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Education

- Ph.D. in Computer Science, George Mason University, Fairfax, Virginia, USA, 2000
- M.Eng. in Computer Science, University of Electronic Science & Technology, China, 1994
- B.Eng. in Computer Science, Southwest Jiaotong University, China, 1991

Positions

2016 – present: Associate Professor, Creative Media Industries Institute, with a joint appointment in the Department of Computer Science Georgia State University, Atlanta, Georgia

2009 – 2016: Associate Professor, Department of Computer Science, Georgia State University, Atlanta, Georgia

2003 - 2009: Assistant Professor, Department of Computer Science, Georgia State University, Atlanta, Georgia

2000 - 2003: Senior Software Engineer, CA Technologies, Inc., Dallas, Texas

Research Interests

Computer graphics, data visualization, game design and development, virtual reality, human-computer interaction, natural language processing

Peer-reviewed Publications

1. S. Pokharel and Y. Zhu. Tactical Rings: A Visualization Technique for Analyzing Tactical Patterns in Tennis. In: Bebis G. et al. (eds) Advances in Visual Computing. ISVC 2019. Lecture Notes in Computer Science (LNCS), vol 11845. Springer, 2019. (DOI: 10.1007/978-3-030-33723-0_39)
2. D. Roberts and Y. Zhu, Motion Tracking for Volumetric Motion Capture Data, in Proceedings of the Sixth National Workshop for REU Research in Networking and Systems, Monterey, CA, 2019.
3. S. Pokharel and Y. Zhu. Micro-level Data Analysis and Visualization of the Interrelation Between Confidence and Athletic Performance. In Proceedings of the 2nd International Conference on Computer Science and Software Engineering (CSSE 2019). Association for Computing Machinery (ACM), New York, NY, USA, 67–72. (DOI: 10.1145/3339363.3339376)

4. S. Pokharel, Y. Zhu and S. Puri, "Micro-Level Analysis and Visualization of Tennis Shot Patterns with Fractal Tables," 2019 IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC), Milwaukee, WI, USA, 2019, pp. 97-102. (DOI: 10.1109/COMPSAC.2019.10190)
5. S. Podila and Y. Zhu, "Animating predator and prey fish interactions," Computer Animation and Virtual Worlds, Vol. 30, No. 2, March/April 2019. (DOI: 10.1002/cav.1866)
6. S. Pokharel and Y. Zhu, "Analysis and Visualization of Sports Performance Anxiety in Tennis Matches", in the Proceedings of the 13th International Symposium on Visual Computing, Lecture Notes in Computer Science Vol. 11241, pp. 407-419, Springer 2018 (DOI 10.1007/978-3-030-03801-4_36).
7. S. Pawar, A. Stanam and Y. Zhu, "Evaluating the computing efficiencies (specificity and sensitivity) of graphics processing unit (GPU)-accelerated DNA sequence alignment tools against central processing unit (CPU) alignment tool", Journal of Bioinformatics and Sequence Analysis, Vol. 9, No. 2, 2018. (DOI 10.5897/JBSA2018.0109)
8. A. J George, Y. C Hoffiz, A. J Charles, Y. Zhu, and A. M Mabb, A comprehensive atlas of E3 ubiquitin ligase mutations in neurological disorders, Frontiers in Genetics, Vol. 9, Article 29, 2018. (DOI 10.3389/fgene.2018.00029)
9. S. Podila and Y. Zhu, Animating Multiple Escape Maneuvers for a School of Fish, Proceedings of 43rd International Conference on Graphics, Visualization & Human-Computer Interaction (Graphics Interface), 2017.
10. S. Podila and Y. Zhu, "Animating Escape Maneuvers for a School of Fish," in Proceedings of ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D), poster paper, 2017.
11. S. Podila and Y. Zhu, "Simulating a Predator Fish Attacking a School of Prey Fish in 3D Graphics," in Proceedings of International Symposium on Visual Computing, Lecture Notes in Computer Science (LNCS), Springer, Vol. 10073, pp. 586-594, 2016.
12. L. Zhang and Y. Zhu, "CutPointVis: An Interactive Exploration Tool for Cancer Biomarker Cutpoint Optimization," in Proceedings of International Symposium on Visual Computing, Lecture Notes in Computer Science (LNCS), Springer, Vol. 10072, pp. 55-64, 2016.
13. S. Podila and Y. Zhu, "A Visualization Tool for 3D Graphics Program Comprehension and Debugging," The fourth IEEE Working Conference on Software Visualization (VISOFT), 2016.
14. Y. Zhu, "Courseware for Improving Undergraduate Students' Debugging Skill in GPU Programming," AAAS/NSF Envisioning the Future of Undergraduate STEM Education: Research and Practice Symposium, 2016.
15. X. He and Y. Zhu, "TennisMatchViz: a tennis match visualization," in Proceedings of International Conference on Visualization and Data Analysis (VDA), 2016.
16. L. Zhang, Y. Zhu, and S. Klimov, "CancerVis: an Interactive Exploratory Tool for Cancer Biomarker Analysis," Workshop on Health Informatics and Data Science, IEEE International Conference on Bioinformatics and Biomedicine (BIBM) 2015.
17. Y. Zhu, G. S. Owen, Teaching Debugging Skills in Shader-Based Computer Graphics Programming, 46th ACM Technical Symposium on Computer Science Education (SIGCSE), 2015.
18. Y. Zhu and E. Frigal, "Interactive Visual Text Analysis for Corpus-based Learning," in Proceedings of IEEE Big Data Computing Service and Applications Conference, 2015.

