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CITIZENSHIP: US

EDUCATION:

Ph.D. Clemson University, Computer Science, 5/1994
Advisor: Dr. Stephen T. Hedetniemi
Dissertation: Parallel Computation of Steiner Minimal Trees
M.S., Clemson University, Computer Science, 12/1991
M.S., Bob Jones University, Educational Administration, 8/1988
B.S., Bob Jones University, Mathematics, Minor: Physics, 5/1986

EMPLOYMENT:

	College of Engineering University of Nevada, Reno, Nevada 89557
2023 - present	Associate Dean for Faculty and Academic Affairs
2022 - 2023	Associate Dean for Research,
	Department of Computer Science and Engineering, University of Nevada, Reno, Nevada 89557
4/2022 - present	Foundation Professor
7/2007 - 4/2022	Professor
7/2000 - 6/2007	Associate Professor
8/1994 - 6/2000	Assistant Professor
1/2019 - present	Nevada State EPSCoR Director
10/2018 - present	Project Director, Nevada NSF EPSCoR
	Desert Research Institute, Reno, Nevada 89512
3/2015-12/2015	Affiliated Faculty, Division of Earth and Ecosystem Sciences
9/2009-6/2011	Affiliated Faculty, Division of Hydrologic Sciences
7/2007-9/2008	Interim Senior Director, Center for Advanced Visualization, Computation, and Modeling (CAVCaM)
7/2004-9/2009	Affiliated Faculty, Division of Atmospheric Sciences
8/1988 - 5/1994:	Department of Computer Science, Clemson University, Clemson, South Carolina 29634
8/1986 - 5/1988:	Department of Computer Science, Bob Jones University, Greenville, South Carolina 29614

PUBLICATIONS:**Books Edited:**

- B 15. Frederick C Harris, Jr., Rui Wu, Alex Redei, and Ajay Bandi (eds) *Proceedings of the 31st International Conference on Software Engineering and Data Engineering*, **SEDE 2022**, EPIC Series in Computing, Vol 88, (https://easychair.org/publications/volume/SEDE_2022), (moved online), USA, Oct 17-18, 2022.
- B 14. Frederick C Harris, Jr., Rui Wu and Alex Redei (eds) *Proceedings of the 30th International Conference on Software Engineering and Data Engineering*, **SEDE 2021**, EPIC Series in Computing, Vol 77, (https://easychair.org/publications/volume/SEDE_2021), New Orleans, LA (moved online), USA, Oct 11-13, 2021.
- B 13. Frederick C Harris, Jr., Rui Wu and Alex Redei (eds) *Proceedings of the 29th International Conference on Software Engineering and Data Engineering*, **SEDE 2020**, EPIC Series in Computing, Vol 76, (https://easychair.org/publications/volume/SEDE_2020), Las Vegas, NV (moved online), USA, Oct 19-21, 2020.
- B 12. 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*, **SEDE 2019**, EPIC Series in Computing, Vol 64, (https://easychair.org/publications/volume/SEDE_2019), San Diego, CA, USA, Sept 30-Oct 2, 2019.
- B 11. Shahram Latifi (editor), Glauco Carneiro, Luiz Alberto Vieira Dias, Fred Harris, Ray Hashemi, Thomas Jell, Atsushi Kawaguchi, Teruya Minamoto, and Fangyan Shen (assoc editors). *Advances in Intelligent Systems and Computing*, Volume 800. *Proceedings of the 16th International Conference on Information Technology: New Generations*, **ITNG 2019**, Las Vegas, NV, April 1-3, 2019.
- B 10. 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.
- B 09. 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.
- B 08. Frederick C Harris, Jr., Sergiu M. Dascalu, and Yan Shi (eds) *Proceedings of the 25th International Conference on Software Engineering and Data Engineering*, **SEDE 2016**, Denver, CO, USA, Sept 26-28, 2016.
- B 07. Frederick C Harris, Jr., Yan Shi and Wenying Feng (eds) *Proceedings of the 24th International Conference on Software Engineering and Data Engineering*, **SEDE 2015**, San Diego, CA, USA, Oct 12-24, 2015.
- B 06. Frederick C Harris, Jr. (ed) *Proceedings of ISCAs 2nd International Conference on Advanced Computing and Communication*, **ACC 2012**, Los Angeles, CA, USA, June 27-29, 2012.
- B 05. Frederick C. Harris, Jr. (ed) *Proceedings of ISCAs 23rd International Conference on Computer Applications in Industry and Engineering*, **CAINE 10**, Las Vegas, NV, USA, November 12-14, 2010.
- B 04. Frederick C. Harris, Jr. (ed) *Proceedings of ISCAs 21st International Conference on Computer Applications in Industry and Engineering*, **CAINE 08**, Honolulu, Hawaii, USA, November 12-14, 2008,

- B 03. Hamid R. Arabnia, Hassan Reza (ed), Lawrence Chung, Juan J Cuadrado-Gallego, Sergiu Dascalu, Frederick C. Harris, Jr., Michael Hinchey, Deborah Kobza, Youngsong Mun, Roy Steritt, Nary Subramanian (assoc eds.) *Proceedings of the 2005 International Conference on Software Engineering Research and Practice*, **SERP '05**, Las Vegas, NV, USA, June 27-30, 2005.
- B 02. Hamid R. Arabnia, Hassan Reza (ed), Lawrence Chung, Sergiu Dascalu, Emanuel Grant, Volker Gruhn, Frederick C. Harris, Jr., Youngsong Mun, Srin Ramaswamy, Jourd Luis Risco Becerra, Nary Subramanian, Pierre F. Tiako, Heitor Augustus Xavier Costa (assoc eds) *Proceedings of the 2004 International Conference on Software Engineering Research and Practice*, **SERP '04**, Las Vegas, NV, USA, June 21-24, 2004.
- B 01. Frederick C. Harris, Jr. (ed) *Proceedings of ISCAs 5th International Conference on Intelligent Systems*, **IS 96**, Reno, NV, USA, June 19-21, 1996.

