

Dr. Sharad Sharma
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Professional Preparation

1. PhD, Computer Engineering, Wayne State University, Detroit, MI, 2006
2. M.S., Architecture, University of Michigan, Ann Arbor, MI, 2003
3. B.Arch. Birla Institute of Technology, India, 1999

Professional Appointments

1. Associate Professor, Department of Computer Science, Bowie State University, Bowie, MD, 2007 – Present.(Tenured and Promoted in 2013)
2. Research /Teaching Assistant, Department of Electrical and Computer Engineering, Wayne State University, Detroit, MI, 2005 -2006.
3. Research/Teaching Assistant, University of Michigan, Ann Arbor, MI, 2000-2004

Selected Publications (Last 5 years)

Journals

1. **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.
2. Lohgaonkar, **Sharma, S.**, "Online Assessment System with Offline Capabilities", Journal of Computer Technology and Application (JCTA-E20111006-1), Vol.3, No.1, 2012.
3. **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.
4. **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.
5. **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.
6. **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.

Conferences

1. **Sharma, S.**, Jerripothula, S., Arah, D., Nadarajah, S., "Mobile App for increasing Productivity and Health at Workplace", ISCA 24th International Conference on Software Engineering and Data Engineering (SEDE 2015), San Diego, California, USA, October 12-14, 2015.
2. Oladunni, T., **Sharma, S.**, "Predictive Real Estate Multiple Listing System Using MVC Architecture and Linear Regression", ISCA 24th International Conference on Software Engineering and Data Engineering (SEDE 2015), San Diego, California, USA, October 12-14, 2015.
3. **Sharma, S.**, Jerripothula, S., Devreaux, P., "An Immersive Collaborative Virtual Environment of a University Campus for performing Virtual Campus Evacuation drills and Tours for Campus Safety", proceedings of IEEE International Conference on Collaboration Technologies and Systems (CTS 2015), Atlanta, Georgia, USA, June 01-05, 2015.
4. **Sharma, S.**, and Ogunlana, K., "Modeling Learning Behavior in a Multi-Agent System using GA & NN during Evacuation", Proceedings at the ISCA 30th International Conference on Computers and their Applications (CATA 2015), Honolulu, Hawaii, USA, March 9-11, 2015.
5. **Sharma, S.**, Jerripothula, S., "An indoor augmented reality mobile application for simulation of building evacuation", proceedings of SPIE conference on the Engineering Reality of Virtual Reality 2015, paper 9392-7, San Francisco, CA, USA, 9 - 10 February 2015.