19. A. Shresha, Y. Zhu, and K. Manandhar, "NetTimeView: Applying Spatio-Temporal Visualization Techniques to DDoS Attack Analysis," in Proceedings of the 10th International Symposium on Visual Computing (ISVC), Lecture Notes in Computer Science (LNCS), Vol. 8887, pp. 357-366, 2014.
20. A. Shresha, Y. Zhu, and B. Miller, "Visualizing Uncertainty in Spatio-temporal data," in ACM SIGKDD Workshop on Interactive Data Exploration and Analytics (IDEA), 2014.
21. A. Shresha, Y. Zhu, and Y. Zhu, "Visual cluttering reduction for visualizing large spatio-temporal data sets," in Proceedings of the 17th IEEE International Conference on Computational Science and Engineering, 2014.
22. Y. Zhu, Review of "B. Steichen, et al., Inferring visualization task properties, user performance, and user cognitive abilities from eye gaze data, ACM Transactions on Interactive Intelligent Systems (TiiS) 4 (2): 1-29, 2014.", ACM Computing Reviews, published on October 27, 2014.
23. A. Shresha, Y. Zhu, B. Miller, and Y. Zhao, "Storygraph: Telling Stories from Spatio-temporal Data," Advances in Visual Computing, Lecture Notes in Computer Science, Vol. 8034, pp. 693-702, 2013.
24. X. Chen and Y. Zhu, "Real-Time Simulation of Vehicle Tracks on Soft Terrain," Advances in Visual Computing, Lecture Notes in Computer Science, Vol. 8033, pp. 437-447, 2013.
25. A. Shreshtha, Y. Zhu, and B. Miller, "Visualizing time and geography of Open Source Softwares with Storygraph," in Proceedings of 1st IEEE Working Conference on Software Visualization, New Ideas or Emerging Results (NIER) paper, 2013.
26. A. Shresha, Y. Zhu, B. Miller, and Y. Zhao, "Storygraphs: Extracting patterns from spatio-temporal data," ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), Workshop on Interactive Data Exploration and Analytics (IDEA), 2013.
27. Y. Zhu, E. Friginal and J. Hardy, "Introducing Text X-Ray: an online text parsing and visualization program," in Proceedings of the American Association for Corpus Linguistics Conference, 2013.
28. Y. Zhu and E. Friginal, "Visualizing Writing: Text X-Ray for IEP Classrooms," Presented at the 1st Atlanta Area IEP Conference. February 23, 2013, Georgia Institute of Technology, Atlanta, GA 2013.
29. X. Chen and Y. Zhu, "Evaluating a mobile pedestrian safety application in a virtual environment," in Proceedings of ACM SIGGRAPH Virtual Reality Continuum and its Application in Industry (VRCAI), 2012.
30. Y. Zhu, "Introducing Google Chart Tools and Google Maps API in Data Visualization Courses," IEEE Computer Graphics and Applications, Vol. 32, No. 6, pp. 6-9, December 2012.
31. A. Shreshtha, Y. Zhu, C. M. Dooley, and Y. Zhang, "Exploring new reading assessment methods in early childhood education with mobile reading devices," in Proceedings of the 3rd Workshop on Educational Interfaces, Software, and Technology (EIST), ACM SIGCHI Conference on Human Factors in Computing Systems, 2012.
32. X. Chen and Y. Zhu, "Real-time simulation of ship motions in waves," in Proceedings of the International Symposium on Visual Computing, Lecture Notes in Computer Science, Vol. 7431, Springer-Verlag, 2012.
33. A. G. Bourgeois, S. Prasad, Y. Zhu, J. Bhola, and Y. Pan, "Incorporating PDC Topics throughout the Undergraduate Computer Science Curriculum," in Proceedings of the 2nd NSF/TCPP Workshop on Parallel and Distributed Computing Education (EduPar), 2012.

34. Y. Zhu, X. Chen, and G. S. Owen, "Terramechanics based terrain deformation for real-time off-road vehicle simulation," in Proceedings of the 7th International Symposium on Visual Computing, Lecture Notes in Computer Science, Vol. 6938, Springer-Verlag, 2011.
35. X. Chen and Y. Zhu, "Shader based polygon stitching and its application in deformable terrain simulation," in Proceedings of the 6th International Conference on Image and Graphics, IEEE, 2011.
36. S. Karmakar and Y. Zhu, "Mining collaboration through textual semantic interpretation," in Proceedings of the 11th International Conference on Hybrid Intelligent Systems, IEEE, 2011.
37. S. A. Markham and Y. Zhu, "A model for visualizing sentence complexity," (poster) 16th annual joint conference on Innovation and technology in computer science education (ITiCSE), ACM, pp. 357, 2011
38. Y. Zhu, S. Karmakar, K. Kokala, and R. K. N. Ayudhaya, "Analyzing Comments on Social Media Web Sites with Latent Semantic Analysis," in Proceedings of The Fifth International Conference on Knowledge, Information and Creativity Support Systems (KICSS), LNCS/LNAI, Springer, 2010.
39. Y. Zhu and S. Karmakar, "Analysis of a social data visualization web site," in Proceedings of the 10th IEEE International Conference on Intelligent Systems Design and Applications (ISDA), IEEE, 2010.
40. S. Karmakar and Y. Zhu, "Recommendation by composition style," in Proceedings of the 10th IEEE International Conference on Intelligent Systems Design and Applications (ISDA), IEEE, 2010.
41. S. Karmakar and Y. Zhu, "Visualizing Text Readability," in Proceedings of IEEE International Conference on Data Mining and Intelligent Information Technology Applications (ICMiA), IEEE, 2010.
42. S. Karmakar, Y. Zhu, "Visualizing Multiple Text Readability Indexes". in Proceedings of IEEE International Conference on Education and Management Technology (ICEMT), IEEE, 2010.
43. P. S. Katz, R. J. Calin-Jageman, A. Dhawan, C. Frederick, S. Guo, R. Dissanayaka, N. Hiremath, W. Ma, X. Shen, H. C. Wang, H. Yang, S. Prasad, R. Sunderraman, and Y. Zhu, "NeuronBank: a tool for cataloging neuronal circuitry," *Frontiers in Systems Neuroscience*, Vol. 4, No. 9, 2010.
44. D. Cofer, G. Cymbalyuk, J. Reid, Y. Zhu, W. J. Heitler, and D. H. Edwards, "AnimatLab: A 3-D Graphics Environment for Neuromechanical Simulations," *Journal of Neuroscience Methods*, Vol. 187, No. 2, 2010, pp. 280-288.
- Y. Zhu, X. Suo, and G. S. Owen, "A Visual Data Exploration Framework for Complex Problem Solving Based on Extended Cognitive Fit Theory," in Proceedings of the 5th International Symposium on Visual Computing, Lecture Notes in Computer Science, Vol. 5876, Springer-Verlag, 2009, pp. 869-878.
45. X. Suo, Y. Zhu, and G. S. Owen, "A Study of the Vulnerability of Click Based Graphical Password," in the Proceedings of the 5th International Symposium on Visual Computing, Lecture Notes in Computer Science, Vol. 5876, Springer-Verlag, 2009, pp. 889-898.
46. S. Purao, C. Baldwin, A. Hevner, V. C. Storey, J. Pries-Heje, B. Smith, and Y. Zhu, "The Sciences of Design: Observations on an Emerging Field," *Communications of the Association for Information Systems*, Vol. 23, No. 1, pp. 523-546, 2008.
47. X. Suo, Y. Zhu, and G. S. Owen "A Task Centered Framework for Computer Security Data Visualization," in 5th International Workshop on Visualization for Cyber Security (VizSEC), Lecture Notes in Computer Science, J. R. Goodall, G. Conti, and K.-L. Ma (Eds.), Vol. 5210, Springer-Verlag, 2008, pp. 87-94.