Book Chapters:

- Chap 03. Frederick C Harris, Jr. and Rakhi Motwani, "Steiner Minimum Trees: An Introduction, Parallel Computation, and Future Work," In Panos M. Pardalos, Ding-Zhu Du and Ronald L. Graham, editors, *Handbook of Combinatorial Optimization 2nd Edition* Springer. July 2013.
- Chap 02. Sara Nasser, Adrienne Breland, Frederick C. Harris Jr., Monica Nicolescu, and Gregory L. Vert "Fuzzy Genome Sequence Assembly for Single and Environmental Genomes," in Yaochu Jin and Lipo Wang, editors, *Fuzzy Systems in Bioinformatics and Computational Biology Series: Studies in Fuzziness and Soft Computing*, Vol. 242, March 2009.
- Chap 01. Frederick C. Harris, Jr., "Steiner Minimal Trees: An Introduction, Parallel Computation, and Future Work," In Ding-Zhu Du and Panos Pardalos, editors, *Handbook of Combinatorial Optimization* Kluwer Academic Publishers. Vol II. Dec 1998.

Journal Publications:

- J 91. Norhaslinda Kamaruddin, Mohd Hafiz Mohd Nasir, Abdul Wahab, Frederick C. Harris, Jr “Early Detection of Dysphoria using Electroencephalogram Affective Modelling” *International Journal of Electrical and Computer Engineering (IJECE)*, Vol 13, No 5, October 2023, pp. 5874-58854, DOI: 10.11591/ijece.v13i5.pp5874-5884
- J 90. Rui Wu, Connor Scully-Allison, Chase Carthen, Andy Garcia, Roger Hoang, Christopher Lewis, Ronn Siedrik Quijada, Jessica Smith, Sergiu M. Dascalu and Frederick C. Harris, Jr “vFirelib: A GPU-based Fire Simulation and Visualization Tool,” *Software X*, Vol 23, July 2023, Pgs. 101411 DOI: <https://doi.org/10.1016/j.softx.2023.101411>
- J 89. Joshua Dahl, Erik Marsh, Christopher Lewis, Frederick C. Harris, Jr. “uMuVR: A Multiuser Virtual Reality and Body Presence Framework for Unity,” *International Journal of Computers and Their Applications* Vol 30, No 1, pg 39-53, March 2023.
- J 88. Christopher Lewis and Frederick C. Harris, Jr. “Virtual Reality: An Overview, and How to do Typing in VR,” *International Journal of Computers and Their Applications* Vol 30, No 1, pg 14-29, March 2023.
- J 87. Frederick C. Harris, Jr., Rui Wu, and Alex Redei “Guest Editorial: March 2023,” *International Journal of Computers and Their Applications* Vol 30, No 1, pg 1-2, March 2023.
- J 86. Yifan Zhang, Duc Tran, Tin Nguyen, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “A robust and accurate single-cell data trajectory inference method using ensemble pseudotime,” *BMC Bioinformatics* Vol 24, 55 (2023) DOI: 10.1186/s12859-023-05179-2
- J 85. Antoine Bossard, Keiichi Kaneko, and Frederick Harris, Jr. “On the crossing number of a torus network”, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, Vol E106-A, No 1, pp -, Jan 2023
- J 84. Keiichi Kaneko, Antoine Bossard, and Frederick Harris, Jr. “Set-to-Set Disjoint Path Routing in Bijective Connection Graphs,” *IEEE Access*, vol. 10, pp. 72731-72742, 2022, doi: 10.1109/ACCESS.2022.3188783
- J 83. Steven J. Anbro, Ramona A. Houmanfar, Julie Thomas, Kim Baxter, Frederick C. Harris Jr., Laura H. Crosswell “Behavioral Assessment in Virtual Reality: An Evaluation of Multi-User Simulations in Healthcare Education”, *Journal of Organizational Behavior Management* pg 1-24, 2022, <https://doi.org/10.1080/01608061.2022.2084207>
- J 82. Amruta Kale, Tin Nguyen, Frederick C. Harris, Jr., Chenhao Li, Jiyin Zhang, Xiaogang Ma “Provenance documentation to enable explainable and trustworthy AI: A literature review” *Data Intelligence*, 2022. https://doi.org/10.1162/dint_a_00119
- J 81. Jonathon Hewitt, Daniel Hall, Christopher Parks, Payton Knoch, Sergiu M. Dascalu, Devrin Lee, Nikkolas J. Irwin, Frederick C. Harris, Jr. “Design and Implementation of VS-TAP: The Veteran Services Tracking and Analytics Program.” *International Journal of Computers and Their Applications* Vol 29, No 1, pg 27-37, March 2022.
- J 80. Frederick C. Harris, Jr., Rui Wu, and Alex Redei “Guest Editorial: Special Issue from ISCA Fall - 2021 SEDE Conference,” *International Journal of Computers and Their Applications* Vol 29, No 1, pg 2-3, March 2022.
- J 79. Jordan Blocher and Frederick C Harris, Jr. “An Equilibrium Analysis of a Secondary Mobile Data-Share Market” *Information* Vol 12, No 11, pg 434, October 2021. <https://doi.org/10.3390/info12110434>