6. Sharma, S, Jerripothula, S., Mackey, S. and Soumare, O, "Immersive Virtual Reality Environment of a Subway Evacuation on a Cloud for Disaster Preparedness and Response Training", proceedings of IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2014), Orlando, Florida, USA, Dec. 9-12, 2014.
7. Ogunlana, K., **Sharma, S.**, "Agent based Simulation model for data visualization during evacuation", proceedings of 2014 ASE/IEEE BIGDATA/SOCIALCOM/CYBERSECURITY Conference, ISBN: 978-1-62561-000-3, page 1-6, Stanford University, May 27-31, 2014.
8. Mou, X., **Sharma, S.**, "Restaurant Online Ordering System with Personalized Advertising through Data Mining", ISCA 23rd International Conference on Software Engineering and Data Engineering (SEDE 2014), New Orleans, USA, October 13-15, 2014.
9. **Sharma, S.**, Chen, W., "Multi-user VR Classroom with 3D interaction and real-time motion detection", proceedings of IEEE the International Conference on Computational Science and Computational Intelligence (CSCI'14), Las Vegas, USA, March 10-13, 2014.
10. **Sharma, S.**, Agada, R., and Ruffin, J., "Virtual Reality Classroom as an Constructivist Approach", Proceedings of IEEE SoutheastCon 2013, Jacksonville, Florida, April 4th - 8th, 2013.
11. **Sharma, S.**, and Ogunlana, K., "Using Genetic Algorithm and Neural Networks in a Goal Finding Application for Evacuation", Proceedings at the ISCA 22nd International Conference on Software Engineering and Data Engineering (SEDE-2013), Los Angeles, California, USA, page 25-30, Sep 25 – 27, 2013.
12. M'Balé, K., Josyula, D., and **Sharma, S.**, "Topic-Based Service Integration in Software Systems", Proceedings at the ISCA 22nd International Conference on Software Engineering and Data Engineering (SEDE-2013), Los Angeles, California, USA, page 3-8, Sep 25 – 27, 2013.
13. **Sharma, S.**, Otunba, S., "Collaborative Virtual Environment to Study Aircraft Evacuation for Training and Education", Proceedings of 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.
14. **Sharma, S.**, Otunba, S., and Ogunlana, K., Tripathy, T., "Intelligent Agents in a Goal Finding Application for Homeland Security", Proceedings of IEEE, SoutheastCon 2012, Orlando, Florida, USA, March 14-17, 2012.
15. S. Ji, **S. Sharma**, B. Yu, D. H. Jeong, "Designing a Computer-Aided Rule-Based Hourly Rainfall Prediction", Proceedings of the IEEE International Conference on Information Reuse and Integration, (IEEE IRI 2012), Las Vegas, USA, Aug. 8-10, 2012.
16. Mivule, K., Otunba, S., Tripathy, T., and **Sharma, S.**, "Implementation of Data Privacy and Security in an Online Student Health Records System", Proceedings at the ISCA 21th International Conference on Software Engineering and Data Engineering (SEDE-2012), Los Angeles, California, USA, June 27 – 29, 2012.
17. M'Balé, K., Nwolisa, A., Ogunlana, K. and **Sharma, S.**, "Teaching Domain Simplification using Furaha", Proceedings at the ISCA 21th International Conference on Software Engineering and Data Engineering (SEDE-2012), Los Angeles, California, USA, June 27 – 29, 2012.
18. **Sharma, S.**, Otunba, S., and Han, J., "Crowd Simulation in Emergency Aircraft Evacuation using Virtual Reality", Proceedings of IEEE, 16 th International Conference on Computer Games: AI, Animation, Mobile, Interactive Multimedia, Educational & Serious Games, (CGAMES), Kentucky, USA, July 27-30, 2011.
19. **Sharma, S.**, Shete, S., "Pattern matching and information extraction in a software system for a battlefield environment", Proceedings of *International Conference on Software Engineering and Data Engineering*, SEDE, June 20- 22, Las Vegas, Nevada, USA, 2011.
20. **Sharma, S.**, Han, J., "Angel Blaze Media Player for Children with Client/Server File Sharing", Proceedings of *International Conference on Software Engineering and Data Engineering*, SEDE, June 20- 22, Las Vegas, Nevada, USA, 2011.
21. **Sharma, S.**, and Otunba, S., "Virtual Reality as a Theme-Based Game Tool for Homeland Security Applications", Proceedings of ACM Military Modeling & Simulation Symposium (MMS11), Boston, MA, USA, April 4 - 7, 2011.
22. **Sharma, S.**, and Shete, S., "Virtual City: A gaming tool for training and education", Proceedings of ISCA 26th International Conference on Computers and their Applications, New Orleans, Louisiana, USA, March 23-25, 2011.
23. **Sharma, S.**, "Favorite goal in agent based modeling and simulation", Proceedings of the 19th International Conference on Software Engineering and Data Engineering, SEDE, San Francisco, California, USA, June 16-18, 2010.
24. Lohgaonkar, S, **Sharma, S.**, "Online Assessment System with Offline Capabilities", Proceedings of the 2010 World Congress in Computer Science, Computer Engineering, and Applied Computing, July 12-15, pg. 284-289, 2010.
25. **Sharma, S.**, Lohgaonkar, S., "Simulation of agent behavior in a goal finding application", Proceedings of IEEE SoutheastCon Conference, March 18-21, Charlotte-Concord, NC, pages: 424-427, 2010.
26. **Sharma, S.**, "Military route planning in battle field simulations for a multi-agent system", Proceedings of the International Conference on Software Engineering and Data Engineering, SEDE, June 22- 24, Las Vegas, Nevada, USA, 2009.

27. **Sharma, S.**, Vadali, H., "Modeling emergency scenarios in virtual evacuation environment", Proceedings of IEEE World Congress on Computer Science and Information Engineering, CSIE, March 31 - April 2, Los Angeles, USA, pg. 759-763, 2009.
28. **Sharma, S.**, "Simulation and modeling of group behavior during evacuation", Proceedings of IEEE Symposium Series on Computational Intelligence, Intelligent Agents, March 30-April 2, Nashville, TN, USA, 2009.
29. **Sharma, S.**, Vadali, H., "Simulation and modeling of a virtual library for navigation and evacuation", Proceedings of MSV'08 - The 2008 International Conference on Modeling, Simulation and Visualization Methods, Monte Carlo Resort, Las Vegas, Nevada, USA, July 14-17, 2008.
30. **Sharma, S.**, "Avatarsim: A multi-agent system for emergency evacuation simulation", 17th International Conference on Software Engineering and Data Engineering, Los Angeles, California USA, June 30 - July 2, 2008.

Synergistic activities

Dr. Sharad Sharma research specialization **includes modeling and simulation of emergency response and decision making**, evacuation scenarios, software engineering, multi-agent systems, virtual reality, fuzzy logic, and neural network. He has developed AvatarSim, a simulation tool in Java that can simulate building evacuation, battlefield scenario and airplane evacuation scenarios. His research study investigates modeling strategies to simulate human egress behavior in emergency scenarios and represent them in a goal-finding computer application. Dr. Sharma is the **Director of the Virtual Reality Laboratory** at the Bowie State University. Dr. Sharma and his group have developed multi-user applications with a theme-based game for emergency behavior analysis and conducted user studies for the environments (VR city, airplane, subway) in virtual reality. They are also using *Augmented Reality* to create an emergency response system to help people evacuate a building using mobile devices.

