and Applications

Membership of Professional Societies
1. Senior Member of IEEE, the Institute of Electrical and Electronics Engineers.
2. Member of ACM, Association for Computing Machinery.
3. Member of IEEE Computer Society.