- J 78. Yan Yan and Frederick C Harris, Jr. "A Survey of Data Clustering for Cancer Subtyping" *International Journal of Computers and Their Applications* Vol 28, No 2, June 2021.
- J 77. Jalal H. Kiswani, Sergiu M. Dascalu, and Frederick C. Harris, Jr. "Cloud Computing and its Applications: A Comprehensive Survey" *International Journal of Computers and Their Applications* Vol 28, No 1, pg 4-27, March 2021.
- J 76. Frederick C. Harris, Jr., Rui Wu, and Alex Redei "Guest Editorial: Special Issue from ISCA Fall - 2020 SEDE Conference," *International Journal of Computers and Their Applications* Vol 28, No 1, pg 2-3, March 2021.
- J 75. Alexander Novotny, Rowan Gudmundsson, and Frederick C. Harris, Jr., "A Unity Framework for Multi-Player VR Applications," *International Journal of Computers and Their Applications* Vol 27, No 3, pg 115-121, September 2020
- J 74. Steven J. Anbro, Alison J. Szarko, Ramona A. Houmanfar, Amber M. Maraccini, Laura H. Crosswell, Frederick C. Harris, Michelle Rebaleati, and Luka Starmer "Using Virtual Simulations to Assess Situational Awareness and Communication in Medical and Nursing Education: A Technical Feasibility Study," *Journal of Organizational Behavior Management*, Vol 40, No 1-2, pg 129-139, 2020, <https://doi.org/10.1080/01608061.2020.1746474>
- J 73. Terri Heglar, Andrew Penrose, Austin Yount, Kristine Galek, Yantao Shen, Sergiu M. Dascalu, and Frederick C. Harris, Jr. "A Hardware and Software Prototype of the CTAR All-Star." *International Journal of Computers and Their Applications* Vol 27, No 1, pg 45-55, March 2020
- J 72. Frederick C. Harris, Jr., Sergiu M. Dascalu, Sharad Sharma, Rui Wu "Guest Editorial: Special Issue from ISCA Fall - 2019 SEDE Conference," *International Journal of Computers and Their Applications* Vol 27, No 1, pg 2-3, March 2020.
- J 71. Angela Gregory, Chao Chen, Rui Wu, Sarah Miller, Sajjad Ahmad, John W Anderson, Hays Barret, Karl Benedict, Dan Cadol, Sergiu M Dascalu, Donna Delparte, John Erickson, Lynn Fenstermaker, Sarah E Godsey, Frederick C Harris, Jr., James P McNamara, John Savickas, Luke Sheneman, Mark Stone and Matthew A Turner "Efficient Model-data Integration for Flexible Modeling, Parameter Analysis & Visualization, and Data Management" *Frontiers in Water*, 2020. doi: 10.3389/frwa.2020.00002
- J 70. Rui Wu, Lei Yang, Chao Chen, Sajjad Ahmad, Sergiu M. Dascalu, Frederick C Harris, Jr. "MELPF Version 1: Modeling Error Learning based Post-Processor Framework for Hydrologic Models Accuracy Improvement," *Geoscientific Model Development Discussions*, Vol 12, Issue 9, pg 4115-4131, Sept 2019. DOI: 10.5194/gmd-12-4115-2019
- J 69. Alex Redei, Sergiu Dascalu, and Frederick C. Harris, Jr "A Framework for Virtualizing Joystick Controls in a Flight Simulator Training Environment," *International Journal of Computers and Their Applications* Vol 26, No 1, pg 20-29, March 2019.
- J 68. Pattaphol Jirasessakul, Zachary Waller, Paul Marquis, Connor Scully-Allison, Vinh Le, Scotty Strachan, Frederick C. Harris, Jr., Sergiu M. Dascalu, "Simplifying Data Visualization Pipelines with the NRDC-CHORDS Interface," *International Journal of Computers and Their Applications* Vol 26, No 1, pg 10-19, March 2019.
- J 67. Frederick C. Harris, Jr., Sergiu M. Dascalu, Sharad Sharma, "Guest Editorial: Special Issue from ISCA Fall - 2018 SEDE Conference," *International Journal of Computers and Their Applications* Vol 26, No 1, pg 2-3, March 2019.

- J 66. Frederick C. Harris, Jr., Gordon Lee, "Editor's Note: March 2019," *International Journal of Computers and Their Applications* Vol 26, No 1, pg 1, March 2019.
- J 65. Likhitha Ravi, Eric Fritzinger, Sergiu M. Dascalu, Frederick C. Harris, Jr. "AVISTED-Analysis and Visualization Toolset for Environmental Data," *International Journal of Computers and Their Applications* Vol 25, No 4, pg 153-164, December 2018.
- J 64. Rui Wu, Connor Scully-Allison, Moinul Hossain Rifat, Jose Painumkal, Sergiu Dascalu, Frederick C Harris, Jr, "Virtual Watershed System: AWeb-Service-Based Software Package For Environmental Modeling," *Advances in Science, Technology and Engineering Systems Journal* Vol. 3, No. 5, 382-393 (2018).
- J 63. Connor Scully-Allison, Vinh Le, Eric Fritzinger, Scotty Strachan, Frederick C. Harris, Jr., and Sergiu M. Dascalu "Near Real-time Autonomous Quality Control for Streaming Environmental Sensor Data," *Procedia Computer Science*, Vol 126, pg 1656-1665, 2018.
- J 62. Connor Scully-Allison, Hannah Munoz, Vinh Le, Scotty Strachan, Eric Fritzinger, Frederick C. Harris, Jr., and Sergiu Dascalu "Advancing Quality Assurance Through Metadata Management: Design and Development of a Mobile Application for the NRDC," *International Journal of Computers and Their Applications*, Vol 25, No 1, pg 20-29, March 2018.
- J 61. Frederick C. Harris, Jr., Sergiu M. Dascalu, Sharad Sharma "Guest Editorial: Special Issue from ISCA Fall - 2017 SEDE Conference," *International Journal of Computers and Their Applications*, Vol 25, No 1, pg 2-3, March 2018.
- J 60. Frederick C. Harris, Jr. "Editor's Note: March 2018", *International Journal of Computers and Their Applications*, Vol 24, No 1, pg 1, March 2017.
- J 59. Chase D. Carthen, Vinh Le, Richard Kelley, Tomasz J. Kozubowski, Frederick C. Harris, Jr. "Rewind: An Automatic Music Transcription Web Application" *International Journal of Computers and Their Applications* Vol 24, No 1, pg 20-30, January 2017.
- J 58. Frederick C. Harris, Jr., Sergiu M. Dascalu, Yan Shi "Guest Editorial: Special Issue from ISCA Fall - 2016 SEDE Conference," *International Journal of Computers and Their Applications*, Vol 24, No 1, pg 2-3, March 2017.
- J 57. Frederick C. Harris, Jr. "Editor's Note: March 2017", *International Journal of Computers and Their Applications*, Vol 24, No 1, pg 1, March 2017.
- J 56. Rui Wu, Muhanna Muhanna, Sergiu M. Dascalu, Lee Barford, Frederick C. Harris, Jr "Data Lossless Compression Using Improved GFC Algorithm With Multiple GPUs" *International Journal of Computers and Their Applications* Vol 23, No 4, pg X, December 2016.
- J 55. Scotty Strachan, Eric P. Kelsey, Rene F. Brown, Sergiu Dascalu, Fred Harris, Graham Kent, Bradley Lyles, Gregory McCurdy, David Slater, and Kenneth Smith "Filling the Data Gaps in Mountain Climate Observatories Through Advanced Technology, Refined Instrument Siting, and a Focus on Gradients" *Mountain Research and Development* Vol 36, No 4, pages518-527. November 2016
- J 54. Chase Carthen, Thomas J. Rushton, Nolan P. Burfield, Christine M. Johnson, Aaron Hesson, Daniel Nielson, Bryan Worrell, Donna Delparte, Tucker Chapman, W. Joel Johansen, Roger Lew, Nicholas R. Wood, Mathew Ziegler, John W. Anderson, Sergiu M Dascalu, Frederick C. Harris, Jr "Virtual Watershed Visualization for the WC-WAVE Project" *International Journal of Computers and Their Applications* Vol 23, No 3, pg 195, September 2016.