Dr. Sharma has won "**Outstanding Researcher of the year Award**" in college of Arts and Science at Bowie State University in year 2013 and 2011. He has won "**Outstanding Faculty of the year Award**" in year 2012. He has also won the "**Outstanding Publication Award**" at the Bowie State University in the year 2010 and "**Outstanding Young Faculty Award**" at the Bowie State University in the year 2009. Dr. Sharma has also received the *Outstanding Graduate/Professional Student Leadership Award* for the year 2005-2006 to recognize his yearlong achievements at Wayne State University. Dr. Sharma has reviewed Journal papers in *IEEE Transactions on Systems, Man, and Cybernetics Journal, Part A, Part C*, IEEE Transactions on Evolutionary Computation, and *IEEE Potential* magazine papers in 2005, 2006, 2007, 2008, 2010, and 2011.

Professional Services

- Program Committee member, ISCA 30th International Conference on Computers and Their Applications (CATA 2016), Las Vegas, NV, USA on April 4-6, 2016.
- International Program Committee member and Session Chair, IEEE International Conference on Collaboration Technologies and Systems (CTS 2015), Atlanta, Georgia, USA, June 01-05, 2015.
- Program Committee member and Session Chair, 24th International Conference on Software Engineering and Data Engineering, SEDE, San Diego, California, USA, USA on October 12-14, 2015
- International Advisory Committee member, 2015 International Conference on Information and Computer Technology (ICICT 2015), Dubai, UAE, November 12-13, 2015.
- Program Committee member, 23rd International Conference on Software Engineering and Data Engineering, SEDE, New Orleans, Louisiana, USA on October 13-15, 2014.
- Program committee member, 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.
- **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
- Paper Session Chair, IEEE SoutheastCon 2013, Jacksonville, Florida, April 4th - 8th, 2013.
- **Conference General Chair** of "2012 8th International Conference on MEMS NANO, and Smart Systems (ICMENS 2012) November 3-4, 2012.

- Program Committee, 21st *International Conference on Software Engineering and Data Engineering*, SEDE, Los Angeles, California, USA, June 27-29, 2012.
- Invited Demo Speaker and Program Committee member, International Workshop on Collaboration in Virtual Environments, Denver, Colorado, USA, May 21-25, 2012.
- Department Webmaster for Computer Science Department website, 2009- 2013.
- Webmaster for College of Arts and Science (CAS) website, 2011- 2013.
- Judge for five years at Innovative STEM Conference and Junior Science Symposium.
- Judge at the Emerging Researchers National (ERN) conference in STEM, Feb 24-26, Washington DC, 2011.
- Paper Session Chair, IEEE SoutheastCon Conference, March 18-21, Charlotte-Concord, NC, 2010.
- Associate Chair and Special Session Chair, 19th International Conference on Software Engineering and Data Engineering, San Francisco, California, USA, June 16-18, 2010.
- Paper Session Chair, SEDE, June 22- 24, Las Vegas, Nevada, USA, 2009.
- Faculty Senator, Bowie State University, 2013-till date.

Awards Won

- Won **Outstanding Researcher Award** for the year 2013 in College of Arts and Science (CAS), Bowie State University.
- Won **Outstanding Faculty Award** for the year 2012 in CAS, Bowie State University.
- Won **Outstanding Researcher Award** for the year 2011 in CAS at Bowie State University.
- Won **Outstanding Publication Award** for the year 2010 in CAS, Bowie State University.
- Won **Outstanding Young Faculty Award** for the year 2009 in CAS, Bowie State University
- 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.

Invited Talks

- 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**.
- Invited talk on “Virtual Reality Laboratory Research, at Research-In-Progress Conference at Faculty Institute, Bowie State University on January 17, **2013**.
- 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**.
- 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**.

Current Students

1. **Doctoral Students:** Kola Ogunlana, James Stigall, Roy Brown, Sarika Rajeev, Lamar Taylor
2. **Masters Students:** Veda Dasari, Naveen Kumar, Pranay Rajeev, Isac Anio- Frempong, Swetha Yalla, Suraj Kumar
3. **Undergraduate Students:** Jeff Ruffin, Dexter Ballerda, Stephon Mackey, Oumar Soumare, Stanley Woodroff, Dilorah Arah, Phillip Devreaux

Membership of Professional Societies

1. Senior Member of IEEE, the Institute of Electrical and Electronics Engineers.
2. Member of ISCA, International Society of Computer and their Applications.
3. Senior Member, International Association of Computer Science and Information Technology (IACSIT).