48. J. W. Chastine and Y. Zhu "The Cost of Supporting References in Collaborative Augmented Reality," In Proceedings of the 34th Graphics Interface Conference (GI), 2008.
49. J. W. Chastine, K. Nagel, Y. Zhu, and M. Hudachek-Buswell, "Studies on the Effectiveness of Virtual Pointers in Collaborative Augmented Reality," in Proceedings of the 3rd IEEE Symposium on 3D User Interfaces (3DUI), IEEE, 2008.
50. Y. Zhu, "Visualizing Menisci-Femur Contact Using Deformable Knee Models," International Journal of Functional Informatics and Personal Medicine, Vol. 1, No. 1, 2008, pp. 80-102.
51. X. Suo, Y. Zhu, and G. S. Owen, "Measuring the Complexity of Visualization Design," in Proceedings of the 2007 Workshop on Visualization for Computer Security (VizSEC), Springer, 2007.
52. Y. Zhu, X. Suo, and G. S. Owen, "Complexity Analysis for Information Visualization Design and Evaluation," Advances in Visual Computing, Lecture Notes in Computer Science (LNCS), G. Bebis et al. (Eds.), Vol. 4841, pp. 576-585, Springer-Verlag, 2007.
53. Y. Zhu, "Measuring Effective Data Visualization," Advances in Visual Computing, Lecture Notes in Computer Science (LNCS), G. Bebis et al. (Eds.), Vol. 4842, pp. 652-661, Springer-Verlag, 2007.
54. Y. Zhu, "Simulation and Visualization of Menisci-Femur Contact Using Patient-Specific Deformable Models," in Proceedings of IEEE 7th International Symposium on Bioinformatics and BioEngineering (BIBE), Boston, MA, IEEE, 2007.
55. J. W. Chastine, K. Nagel, Y. Zhu, and L. Yearsoyich, "Understanding the Design Space of Referencing in Collaborative Augmented Reality Environments," in the Proceedings of the 33rd Graphics Interface Conference (GI), ACM, 2007.
56. R. Calin-Jageman, Y. Chen, A. Dhawan, C. Frederick, N. Hiremath, W. Ma, X. Shen, H. Yang, S. Prasad, R. Sunderraman, Y. Zhu, and P. Katz, "Development of NeuronBank: A Federation of Customizable Knowledge Bases of Neural Circuitry," IEEE International Workshop on Service Oriented Technologies for Biological Databases and Tools (SOBDAT), in Proceedings of IEEE Congress on Services (SERVICES 2007), IEEE, 2007.
57. D. Cofer, J. Reid, Y. Zhu, G. Cymbalyuk, W. H. Heitler, and D. Edwards, "Role of the Semi-lunar Process in Locust Jumping," 16th Annual Computational Neuroscience Meeting (CNS), Toronto, Canada, 2007. ((Also appears in BMC Neuroscience, Vol. 8(Sppl 2): P12.))
58. W. Ma, Y. Zhu, R. W. Harrison, and G. S. Owen, "Managing User Privacy and Cooperation Demand in a Collaborative Molecular Modeling Virtual System," IEEE Virtual Reality Conference, Charlotte, NC, 2007.
59. J. W. Chastine, Y. Zhu, and J. A. Preston, "A Framework for Inter-referential Awareness in Collaborative Systems," in the Proceeding of the 2nd IEEE International Conference on Collaborative Computing (CollaborateCom), Atlanta, GA, IEEE, 2006.
60. A. S. Aquilio, J. C. Brooks, Y. Zhu, and G. S. Owen, "Real-time GPU-based Simulation of Dynamic Terrain," in Advances in Visual Computing, Lecture Notes in Computer Science (LNCS), G. Bebis et al. (Eds.), Vol. 4291, pp. 891-900, Springer-Verlag, 2006.
61. X. Suo, Y. Zhu, and G. S. Owen, "Analysis and Design of Graphical Password," in Advances in Visual Computing, Lecture Notes in Computer Science (LNCS), G. Bebis et al. (Eds.), Vol. 4292, pp. 741-749, Springer-Verlag, 2006.
62. X. Suo, Y. Zhu, and G. S. Owen, "A Survey of Graphical Passwords," IAnewsletter, Vol. 9, No. 2, 2006, pp. 24-28.

63. H. Tian, R. Sunderraman, R. Calin-Jageman, H. Yang, Y. Zhu, and P. S. Katz, "NeuroQL: A Domain-Specific Query Language for Neuroscience Data," in *Current Trends in Database Technology, Lecture Notes in Computer Science (LNCS)*, T. Grust et al. (Eds.), Vol. 4254, pp. 613-624, Springer-Verlag, 2006.
64. D. W. Cofer, J. Reid, Y. Zhu, G. Cymbalyuk, W. Heitler, D. Edwards, "Biomechanical Simulation of the Escape Response in Crayfish and Locust," 36th Society for Neuroscience Annual Meeting, Atlanta, Georgia, 2006.
65. D. W. Cofer, J. Reid, O. Pochapinsky, Y. Zhu, G. Cymbalyuk, W. Heitler, D. Edwards, "AnimatLab: A Physics Accurate 3-D Environment for Behavioral Neurobiology Research," in 15th Annual Computational Neuroscience Meeting (CNS), Edinburgh, UK, 2006.
66. H. Tian, Y. Wang, H. Yang, R. Sunderraman, P. Katz, and Y. Zhu, "A Novel Neuron Data Model with Domain Specific Language," in *Proceedings of 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Shanghai, China, IEEE, 2005.
67. J. W. Chastine, J. C. Brooks, Y. Zhu, G. S. Owen, R. W. Harrison, and I. T. Weber, "AMMP-Vis: A Collaborative Virtual Environment for Molecular Modeling," in *Proceedings of ACM Symposium on Virtual Reality Software and Technology (VRST)*, Monterey, CA, ACM, 2005.
68. X. Suo, Y. Zhu, and G. S. Owen, "Graphical Password: A Survey," in *Proceedings of 21st Annual Computer Security Applications Conference (ACSAC)*, Tucson, AZ, IEEE, 2005.
69. J. W. Chastine, Y. Zhu, J. C. Brooks, G. S. Owen, R. W. Harrison, and I. T. Weber, "A Collaborative Multi-View Virtual Environment for Molecular Visualization and Modeling," in *Proceedings of the 3rd IEEE International Conference on Coordinated & Multiple Views in Exploratory Visualization (CMV)*. London, UK, IEEE, 2005.
70. F. Liu, G. S. Owen, Y. Zhu, R. W. Harrison, and I. T. Weber, "Web Based Molecular Visualization using Procedural Shaders in X3D," in *Proceedings of ACM SIGGRAPH Conference Web Program*. Los Angeles, CA, ACM, 2005.
71. G. S. Owen, Y. Zhu, J. W. Chastine, and B. R. Payne. "Teaching Programmable Shaders: Lightweight versus Heavyweight Approach," in *ACM SIGGRAPH Conference Educators Program*. Los Angeles, CA, ACM, 2005.
72. J. A. Pamplin, Y. Zhu, P. S. Katz, and R. Sunderraman, "A 3D User Interface for Visualizing Neuron Location in Invertebrate Ganglia," in *Computational Science - ICCS 2005, Lecture Notes in Computer Science (LNCS)*, V. S. Sunderam et al. (Eds.), Volume 3515, pp. 347-350, Springer-Verlag, 2005.
73. R. Payne, S. O. Belkasim, G. S. Owen, M. C. Weeks, and Y. Zhu, "Accelerated 2D Image Processing on GPUs," in *Computational Science - ICCS 2005, Lecture Notes in Computer Science (LNCS)*, V. S. Sunderam et al. (Eds.), Volume 3515, pp. 256-264, Springer-Verlag, 2005.
74. Y. Zhu and S. O. Belkasim, "A 3D Reconstruction Algorithm Based on 3D Deformable Atlas," in *Proceedings of IEEE International Conference on Information Technology and Applications (ICITA)*. Sydney, Australia, IEEE, 2005.
75. G. Bays and Y. Zhu, "ScoreSVG: A Three-Tiered Software Architecture for Creating Music Scores in SVG," in *Proceedings of the 4th Annual Conference on Scalable Vector Graphics (SVG Open)*. Enschede, The Netherlands, 2005.
76. D. W. Cofer, J. Reid, Y. Zhu, G. Cymbalyuk, W. J. Heitler, D. H. Edwards, "AnimatLab: A Physics Based 3-D Graphics Environment for Behavioral Neurobiology Research," 35th Society for Neuroscience Annual Meeting, Washington DC, 2005.