- J 53. Juli Petereit, Sebastian Smith, Frederick C. Harris Jr., and Karen A. Schlauch “petal: Co-expression network modelling in R” *BMC Systems Biology* Vol 10 (Suppl 2), paper 51 (15 pages) DOI 10.1186/s12918-016-0298-8
- J 52. Gareth B. Ferneyhough, Corey M. Thibeault, Sergiu M. Dascalu and Frederick C. Harris Jr. “ModFossa: A library for modeling ion channels using Python” *Journal of Bioinformatics and Computational Biology*, Vol. 14, No. 3 (2016)
- J 51. Damien Ennis, Sergiu M. Dascalu, Frederick C. Harris, Jr. “Leveraging Clustering Techniques to Facilitate Metagenomic Analysis,” *Intelligent Automation and Soft Computing (Autosoft)*, Vol 22, No 1, (2016) pp 153-165. DOI:10.1080/10798587.2015.1073887.
- J 50. Gongzhu Hu, Takaaki Goto, Frederick C Harris, Jr., Yan Shi, Wenying Feng “Guest Editorial: Special Issue from ISCA Fall-2015 Conferences,” *International Journal of Computers and Their Applications*, Vol 23, No 1, pg 2-3, March 2016.
- J 49. Frederick C. Harris, Jr. “Editor’s Note: March 2016”, *International Journal of Computers and Their Applications*, Vol 23, No 1, pg 1, March 2016.
- J 48. E. Michael Nussbaum, Marissa C. Owens, Gale M. Sinatra, Abeera P. Rehmat, Jacqueline Cordova, Sajjad Ahmad, Frederick C. Harris, Jr., and Sergiu M. Dascalu “Losing the Lake: Simulations to Promote Gains in Student Knowledge & Interest About Climate Change,” *International Journal of Environmental and Science Education*, Vol 10, No 6, pg 789-811, December 2015.
- J 47. Ivan Gibbs, Frederick C. Harris, Jr, and Sergiu M. Dascalu “A Separation-Based UI Architecture with a DSL for Role Specialization,” *Journal of Systems and Software*, Vol 101 pp 69-85, March 2015.
- J 46. Frederick C. Harris, Jr. “Editor’s Note: March 2015”, *International Journal of Computers and Their Applications*, Vol 22, No 1, pg 1, March 2015.
- J 45. Benjamin J. Lucchesi, Dwight D. Egbert, and Frederick C. Harris, Jr, “A Parallel Linear Octree Collision Detection Algorithm,” *International Journal of Computers and Their Applications* Vol 21, No 4, pg 230-243, December 2014.
- J 44. Beifang Yi, Xusheng Wang, Frederick C. Harris, Jr, and Sergiu M. Dascalu “sEditor: a Prototype for a Sign Language Interfacing System”, *IEEE Transactions on Human-Machine Systems*, Vol 44, No 4, PP 499-510, August 2014.
- J 43. Corey M. Thibeault, Frederick C Harris, Jr., and Narayan Srinivasa, “Using Games to Embody Spiking Neural Networks for Neuromorphic Hardware”, *International Journal of Computers and Their Applications*, Vol 21, No 1, March 2014.
- J 42. Frederick C. Harris, Jr. “Editor’s Note: March 2014”, *International Journal of Computers and Their Applications*, Vol 21, No 1, pg 1, March 2014.
- J 41. Roger V. Hoang, Devyani Tanna, Laurence C. Jayet Bray, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “A Novel CPU/GPU Simulation Environment for Large-Scale Biologically Realistic Neural Modeling”, *Frontiers in Neuroinformatics*, Vol 7, No 19, October 2013.
- J 40. Damien Ennis, Ann Medaille, Theodore Lambert, Richard Kelley, and Frederick C. Harris, Jr. “A Comparison of Academic Libraries: An Analysis Using a Self-Organizing Map”, *Performance Measurement and Metrics*, Vol 14, No 2, pp 118-131.

- J 39. Alexander Jones, Justin Cardoza, Denver J. Liu, Laurence C. Jayet Bray, Bobby Bryant, Sergiu M. Dascalu, Sushil J. Louis, and Frederick C. Harris, Jr. “A Software Package for Visualizing Complex, Distributed Neural Networks”, *BMC Neuroscience*, 2013, 14(Suppl 1):158.
- J 38. Corey Michael Thibeault, Kirill Minkovich, Michael John O’Brien, Frederick C Harris, Jr., and Narayan Srinivasa “Efficiently passing messages in distributed spiking neural network simulation”, *Frontiers in Computational Neuroscience*, Vol 7, Article 77, June 2013.
- J 37. Laurence C Jayet Bray, Gareth B Ferneyhough, Corey M Thibeault, Devyani Tanna, Emily R Barker, and Frederick C Harris, Jr. “Reward-Based Learning for Virtual Neuro-robotics Through Emotional Speech Processing”, *Frontiers in Neurorobotics*, Vol 7, No 8, April 2013.
- J 36. Frederick C. Harris, Jr. “Editor’s Note”, *International Journal of Computers and Their Applications*, Vol 20, No 1, pg 1, March 2013.
- J 35. Frederick C. Harris, Jr., Jeffrey L. Krichmar, Hava T. Siegelmann, Hiroaki Wagatsuma “Guest Editorial: Biologically Inspired Human-Robot Interactions-Developing More Natural Ways to Communicate with our Machines”, *IEEE Transactions on Autonomous Mental Development*, Vol 4, No 3, pp 190-191, September 2012.
- J 34. Laurence C Jayet Bray, Emily R Barker, Gareth B Ferneyhough, Roger V Hoang, Bobby D Bryant, Sergiu M Dascalu, and Frederick C Harris Jr. “Goal-related navigation of a neuromorphic virtual robot”, *BMC Neuroscience*, 2012, 13(Suppl 2):O3
- J 33. Laurence C. Jayet Bray, Sridhar R. Anumandla, Corey M. Thibeault, Roger V. Hoang, Philip H. Goodman, Sergiu M. Dascalu, Bobby D. Bryant, and Frederick C. Harris, Jr. “Real-time human-robot interaction underlying neurobotic trust and intent recognition.”, *Neural Networks*, Vol 32, pages 130-137, 2012.
- J 32. William E. Brandstetter III, Joseph D. Mahsman, Cody J. White, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “Multi-Resolution Deformation in Out-of-Core Terrain Rendering”, *International Journal of Computers and Their Applications* Vol 18, issue 4, pages 263-272, December, 2011.
- J 31. R.C. Motwani, M.C. Motwani, and F.C. Harris, Jr. “Watermarking of Space Curves using Wavelet Decomposition”, *International Journal of Computers and Their Applications* Vol 18, issue 4, pages 234-242, December, 2011.
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- J 29. Bei Yuan, Eelke Folmer, Frederick C. Harris, Jr. “Game Accessibility: a Survey”, *Universal Access in the Information Society* Vol 10, issue 1, March, 2011.
- J 28. Roger V Hoang, Matthew R Sgambati, Timothy J Brown, Daniel S Coming, Frederick C Harris, Jr. “VFire: Immersive Wildfire Simulation and Visualization”, *Computers and Graphics*, Special Issue on Serious Games, December 2010, Vol 34, No 6.
- J 27. Laurence C Bray Jayet, Mathias Quoy, Philip H Goodman, Frederick C Harris “A Circuit-Level Model of Hippocampal Place Field Dynamics Modulated by Entorhinal Grid and Suppression-Generating Cells”, *Frontiers in Neural Circuits* Vol 4, Article 122, November 2010
- J 26. Mukesh Motwani, Rakhi Motwani, and Frederick C. Harris, Jr., “Fragile Watermarking of 3D Models using Genetic Algorithms”, *Journal of Electronic Science and Technology (JEST)*

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- J 24. Mukesh Motwani, Rakhi Motwani, and Frederick C Harris, Jr. "Parametric Evaluation of Video Motion Tracking Data Sets", *Journal of Electronic Science and Technology (JEST)* Vol 8, No 3, September 2010, pp 215-222.
- J 23. Corey M. Thibeault, Frederick C Harris, Jr., Philip H Goodman "Breaking the virtual barrier: real-time interactions with spiking neural models" *BMC Neuroscience* Vol 11, Supp 1, pp 73-74.
- J 22. Joshua M. Hegie, Andrew S. Kimmel, Kelvin H. Parian, Sergiu M. Dascalu, Frederick C. Harris, Jr. "WiELD-CAVE: Wireless Ergonomic Lightweight Device for use in the CAVE", *Journal of Computational Methods in Science and Engineering (JCMSE)* Vol 10, Supp 2, 2010, pp 177-186.
- J 21. David T. Brown, Roger V. Hoang, Matthew R. Sgambati Timothy J. Brown, Sergiu M. Dascalu, Frederick C. Harris, Jr. "An Application for Tree Detection Using Satellite Imagery and Vegetation Data", *Journal of Computational Methods in Science and Engineering (JCMSE)* Vol 10, Supp 1, 2010, pp 13-25.
- J 20. Adrienne Breland, Sara Nasser, Karen Schlauch, Monica Nicolescu, Frederick C. Harris, Jr. "Efficient Influenza A Virus Origin Detection" *Journal of Electronics and Computer Science* Vol. 10, No 2, December, 2008.
- J 19. Romain Brette, Michelle Rudolph, Ted Carnevale, Michael Hines, David Beeman, James M. Bower, Markus Diesmann, Abigail Morrison, Philip H. Goodman, Frederick C. Harris, Jr., Milind Zirpe, Thomas Natschlag, Dejan Pecevski, Bard Ermentrout, Mikael Djurfeldt, Anders Lansner, Olivier Rochel, Thierry Vieville, Eilif Muller, Andrew P. Davison, Sami El Boustani and Alain Destexhe "Simulation of networks of spiking neurons: A review of tools and strategies" *Journal of Computational Neuroscience* December 2007 (Vol 23), pp 349-398.
- J 18. Bill Sherman, Simon Su, Phil McDonald, Yi Mu, Fred Harris "Open-source Tools for Immersive Environmental Visualization" *IEEE Computer Graphics and Applications* March/April 2007 (Vol. 27, No. 2), pp 88-91.
- J 17. Greg Vert, Fred Harris, Sara Nasser, "Spatial Data Authentication Using Mathematical Visualization" *International Journal of Computer Science and Network Security* vol 7, no 1, pp 267-274. Jan. 2007.
- J 16. Greg Vert, Fred Harris, Sara Nasser, "Modeling State Changes in Computer Systems for Security" *International Journal of Computer Science and Network Security* vol 7, no 1, pp. 293-295. January 2007.
- J 15. Beifang Yi, Frederick C. Harris, Jr., Sergiu M. Dascalu, and Ali Erol, "User Interface Aspects of a Human-Hand Simulation System," *Journal of Systemics, Cybernetics and Informatics*, vol. 3 no. 5, 2006
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- J 11. Judith R. Fredrickson, Bei Yuan, and Frederick C. Harris, Jr., "A Time Saving Region Restriction for Calculating the Crossing Number." *Congr. Numer.*, **168**, (2004) pp. 145–158.
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- C 237. Chase Carthen, Araam Zaremehrijardi, Vinh Le, Alireza Tavakkol, Frederick C. Harris Jr., Sergiu Dascalu, Carlos Cardillo, Scotty Strachan, “Orchestrating Apache NiFi/MiNiFi within a Spatial Data Pipeline,” *Proceedings of the 21st IEEE/ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2023)*, pp XX-XX. May 23-25, 2023 Orlando, FL.
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- C 185. Jalal Kiswani, Sergiu M. Dascalu, Frederick C. Harris, Jr. "Cloud-RA: A Reference Architecture for Cloud Based Information Systems," in *Proceedings of the 13th International Conference on Software Technologies (ICSOFT 2018)*, July 26-28, 2018, Porto, Portugal.
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- C 166. Chase Carthen, Vinh Le, Richard Kelley, Tomasz Kozubowski, Frederick C. Harris Jr. “Rewind: A Transcription Method and Website” in *Proceedings of the 25th International Conference on Software Engineering and Data Engineering (SEDE 2016)*, pp 73-78, September 26-28, Denver, CO.
- C 165. Vinh Le, Terence Henriod, Eric Fritzingler, Frederick C. Harris, Jr., Segiu Dascalu “A Web Interface Usability Evaluation of a Public Collaborative Data Portal” in *Proceedings of the 25th International Conference on Software Engineering and Data Engineering (SEDE 2016)*, pp 61-66, September 26-28, Denver, CO.
- C 164. Rui Wu, Sergiu M. Dascalu, Lee Barford, Frederick C. Harris, Jr “Floating-Point Data Compression Using Improved GFC Algorithm” in *Proceedings of the 25th International Conference on Software Engineering and Data Engineering (SEDE 2016)*, pp 35-40, September 26-28, Denver, CO.
- C 163. Jose T. Painumkal,Sankeerth Ankam, Sergiu M. Dascalu Frederick C. Harris, Jr “Comparative Evaluation of NRDC Web Portal Using Automated Tools” in *Proceedings of the 25th International Conference on Software Engineering and Data Engineering (SEDE 2016)*, pp 17-22, September 26-28, Denver, CO.
- C 162. Jessica Smith, Lee Barford, Sergiu M. Dascalu, and Frederick C. Jr. Harris, Jr., “Highly Parallel Implementation of Forest Fire Propagation Models on the GPU” in *Proceedings of the 2016 International Conference on High Performance Computing and Simulations (HPCS 2016)* July 18-22, 2016, Innsbruck, Austria. **Best Paper Finalist**
- C 161. Eric Klukovich, Mehmet Hadi Gunes, Lee Barford, and Frederick C. Jr. Harris, Jr., “Accelerating BFS Shortest Paths Calculations Using CUDA for Internet Topology Measure-