77. J. Reid, D. W. Cofer, Y. Zhu, D. H. Edwards, "A 3D Graphics Toolkit for Studying Neural Basis of Adaptive Behavior," 32nd International Conference on Computer Graphics and Interactive Techniques (SIGGRAPH), Los Angeles, CA, ACM, 2005
78. J. W. Chastine, J. C. Brooks, Y. Zhu, G. S. Owen, R. W. Harrison, I. T. Weber, "Emphasizing the Area of Interesting Using Real-Time Shaders," 32nd International Conference on Computer Graphics and Interactive Techniques (SIGGRAPH), Los Angeles, CA, ACM, 2005
79. F. Liu, G. S. Owen, Y. Zhu, R. W. Harrison, and I. T. Weber, "Web Based Molecular Visualization using Procedural Shaders in X3D," 3rd Georgia State Biotech Symposium, 2005.
80. Y. Zhu and J. X. Chen, "Simulation and Visualization of Knee Joint Contact using Deformable Model", in Proceedings of the 4th IEEE International Conference on Computer and Information Technology (CIT), Wuhan, China, IEEE, 2004.
81. Y. Zhu and G. S. Owen, "Integrating Modeling and Animation Tools into an Introductory Computer Science Graphics Course," ACM SIGGRAPH Conference Educators Program, Los Angeles, CA, ACM, 2004.
82. Y. Zhu, G. S. Owen, F. Liu, and A. Aquilio, "GPU-Based Volumetric Lighting Simulation," in Proceedings of the 7th IASTED International Conference on Computer Graphics and Imaging (CGIM), Kauai, HI, 2004.
83. Y. Zhu, "A Multi-thread Based Terrain Visualization Algorithm," in Proceedings of the 7th IASTED International Conference on Computer Graphics and Imaging (CGIM). Kauai, HI, 2004.
84. J. A. Pamplin and Y. Zhu, "Design and Implementation of a Workflow Rendering Engine," in Proceedings of the International Conference on Modeling, Simulation and Visualization Methods, Las Vegas, Nevada, 2004.
85. F. Liu, G. S. Owen and Y. Zhu, "Universal Converter for Platform Independent Procedural Shaders in X3D," in Proceedings of ACM SIGGRAPH Conference on Web Graphics, Los Angeles, CA, ACM, 2004.
86. D. Cofer, Y. Zhu, D. H. Edwards, A. Aquilio, G. Cymbalyuk, and G. S. Owen, "A 3D Graphics Environment for Behavioral Neurobiology Research," in ACM SIGGRAPH Posters Program. Los Angeles, CA: ACM, 2004.
87. B. Payne, G. S. Owen, I. Weber, Y. Zhu, and P. Liu, "A Portable, Reusable Framework for Scientific Computing on GPUs," in Proceedings of ACM SIGGRAPH Posters Program. Los Angeles: ACM, 2004.
88. Y. Zhu and D. H. Edwards, "3D Animated Crayfish Model for Neurobiological Study of Adaptive Behaviors", 2nd Georgia State Biotech Symposium, Atlanta, GA, May 24-25, 2004.
89. B. R. Payne, G. S. Owen, I. T. Weber, Y. Zhu and P. Liu, "Accelerating Automated Structure Fitting in Protein Crystallography by Using Programmable Graphics Processors", 2nd Georgia State Biotech Symposium, Atlanta, GA, May 24-25, 2004
90. J. X. Chen, H. Wechsler, M. Pullen, Y. Zhu, and E. MacMahon, "Knee Surgery Assistance: Patient Model Construction, Motion Simulation, and Biomechanical Visualization," IEEE Transactions on Biomedical Engineering, Vol. 48, No. 9, September 2001, pp. 1042-1052.
91. Y. Zhu, J. X. Chen, S. Xiao, and E. MacMahon, "3D Knee Modeling and Biomechanical Simulation," IEEE Computing in Science and Engineering, Vol. 1, No. 4, 1999, pp. 82-87.
92. E. Wegman, J. Symanzik, P. Vandersluis, Q. Luo, F. Camelli, A. Dzubay, X. Fu, N. Khumbah, R. Moustafa, R. Wall, and Y. Zhu, "The MiniCAVE - A Voice-Controlled IPT Environment," in Proceedings of the International Immersive Projection

- Technology Workshop, H. J. Bullinger and O. Riedel, Eds. Center of the Fraunhofer Society Stuttgart IZS: Springer, 1999, pp. 179-190.
93. Y. Zhu, J. X. Chen, X. Fu, and D. Quammen, "A Virtual Reality System for Knee Diagnosis and Surgery Simulation," in IEEE Virtual Reality Conference. Houston, Texas: IEEE, 1999
 94. Y. Zhu and J. X. Chen, "Establishing a 3D Human Gait and Knee Model," in Proceedings of the Sixth International Conference in Central Europe on Computer Graphics and Visualization (WSCG), 1998, pp. 541-546.

Funding

1. National Science Foundation
2019 - 2022
Title: "REU Site: Research Experience for Undergraduates in Immersive Media Computing"
\$359,601
Role: Co-PI (PI: Zhisheng Yan)
2. National Science Foundation
2013 - 2018
Title: "Courseware for improving undergraduate students' debugging skill in GPU programming"
Role: PI (Co-PI: Scott Owen)
3. National Institute of Health (1R21MH076753 – 01)
2006 – 2008
Title: "NeuronBank: A Database for Identified Neurons and Synaptic Connections"
Role: Co-PI (PI: Paul Katz)
4. National Science Foundation
2015 – 2019
Title: "A Reciprocal Model for Teaching and Learning Computational Competence: Connecting Pre-Service Teachers and Urban Latino Youth"
Role: Content advisor (PI: Anton Puvirajah, Patrick Enderle)
5. Georgia State University Research Initiation Grant
2012
Title: "Exploring New Reading Assessment Methods in Early Childhood Education with Mobile Reading Devices"
Role: PI (Co-PIs: Caitlin Dooley and Yanqing Zhang)
6. Georgia State University Tech Fee Grant
2011
Title: "Acquiring software licenses for educational game development"
Role: PI (Co-PI: Anton Puvirajah)
7. Georgia State University Tech Fee Grant
2010
Title: "Extending Teacher Technology Competence through Mobile Digital Applications"
Role: Co-PI (PI: Anton Puvirajah and Brendan Calandra)

8. Georgia State University Brains & Behavior Program Seed Grant
2006 - 2007
Title: "AnimatLab: Software for neuro-biomechanic simulation"
Role: Co-PI
9. Georgia State University Faculty Mentoring Grant
2005 – 2006
Title: "Graphical Simulation of Vehicle-Terrain Interaction for Real-time Training Applications"
Role: PI
10. Georgia State University Brains & Behavior Program Seed Grant
2004 –2006
Title: "A Web based database for identified neurons"
Role: Co-PI
11. Georgia State University Biomedical Computing Center Seed Grant
(sponsored by a NIH Exploratory Centers (P20) for Interdisciplinary Research Grant)
2004 –2006
Title: "Design of Molecular Complexes Using a 3-Dimensional Direct Manipulation Interface"
Role: PI
12. Georgia State University Research Initiation Grant
2004 – 2005
Title: "Fast and Realistic Visualization of Large Terrain Database"
Role: PI
13. Georgia State University Biomedical Computing Center Seed Grant
(sponsored by a NIH Exploratory Centers (P20) for Interdisciplinary Research Grant)
2003 –2006
Title: "3D Animated Crayfish Model for Neurobiological Study of Adaptive Behaviors"
Role: PI

Presentations and invited talks

1. Y. Zhu, Micro-level Data Analysis and Visualization of the Interrelation Between Confidence and Athletic Performance, presented at the 2nd International Conference on Computer Science and Software Engineering, Xi'an, China, May 2019.
2. Y. Zhu, "AI, Machine Learning and Human-Centered Design," Invited Talk, Digital Empowers Atlanta Forum (hosted by U.S. Chamber of Commerce Foundation and Tata Consultancy Services), December 4, 2018.
3. Y. Zhu, "Animating Multiple Escape Maneuvers for a School of Fish", presented at 43rd International Conference on Graphics, Visualization & Human-Computer Interaction (Graphics Interface), Edmonton, Alberta, Canada, May 2017.
4. Y. Zhu, "Animating Escape Maneuvers for a School of Fish," presented at ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D), San Francisco, CA, February 2017.
5. Y. Zhu, "Courseware for Improving Undergraduate Students' Debugging Skill in GPU Programming," AAAS/NSF Envisioning the Future of Undergraduate STEM Education: Research and Practice Symposium, 2016.
6. X. He and Y. Zhu, "TennisMatchViz: a tennis match visualization," International Conference on Visualization and Data Analysis (VDA), 2016.
7. Y. Zhu, G. S. Owen, Teaching Debugging Skills in Shader-Based Computer Graphics Programming, 46th ACM Technical Symposium on Computer Science Education (SIGCSE), 2015.

8. Y. Zhu and E. Frigal, "Interactive Visual Text Analysis for Corpus-based Learning," IEEE Big Data Computing Service and Applications Conference, 2015.
9. "NetTimeView: Applying Spatio-Temporal Visualization Techniques to DDoS Attack Analysis," in Proceedings of the 10th International Symposium on Visual Computing (ISVC), 2014.
10. "Visualizing Uncertainty in Spatio-temporal data," in ACM SIGKDD Workshop on Interactive Data Exploration and Analytics (IDEA), 2014.
11. "Storygraphs: Extracting patterns from spatio-temporal data," ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), Workshop on Interactive Data Exploration and Analytics (IDEA), 2013.
12. "An integrated graphical environment to study adaptive behavior," Invited Talk, The IMACS World Congress on Computational and Applied Mathematics & Applications in Science and Engineering, University of Georgia, Athens, Georgia, August 2009
13. "From Photorealism to Physical and Behavioral Realism," Invited Talk, Southwest Jiaotong University, Chengdu, China, September 2007.
14. "AnimatLab: A Toolkit for Analysis and Simulation of the Neural Control of Behavior," Southeastern Universities Research Association (SURA) Cyberinfrastructure Workshop: Life Sciences and the Grid, Virginia Commonwealth University, 2006.
15. "AMMP-Vis: A Collaborative Virtual Environment for Molecular Modeling," ACM Symposium on Virtual Reality Software and Technology (VRST), Monterey, CA, 2005.
16. "Web Based Molecular Visualization using Procedural Shaders in X3D," ACM SIGGRAPH Conference Web Program. Los Angeles, CA, 2005.
17. "Teaching Programmable Shaders: Lightweight versus Heavyweight Approach," ACM SIGGRAPH Conference Educators Program, Los Angeles, CA 2005
18. "Identified Neuron Database Project: Database and Visualization Issues," Winter Workshop on Biocomputing Workshop, Georgia State University, 2005.
19. "A Plan for Visualization and Mapping Neurons," Identified Neuron Database Workshop, Georgia State University, 2004.
20. "GPU-Based Volumetric Lighting Simulation," The 7th IASTED International Conference on Computer Graphics and Imaging (CGIM), Kauai, HI, 2004.
21. "A Multi-thread Based Terrain Visualization Algorithm," The 7th IASTED International Conference on Computer Graphics and Imaging (CGIM). Kauai, HI, 2004.
22. "Integrating Modeling and Animation Tools into an Introductory Computer Science Graphics Course," ACM SIGGRAPH Conference Educators Program, Los Angeles, CA, 2004.
23. "Universal Converter for Platform Independent Procedural Shaders in X3D," ACM SIGGRAPH Conference, Web Graphics Program, Los Angeles, CA, 2004
24. "Design and Implementation of a Workflow Rendering Engine," International Conference on Modeling, Simulation and Visualization Methods, Las Vegas, NV, 2004
25. "Graphics Simulation and Visualization for Neuroscience Research", Georgia State University Neuroscience Symposium, 2004
26. "3D Animated Crayfish Model for Neurobiological Study of Adaptive Behaviors", 2nd Georgia State Biotech Symposium, 2004

Teaching

Spring 2020 CMIS 1302 Introduction to Game Programming II
 Spring 2020 CMIS4200/CSC4730/CSC6730 Data Visualization

Fall 2019 CMIS 3150 Game Programming & Development I
 Summer 2019 CSC4730/6730/CMIS4200 Data Visualization
 Spring 2019 CSC4841/6841, CMIS4160 Computer Animation
 Spring 2019 CMIS 4070 Media Analytics (new course)

Fall 2018 CSC4820/6820, CMIS 3150 Interactive Computer Graphics
 Summer 2018 CSC4730/6730, CMIS4200 Data Visualization
 Spring 2018 CSC4821/6821, CMIS4100 Fundamentals of Game Design
 Spring 2018 CSC8820 Advanced Graphics Algorithms

Fall 2017 CSC4730/6739, CMIS 4915 Data Visualization
 Spring 2017 CSC4840/6840 Computer Graphics Imaging
 Spring 2017 CSC4821/6821 Fundamentals of Game Design

Fall 2016 CSC4820/6820 Interactive Computer Graphics
 Spring 2016 CSC8820 Advanced Graphics Algorithms
 Spring 2016 CSC4841/6841 Computer Animation

Fall 2015 CSc4730/6730 Data Visualization
 Spring 2015 CSc4821/6821 Fundamentals of Game Design
 Spring 2015 CSc4840/6840/FILM4840 Computer Graphics Imaging

Fall 2014 CSc4820/6820 Interactive Computer Graphics
 Spring 2014 CSc4841/6841 Computer Animation
 Spring 2014 CSc 8820 Advanced Graphics Algorithms

Fall 2013 CSc 4730/6730 Data Visualization
 Spring 2013 CSc4840/6840/FILM 4840 Computer Graphics Imaging
 Spring 2013 CSc4821/6821 Fundamentals of Game Design (new course)

Fall 2012 CSc4820 Interactive Computer Graphics
 Spring 2012 CSc8820 Advanced Graphics Algorithms
 Spring 2012 CSc4841/6841 Computer Animation

Fall 2011 CSc4730/6730 Data Visualization
 Spring 2011 CSc4821/6821 Fundamentals of Game Design
 Spring 2011 CSc4840/6840 Computer Graphics Imaging

Fall 2010 CSc4820/6820, Computer Graphics Algorithms
 Summer 2010 CSc2310, Principles of Computer Programming
 Spring 2010 CSc8820, Advanced Graphics Algorithms
 Spring 2010 CSc4841/6841 Computer Animation

Fall 2009 CSc4730/6730, Scientific Visualization
 Spring 2009 CSc8820, Advanced Graphics Algorithms
 Spring 2009 CSc4840/6840, COMM 6840, FILM 4840, GrD 4840 Computer Graphics Imaging