- ments” in *Proceedings of the 2016 International Conference on High Performance Computing and Simulations (HPCS 2016)*, July 18-22, 2016, Innsbruck, Austria.
- C 160. Angela Chan, Alexander Gamino, Frederick C. Jr. Harris, Jr., and Sergiu Dascalu, “Integration of Assistive Technologies into 3D Simulations: An Exploratory Study,” in *Proceedings of the 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV. **Best Paper Award**
- C 159. Christine Johnson, Lee Barford, Sergiu M. Dascalu, and Frederick C. Jr. Harris, Jr., “CUDA Implementation of Computer Go Game Tree Search,” in *Proceedings of the 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV.
- C 158. Matthew VanCompernelle, Lee Barford, Frederick C. Jr. Harris, Jr., “Maximum Clique Solver using Bisets on GPUs,” in *Proceedings of the 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV.
- C 157. Raja H. Singh, Lee Barford, Frederick C. Jr. Harris, Jr., “Accelerating the Critical Line Algorithm for Portfolio Optimization Using GPUs,” in *Proceedings of the 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV.
- C 156. Andy Olson, Dwight Egbert, Mircea Nicolescu, Harrison Stanton, Raul Rojas, and Frederick C. Jr. Harris, Jr., “Smoke Detection Prescreening in Sequential Images,” in *Proceedings of the 2016 ISCA International Conference on Computers and Their Applications (CATA 2016)*, April 4-6, 2016, Las Vegas, DC.
- C 155. Thomas Kelley, Thomas Rushton, Yantao Shen, Sergiu Dascalu, and Frederick C. Jr. Harris, Jr., “Neocortical Virtual Robot,” in *Proceedings of the 2016 ISCA International Conference on Computers and Their Applications (CATA 2016)* April 4-6, 2016, Las Vegas, DC.
- C 154. Juli Petereit, Frederick C. Jr. Harris, and Karen Schlauch, “A Novel Co-Expression Network Modeling System,” in *Proceedings of the 2015 IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2015)*, November 9-12, 2015, Washington, DC.
- C 153. Andrew M. Olson, Dwight D. Egbert, Frederick C Harris, Jr., “UNR Sim: A Simulated Computer for Computer Engineering Education,” in *Proceedings of the 28th International Conference on Computer Applications in Industry and Engineering (CAINE 2015)* October 12-14, San Diego, CA.
- C 152. Nolan Burfield, Hardy Thrower, Brandon Worl, Sergiu Dascalu, and Frederick Harris, Jr. “Submit: An Online Submission Platform for Computer Science Courses,” in *Proceedings of the 28th International Conference on Computer Applications in Industry and Engineering (CAINE 2015)*, October 12-14, San Diego, CA.
- C 151. Likhitha Ravi, Sergiu M. Dascalu, Frederick C. Harris, Jr., “GUI-Enhanced Activity Diagrams with Application to the Design of AVISTED,” in *Proceedings of the 24th International Conference on Software Engineering and Data Engineering (SEDE 2015)*, October 12-14, San Diego, CA.
- C 150. Rui Wu, Sergiu M. Dascalu, Frederick C Harris, Jr., “Environment for Datasets Processing and Visualization Using SciDB,” in *Proceedings of the 24th International Conference on Software Engineering and Data Engineering (SEDE 2015)*, October 12-14, San Diego, CA.