Fall 2008 CSc4820/6820, Computer Graphics Algorithms
 Spring 2008 CSc8820, Advanced Graphics Algorithms

Spring 2008 CSc4840/6840, COMM 6840, FILM 4840, GrD 4840 Computer Graphics Imaging

Fall 2007 CSc4820/6820, Computer Graphics Algorithms

Spring 2007 CSc8820, Advanced Graphics Algorithms

Spring 2007 CSc4840/6840, COMM 6840, FILM 4840, GrD 4840 Computer Graphics Imaging

Fall 2006 CSc4820/6820, Computer Graphics Algorithms

Spring 2006 CSc8820, Advanced Graphics Algorithms

Spring 2006 CSc4730/6730, Scientific Visualization

Fall 2005 CSc4820/6820, Computer Graphics Algorithms

Spring 2005 CSc4730/6730, Scientific Visualization

Spring 2005 CSc4840/6840, COMM 6840, FILM 4840, GrD 4840 Computer Graphics Imaging

Fall 2004 CSc4820/6820, Computer Graphics Algorithms

Summer 2004 CSc4520/6520, Design and Analysis of Algorithms

Spring 2004 CSc8820, Advanced Graphics Algorithms

Fall 2003 CSc4820/6820, Computer Graphics Algorithms

Ph.D. Student Supervision

Dissertation Committee Chair

| | |
|---------------------|-----------------|
| Sheldon Schiffer | (PhD candidate) |
| Shiraj Pokharel | (PhD candidate) |
| Sahithi Podila | 2018 |
| Lei Zhang | 2017 |
| Xi He | 2016 |
| Ayush Shrestha | 2014 |
| Xiao Chen | 2013 |
| Saurav Karmakar | 2011 |
| Xiaoyuan Suo | 2009 |
| Jeffrey W. Chastine | 2007 |
| Jason A. Pamplin | 2007 |
| Anthony S. Aquilio | 2006 |

Dissertation Committee Member

| | |
|-----------------|-----------------------------|
| David Bolding | (PhD student) |
| Malcom W. Devoe | 2018 (College of Education) |
| Nicholas Kelley | 2017 |
| Sanish Rai | 2016 |
| Satish Puri | 2015 |
| Yanjun Zhao | 2014 |
| Binhuan Wang | 2012 (Math) |
| Yan Chen | 2010 |

| | |
|----------|------|
| Hao Tian | 2007 |
| Feng Liu | 2005 |

M.S. Student Supervision

MS Thesis/Project Committee Chair

2019

Sai Amar Nath Chintla
Sai Varshini Kolla
Jeevitha P Meyyappan
Jagan Savanth Reddy Munnangi
Sudheer Nimmagadda
Samuel Payne
Tarun Kumar Ravipati
Shayideep Sangam
Akhil Maddineni
Bhavya Induri
Manbir Singh Jaspal
Lakshmi Kalyani Nemala

2018

Manbir Jaspal
Abhinav Kapula
Srija Reddy Kasam
Jeevitha P. Meyyappan
Jagan Savanth Reddy Munnangi
Harsha Nalluri
Chinh Le
Boyu Hou

2017

Bin Guo
Prudvi Teja Kondaparthi
Lalith M. Nimmagadda
Fayaz Shaik
Hari Kiran Yalavarthi
Shriya Mansh
Boyu Hou
Sumanth Kandagatla

2016

Sindhura Veena Chavva
Mounika Reddy Allam
Valli S. Devalla
Avinash C. Madineni
Srilekha Rajarapu
Priyanka Tayi
SaiRaj Yalamanchili

| | |
|-------------------|------|
| Prakash Chourasia | 2015 |
|-------------------|------|

| | |
|-------------------------|------|
| Venkata Karri | 2015 |
| Kranthi Koya | 2015 |
| Sneha R. Devireddy | 2015 |
| Venkata S. K. Galimelu | 2015 |
| Tarun Kumar Kollipara | 2015 |
| Siva Charan Kondeti | 2015 |
| Rakesh P. Konduru | 2015 |
| Zacchaeus T. Thomas | 2015 |
| Tao Zhang | 2015 |
| Garima Walia | 2015 |
| Reddy Anugu | 2015 |
| | |
| Akanksha Yadav | 2014 |
| Syambabu Pothini | 2014 |
| Navya R. Punuru | 2014 |
| Shankar R. Potluri | 2014 |
| Sai C. Dogiparthi | 2014 |
| Saandeep Jogiparti | 2014 |
| Sri V. Yechuri | 2014 |
| Hima S. Govada | 2014 |
| Swetha Kosuri | 2014 |
| Zhenhua Wu | 2014 |
| Karthik R. Devarampally | 2014 |
| S. S. P. Nekkalapudi | 2014 |
| Priyanka T. Yechuri | 2014 |
| Sree V. Naraharasetti | 2014 |
| Pragati Sahu | 2014 |
| Naga M. Chintapalli | 2014 |
| Niharika Muriki | 2014 |
| Pranith K. Boinapally | 2014 |
| | |
| Khac-Huy Do To | 2013 |
| Smriti Janaswamy | 2013 |
| Jiepeng Zhang | 2013 |
| Priyanka Yechuri | 2013 |
| Zhenhua Li | 2013 |
| Pridhvi Raj Ramanujula | 2013 |
| Srikanth Pathuri | 2013 |
| Zhiyi Wang | 2013 |
| Wa'el Belkasim | 2013 |
| Long Ma | 2013 |
| Hima Mandava | 2013 |
| | |
| Pavani Reddy Kathuri | 2012 |
| Deepthi Guduguntla | 2012 |
| Guangming Wang | 2012 |
| Moses Rentapalli | 2012 |
| Swapnil Bordiya | 2012 |
| Pu Shi | 2012 |
| Matt Harbers | 2012 |
| Asif Jamaluddin | 2012 |

| | |
|--------------------|------|
| Srujana Gorge | 2012 |
| Chad Griffith | 2012 |
| Alicia Persaud | 2011 |
| Hsin-Yun Weng | 2010 |
| Suman Burjukindi | 2010 |
| Rajesh Venkatesh | 2010 |
| Chandana Kaza | 2010 |
| Jaya Kalidindi | 2010 |
| Kireet Kokala | 2010 |
| Kai Yau | 2008 |
| Monika Patel | 2008 |
| Wenjun Ma | 2007 |
| Hsiu-Chung Wang | 2006 |
| Xiaoyuan Suo | 2006 |
| James Reid | 2006 |
| R. Robert Kasemsri | 2005 |
| Geoffrey Bays | 2005 |

MS Thesis/Project Committee Member

2019

Ratanpriya Shrivastava
Shrikant Pawar
Deep Thakkar
Swapnil Pandey
Keerthika Ravikanti

2018

Ram Priyatham Koppula
Shyamsunder Talacheeru
Vamsi Krishna Batch
Saivivek Therala
Hemanth Kumar Reddy
Swathy Medisetty
Shreyas Karandikar
Sandeep Karnam
Sunam Kandagatla
Dinesh Inavolu
Tejaswi Eerpina
Swathi Kiran Pallamreddy
Harini Penta

2017

Swetha Paka
Amrutha Mynampaty
Hari Yalavarthi
Pranitha Vutukuru
Avinash Thadamatha
Yi Tao