- C 149. Moinul Hossain, Sergiu M. Dascalu, Frederick C Harris, Jr., “A Software Environment for Watershed Modeling,” in *Proceedings of the 24th International Conference on Software Engineering and Data Engineering (SEDE 2015)*, October 12-14, San Diego, CA.
- C 148. Vinh D. Le, Melanie M. Neff, Royal V. Stewart Richard Kelley, Eric Fritzinger, Sergiu M. Dascalu, Frederick C. Harris, Jr. “Microservice-based Architecture for the NRDC”, in *Proceedings of the 13th IEEE International Conference on Industrial Informatics (INDIN 2015)*, July 22-24, Cambridge, UK.
- C 147. Chase D. Carthen, Thomas J. Rushton, Christine M. Johnson, Aaron Hesson, Daniel Nielson, Bryan Worrell, John W. Anderson, Roger Lew, Nicholas R. Wood, Matthew Ziegler Donna M. Delparte, W. Joel Johansen, Sergiu M. Dascalu, and Frederick C. Harris, Jr., “Design of a Virtual Watershed Client for the WC-WAVE Project”, in *Proceedings of The 2015 International Conference on Collaboration Technologies and Systems (CTS-2015)*, June 1-5, Atlanta, GA.
- C 146. Torbjorn Loken, Sergiu M. Dascalu, and Frederick C. Harris, Jr., “GPU Based Sound Simulation and Visualization”, in *Proceedings of The 2015 International Conference on Information Technology: New Generations (ITNG 2015)*, pp 692-697, April 13-15, 2015, Las Vegas, NV.
- C 145. Likhitha Ravi, Sergiu M. Dascalu, Frederick C. Harris, Jr., John Mejia, and Nouredine Belkhatir, “VISTED: A Visualization Toolset for Enviromental Data,” in *Proceedings of The 2015 International Conference on Computers and Their Application (CATA 2015)*, pp 335-342, March 9-11, 2015, Honolulu, HI.
- C 144. Angela Chan, Juan Quiroz, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “An Overview of Brain Computer Interfaces”, in *Proceedings of The 2015 International Conference on Computers and Their Application (CATA 2015)*, pp 327-334, March 9-11, 2015, Honolulu, HI.
- C 143. Lisa Palathingal, Sergiu M. Dascalu, Frederick C. Harris, Jr., and Yaakov Varol “A Brief Survey of Data Curation Literature”, in *Proceedings of The 2015 International Conference on Computers and Their Application (CATA 2015)*, pp 419-424, March 9-11, 2015, Honolulu, HI.
- C 142. Rui Wu, Lisa Palathingal, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “Concentration Reminder: Distraction and Drowsiness Detection for Computer Users”, in *Proceedings of The 2015 International Conference on Computers and Their Application (CATA 2015)*, pp 113-118, March 9-11, 2015, Honolulu, HI.
- C 141. C. M. Thibeault, F.C. Harris, Jr., and P.A. Tebbe, “Modeling particle diffusion in laminar tube flow with spectral collocation”, in *Proceedings of The 2015 International Conference on Computers and Their Application (CATA 2015)*, pp 51-56, March 9-11, 2015, Honolulu, HI.
- C 140. Gareth Ferneyhough, Corey Thibeault, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “ModFossa: A Python Library for Ion Channel Modeling”, in *Proceedings of The 2015 International Conference on Bioinformatics and Computational Biology (BICOB 2015)*, pp 111-118, March 9-11, 2015, Honolulu, HI.
- C 139. Mehdi Rahimi, Yudong Luo, Frederick C. Harris, Jr, Sergiu M. Dascalu, and Yantao Shen “Improving Measurement Accuracy of Position Sensitive Detector (PSD) for a New Scanning PSD Microscopy System”, in *Proceedings of the 2014 IEEE International Conference on Robotics and Biomimetics*, pp 1685-1690, December 5-10, 2014, Bali, Indonesia.

- C 138. Edson O. Almachar, Alexander M. Falconi, Katie A. Gilgen, Devyani Tanna, Nathan M. Jordan, Roger V. Hoang, Sergiu M. Dascalu, Laurence C. Jayet Bray, Frederick C Harris, Jr., “Design and Implementation of a Repository Service and Reporting Interface for the NCS”, in *Proceedings of The 2014 International Conference on Software Engineering and Data Engineering (SEDE 2014)*, October 13-15, 2014, New Orleans, LA.
- C 137. Jakub Berlinski Marlon D. Chavez, Cameron Rowe, Nathan M. Jordan, Devyani Tanna, Roger V. Hoang, Sergiu M. Dascalu, Laurence C. Jayet Bray, Frederick C Harris, Jr., “Neo-Cortical Builder: A Web Based Front End for NCS”, in *Proceedings of The 2014 International Conference on Computer Applications in Industry and Engineering (CAINE 2014)*, October 13-15, 2014, New Orleans, LA.
- C 136. Sergiu Dascalu, Frederick C Harris, Jr., Michael McMahon Jr., Eric Fritzinger, Scotty Strachan, Richard Kelley, “An Overview of the Nevada Climate Change Portal”, in *Proceedings of The 7th International Congress on Environmental Modelling and Software (iEMSs 2014)*, June 15-19, 2014, San Diego, CA.
- C 135. Ershad Sharifahmadian, Yoonsuk Choi, Shahram Latifi, Sergiu Dascalu, Frederick C. Harris, “Wavelet-based Compression of Multichannel Climate Data”, in *Proceedings of SPIE Conference on Sensing Technology and its Applications, Part of Satellite Data Compression, Communications, and Processing X*, May, 2014, Baltimore, MD. Vol 9124, pp. B1-B6
- C 134. Corey M. Thibeault, Frederick C. Harris, Jr., Narayan Srinivasa “A Virtual Environment Framework for Embedding Neural Models”, in *Proceedings of The 2014 International Conference on Computer and Their Applications (CATA 2014)*, March 24-26, 2014, Las Vegas, NV.
- C 133. Corey M. Thibeault, Frederick C. Harris, Jr., Narayan Srinivasa “Embodied modeling with spiking neural networks for neuromorphic hardware: a simulation study”, in *Proceedings of The 2013 International Conference on Computer Applications in Industry and Engineering (CAINE 2013)*, pp 3-10, **Best Paper Runner-up**, September 25-27, 2013, Los Angeles, CA.
- C 132. Justin E. Cardoza, Alexander K. Jones, Denver J. Liu, Roger V. Hoang, Devyani Tanna, Laurence C. Jayet Bray, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “Design and Implementation of a Graphical Visualization Tool for NCS”, in *Proceedings of The 2013 International Conference on Software Engineering and Data Engineering (SEDE 2013)*, September 25-27, 2013, Los Angeles, CA.
- C 131. Ivan Gibbs, Eric Fritzinger, Sergiu M. Dascalu, Frederick C Harris, Jr., Yantao Shen “A Workflow Job Manager for the Nevada Climate Change Portal”, in *Proceedings of The 2013 International Conference on Collaboration Technologies and Systems (CTS 2013)* May 20-24, 2013, San Diego, CA.
- C 130. Jigarkumar Patel, Sergiu M. Dascalu, Frederick C Harris, Jr. “Runtime Generation of Data Processors on Local User Computers”, in *Proceedings of The 2013 International Conference on Collaboration Technologies and Systems (CTS 2013)* May 20-24, 2013, San Diego, CA.
- C 129. Rakhi Motwani, Mukesh Motwani, Frederick C Harris, Jr. “Uniform and Efficient Exploration of State Space using Kinodynamic Sampling-based Planners” in *Proceedings of The International Workshop on Computational Kinematics 2013 (CK2013)* May 12-15, 2013, Barcelona, Spain.
- C 128. Torbjorn Loken, Lee Barford, Frederick C Harris, Jr. “Massively Parallel Jitter Measurement from Deep Memory Digital Waveforms”, in *Proceedings of the 2013 IEEE International*