Naveen Chalicheemala
 Prudvi Kondaparthi
 Nikhilesh Murala
 Laxmi Sivapuram
 Koushik Nallani
 Dinesh Ram Evana
 Uday Guda
 Veera supraja koppisetty
 Manjunath Gundra
 Apoorva Kunapareddy
 Prithvi Sahukar

| | |
|----------------------|------|
| Sushma Kandru | 2016 |
| Bharadwaj Avasarala | 2016 |
| Girish Gedala | 2016 |
| Rohini Boosam | 2016 |
| Venkata P. R. Konda | 2016 |
| Harsha Thota | 2016 |
| Hyun-Wook Chung | 2016 |
| Lu Yao | 2016 |
| Xueli Xiao | 2016 |
| Yu Meng | 2013 |
| Dan Jiang | 2013 |
| William Gimson | 2013 |
| Diana Castro | 2012 |
| Neha Purohit | 2011 |
| Zhibo Wang | 2011 |
| Lakshmi N. Kollepara | 2011 |
| Vinay Madhadi | 2010 |
| Suman Kumar Reddy | 2010 |
| Srividya Peri | 2010 |
| Latchezar Paskalev | 2010 |
| Shuman Guo | 2009 |
| Anuj Kumar | 2009 |
| Sean McKeon | 2009 |
| Fei Song | 2008 |
| Naveen Hiremath | 2008 |
| Karthik Puttaparthi | 2008 |
| Vijay Jain | 2008 |
| Inthira Srivrunyoo | 2007 |
| Piyaphol Phoungphol | 2007 |
| Serpil Tokdemir | 2006 |
| Ou Li | 2006 |
| Milan Pandya | 2006 |
| Yu Qiu | 2006 |
| Ning Gu | 2005 |
| Sangwook Lee | 2005 |
| Peipei Fang | 2004 |
| Hongli Ge | 2004 |
| Mateena H. Syeda | 2004 |
| Jigesh Parikh | 2004 |

Directed Reading

Rahul Mallampati 2010

Undergraduate Student Supervision

Directed Reading

| | |
|-----------------------|------|
| Henry Bernreuter | 2019 |
| Armin Ghavami Shirazi | 2018 |
| Alexander Gonzalez | 2013 |
| Khoan Quach | 2012 |
| Justin Squirek | 2012 |
| Raymond Brown | 2010 |
| Stacey Murphy | 2010 |
| Jessica Smith | 2009 |
| Emlyn Murphy | 2008 |
| Zeeshan Virani | 2007 |
| William Rowland | 2005 |
| Nicole Henderson | 2005 |
| Ifieyemi Ogoun | 2005 |
| Christopher Mureithi | 2005 |

McNair Scholar

Brett Duncan 2012

Brains & Behavior Assistantship

| | |
|-----------------|---------------|
| Robert Casenta | (Summer 2008) |
| Zijing Xia | (Summer 2008) |
| Hsiu-Chung Wang | (Summer 2005) |

Faculty advisor for student organization

Faculty advisor, "Gaming at State" Club (2019 – present)
Faculty advisor, Aurora Game Development Club (2018 – present)
Faculty advisor, GSU Gamer's Association (2011 – 2014)

Awards received by the students I advised:

- My MS student Priyanka Tejaswi Yechuri received the 2nd Place Award in Charleston Defense Contractors Association (CDCA) 3rd Annual Mobile Competition in 2013. This award was based on her MS Project, which I supervised.
- My PhD student Saurav Karmakar received a GSU PhD Dissertation Grant in 2011.

- I'm the faculty advisor of CS undergraduate student Matt Gold, who won 2nd place award with his game Zero Vector at Southern Interactive Entertainment & Game Expo: Student Showcase Competition in 2011.
- I supervised CS undergraduate student Raymond Brown in a project called "Performance Comparison of Two Fluid Simulation Methods in Computer Graphics". Raymond Brown received a Louis Stokes Alliances for Minority Participation (LSAMP) fellowship based on this project in 2010.

Professional services

2019

1. Member of Program Committee
 - IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC), 2019
2. Reviewer
 - ACM CHI 2019
 - ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS) 2019
 - 17th IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT) 2019
 - Mathematical Biosciences

2018

1. Reviewer
 - IEEE Symposium on Visualization for Cyber Security (VizSec) 2018

2017

1. Member of Program Committee
 - IEEE International Conference on Dependable, Autonomic and Secure Computing, 2017
 - 16th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom) 2017
 - 11th IEEE International Conference on Big Data Science and Engineering 2017
 - 14th International Conference on Embedded Software and Systems 2017
2. Reviewer
 - IEEE Transactions on Parallel and Distributed Systems
 - IEEE Computing in Science and Engineering
 - IEEE VR 2018
 - 25th WSCG Conference on Computer Graphics, Visualization and Computer Vision (WSCG) 2018
3. Member of Jury Judges, Golden Joystick Game Award, TERMINUS Conference + Festival, Atlanta, GA, June 2017
4. Member of Jury Judges, Global Game Jam@GSU, Atlanta, GA, January 2017

2016

1. Member of Program Committee
 - IEEE International Conference on Communications (ICC), Communication and Information Systems Security Symposium (CISS)

- IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC)
- International Conference on Connected Vehicles and Expo
- IEEE International Conference on Ubiquitous Computing and Communications (IUCC)
- International Workshop on Collaboration and Virtual Environments
- International Workshop on Visualization and Collaboration
- 2. Reviewer
 - International Conferences in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)

2015

1. Member of Program Committee
 - IEEE International Conference on Communications (ICC), Communication and Information Systems Security Symposium (CISS)
 - 14th IEEE International Conference on Ubiquitous Computing and Communications (IUCC)
 - 13th IEEE International Conference on Dependable, Autonomic and Secure Computing (DASC)
 - 4th International Conference on Biomedical Engineering and Biotechnology (ICBEB)
 - International Conference on Connected Vehicles and Expo
2. Reviewer
 - SIGGRAPH Asia
 - PLOS ONE

2014

1. Reviewer for ACM Computing Reviews
2. Reviewer for International Journal of Applied Mathematics and Computer Science
3. Member of Program Committee
 - IEEE International Conference on Communications (ICC) 2015, Communication & Information System Security (CISS) Symposium
 - IEEE Globecom 2014, Communication & Information System Security (CISS) Symposium
 - The 13th IEEE International Conference on Trust, Security and Privacy in Computing and Communication (TrustCom)
 - The 3rd International Conference on Connected Vehicles (ICCVE)
4. Member of the Academic Review Panel for Introduction to Game Design courses and textbooks, Focal Press

2013

1. Reviewer, British Journal of Mathematics & Computer Science
2. Reviewer for ACM Computing Reviews
3. Member of Program Committee
 - IEEE Globecom, Communication & Information System Security (CISS) Symposium
 - IEEE International Conference on Ubiquitous Computing and Communications (IUCC)
 - IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)

- IEEE International Conference on Computer and Information Technology (CIT)
- International Conference on Connected Vehicles & Expo (ICCVE)

2012

1. Reviewer for Computer Graphics Forum
2. Reviewer for ACM Computing Reviews
3. Reviewer for IEEE Computing in Science and Engineering
4. Member of Program Committee
 - IEEE International Conference on Communications (ICC), Communication & Information System Security (CISS) Symposium
 - 11th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom-2012)
 - 11th IEEE International Conference on Ubiquitous Computing and Communications (IUCC)
 - International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)
 - The 2012 FTRA International Conference on Intelligent Robotics, Automations, telecommunication facilities, and applications
 - International Conference on Computer Graphics and Imaging (CGIM)

2011

1. Reviewer for NSF
2. Reviewer for ACM Computing Reviews
3. Members of Program Committee
 - IEEE GLOBECOM, Communication & Information System Security (CISS) Symposium
 - IASTED International Conference on Computer Graphics and Imaging (CGIM)
 - IEEE International Conference on Computer and Information Technology (CIT)
 - International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)
 - 4th IEEE International Conference on Computer Science and Information Technology

2010

1. Members of Program Committee
 - IEEE GLOBECOM, Communication & Information System Security (CISS) Symposium
 - IEEE International Conference on Computer and Information Technology (CIT)
 - IASTED International Conference on Computer Graphics and Imaging (CGIM)
 - International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)
 - ACIS International Conference on Software Engineering Research, Management and Applications (SERA)
2. Reviewer for Journals
 - ACM Computing Surveys
 - Data & Knowledge Engineering
 - Applied Numerical Mathematics

- Journal of Computer Science and Technology
- Journal of Virtual Reality and Broadcasting

2009

1. Members of Program Committee
 - IASTED International Conference on Computer Graphics and Imaging (CGIM)
 - IEEE Conference on Computer and Information Technology (CIT)
 - ACIS International Conference on Software Engineering Research, Management and Applications (SERA)
2. Reviewer for Journals
 - IEEE Transactions on Parallel and Distributed Systems
3. Reviewer for conferences
 - International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)

2008

1. Co-Chair of Doctoral Consortium, Third International Conference on Design Science Research in Information Systems and Technology (DESRIST 2008)
2. Members of Program Committee
 - 4th International Symposium on Bioinformatics Research and Applications (ISBRA)
 - IEEE 8th International Conference on Computer and Information Technology (CIT)
 - 10th IASTED International Conference on Computer Graphics and Imaging (CGIM)
3. Reviewer for journals
 - IEEE Transactions on Parallel and Distributed Systems
 - Journal of Virtual Reality and Broadcasting
4. Reviewer for conferences
 - IEEE Virtual Reality Conference (VR)
 - International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)

2007

1. Member of Program Committee:
 - IEEE International Conference on Computer and Information Technology (CIT)
 - International Symposium on Bioinformatics Research and Applications (ISBRA)
2. Reviewer for Journals
 - IEEE Transactions on Multimedia
 - Journal of Visualization
 - Journal of Virtual Reality and Broadcasting
3. Reviewer for Conferences
 - IEEE Visualization Conference (VIS)
 - IEEE Virtual Reality Conference (VR)
 - IEEE Symposium on 3D User Interfaces (3DUI)
 - The 15th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)

2006

1. Associate Guest Editor: Special Issue of the International Journal of Pervasive Computing and Communications
2. Member of Program Committee:
 - 7th IEEE Information Assurance Workshop (IAW)
 - 6th IEEE International Conference on Computer and Information Technology (CIT)
 - 9th IASTED International Conference on Computer Graphics and Imaging (CGIM)
3. Reviewer for journals:
 - IEEE Network
 - IEEE Computing in Science and Engineering (CiSE)
4. Reviewer for conferences:
 - IEEE Visualization Conference (VIS)
 - IEEE Symposium on Visual Analytics Science and Technology (VAST)
 - IEEE Annual Computer Security Applications Conference (ACSAC)
 - ACM SIGGRAPH Conference (Research Posters Program)

2005

1. Technical Track Chair: Web Program, ACM SIGGRAPH conference
2. Member of Program Committee:
 - ACM SIGGRAPH Conference (Posters Program)
 - 5th IEEE International Conference on Computer and Information Technology (CIT)
 - 8th IASTED International Conference on Computer Graphics and Imaging (CGIM)
3. Reviewer for conferences:
 - IEEE Visualization Conference (VIS)
 - IEEE Virtual Reality Conference (VR)
 - ACM SIGGRAPH Conference (Course Program)
 - 13th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG)
 - IEEE International Conference on Information Technology and Applications (ICITA)
4. Reviewer for textbook "Interactive Computer Graphics", 4th Edition, Addison-Wesley

2002 - 2004

1. Member of Program Committee:
 - 4th IEEE International Conference on Computer and Information Technology (CIT) 2004
 - IEEE Virtual Reality Conference 2003
 - IEEE Virtual Reality Conference 2002
2. Reviewer:
 - IEEE Computing in Science and Engineering (CiSE), 2003
 - 13th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG) 2004

Member of ACM and ACM SIGGRAPH

University Services

- Member of University Senate (2015 - 2016)

College Services

- Member of the search committee for the Executive Director of Creative Media Industries Institute (2018)
- Member of the committee on creating the Bachelor of Interdisciplinary Studies (BIS) Major in Game Design and Development (2014)
- Member of the review committee, City Grant 2012
- Member of the task force for studying the creation of Institute of Neuroscience at Georgia State University (2007 - 2008)
- Member of the review committee, Brains & Behavior seed grant competition, (2009, 2010, 2014, 2018)

Department Services

- Chair of Search Committee for Lecturer, Creative Media Industries Institute (2019)
- Member of Research Committee, Creative Media Industries Institute (2016 – present)
- Member of P & T Manual Committee, Creative Media Industries Institute (2017)
- Member of the Faculty Search committee, Creative Media Industries Institute (2017 - present)
- Member of Computer Science Undergraduate Committee (2014 – 2017)
- Computer Science Lecturer Search Committee member (2015 – 2016)
- Computer Science Lecturer Search Committee Chair (2014 – 2015)
- Computer Science Network System Administrator Search Committee (2014-2015)
- Member of Computer Science Curriculum Committee (2012 – 2014)
- Member of Computer Science Graduate Committee (2004 – 2014)
- Member of Computer Science Graduate Admission Committee (2004 – present)
- Computer Science PhD Qualifying Examination Committees (2005 – present)
- Member of the Faculty Search Committee, Brains & Behavior Program, Georgia State University (2006 – 2008)
- Member of the Scientific Committee, Brains & Behavior Program, Georgia State University (2004 – 2009)
- Member of the Seminar Committee, Brains & Behavior Program, Georgia State University (2006 – 2007)

Honors and Awards

1. Best Paper Presentation Award, 2nd International Conference on Computer Science and Software Engineering (CSSE), 2019
2. Georgia State University Faculty Instructional Innovation Award (jointly with Dr. Ericson Frigal in the Department of Applied Linguistics and ESL), 2013.
3. Honorable Mention (2nd place), best paper award competition in the 3rd IEEE Symposium on 3D User Interfaces (3DUI 2008) for the paper “Studies on the Effectiveness of Virtual Pointers in Collaborative Augmented Reality” (co-authored with J. W. Chastine, K. Nagel, and M. Hudachek-Buswell).

4. Featured as domain expert in the following article: "Spotlight on Research," IANewsletter, Vol. 9, No. 2, pp. 23, 2006.
5. Doctoral Scholarship, Provost's Office, George Mason University, 2000
6. Doctoral Fellowship, School of Information Technology and Engineering, George Mason University, 1999
7. Outstanding Graduate Student Award, Computer Science Department, University of Electronic Science and Technology (China), 1994
8. Outstanding Student Award, Southwest Jiaotong University (China), 1991
9. Undergraduate Scholarship, Southwest Jiaotong University (China), 1987 -1991

(Last updated in January 2020)