Instrumentation and Measurement Technology Conference (I2MTC), May 6-9, 2013, Minneapolis, MN

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- C 126. Ivan Gibbs, Sergiu M Dascalu, Frederick C Harris, Jr. “Web Portal Usability Tests for the Nevada Climate Change Portal”, in *Proceedings of the 10th International Conference on Information Technology: New Generations (ITNG 2013)* April 15-17, 2013, Las Vegas, NV
- C 125. Joseph M Vesco, Frederick C Harris, Jr., Sergiu M Dascalu, Del Jackson, Josh E Baker “Semi-Automated Analysis Software for a Novel Biochemistry Assay”, in *Proceedings of the 10th International Conference on Information Technology: New Generations (ITNG 2013)* April 15-17, 2013, Las Vegas, NV
- C 124. Likhitha Ravi, Qiping Yan, Sergiu M. Dascalu, Frederick C Harris, Jr. “A Survey of Visualization Techniques and Tools for Environmental Data”, *Proceedings of the 2013 International Conference on Computers and Their Applications (CATA 2013)* March 4-6, 2013, Honolulu, Hawaii.
- C 123. Qiping Yan, Michael J. McMahon Jr., Sergiu Dascalu, Frederick C. Harris, Jr., Likhitha Ravi “Community Metadata ISO 19115 Adaptor”, *Proceedings of the 2013 International Conference on Computers and Their Applications (CATA 2013)*, March 4-6, 2013, Honolulu, Hawaii.
- C 122. Eric Fritzing, Sergiu M Dascalau, Daniel P. Ames, Karl Benedict, Ivan Gibbs, Michael J. McMahon, Jr., and Frederick C. Harris, Jr. “The Demeter Framework for Model and Data Interoperability”, in R. Seppelt, A.A. Voinov, S. Lange, and D. Bankamp (eds.) *Proceedings of the 2012 International Congress on Environmental Modeling and Software (iEMSs-2012)*, July 2012, Leizig, Germany. pp. 1535-1543.
- C 121. Jigarkumar Patel, Sohei Okamoto, Sergiu M. Dascalu and Frederick C Harris, Jr., “Web-Enabled Toolkit for Data Interoperability Support”, in *Proceedings of the 2012 ISCA International Conference on Software Engineering and Data Engineering (SEDE 2012)* pp. 161-166, June 27-29, 2012 Los Angeles, CA.
- C 120. Nathan M. Jordan, Kimberly B. Perry, Nitish Narala, Laurence C. Jayet Bray, Sergiu M. Dascalu and Frederick C Harris, Jr., “Design and Implementation of an NCS-NeuroML Translator”, in *Proceedings of the 2012 ISCA International Conference on Software Engineering and Data Engineering (SEDE 2012)* pp. 13-19, June 27-29, 2012 Los Angeles, CA.
- C 119. Chad Feller, Karen Schlauchm and Frederick C Harris, Jr., “An Introduction to Proactive Server Preservation in an HPC Environment”, in *Proceedings of the 2012 ISCA International Conference on Advanced Computing and Communication (ACC 2012)*, pp. 51-57, June 27-29, 2012 Los Angeles, CA.
- C 118. Adrienne Breland, Harpreet Singh, Omid Tutakhil, Mike Needham, Dickson Luong, Grant Hennig, Roger Hoang, Torbjorn Loken, Sergiu M. Dascalu, and Frederick C Harris, Jr., “A GPU Algorithm for Comparing Nucleotide Histograms”, in *Proceedings of the 2012 ISCA International Conference on Advanced Computing and Communication, (ACC 2012)* pp. 13-18, June 27-29, 2012 Los Angeles, CA.

- C 117. Sohei Okamoto, Roger V Hoang, Sergiu M. Dascalu, Frederick C Harris, Jr., and Nouredine Belkhatir “SUNPRISM: An Approach and Software Tools for Collaborative Climate Change Research”, in *Proceedings of the 13th International Conference on Collaboration Technologies and Systems (CTS 2012)*, pp. 583-590, May 21-25, 2012, Denver, CO, USA.
- C 116. Vinita Khambadkar, Lee Barford, and Frederick C Harris, Jr., “Massively Parallel Localization of Pulsed Signal Transitions Using a GPU”, in *Proceedings of the 2012 IEEE International Instrumentation and Measurement Technology Conference*, pp. 2173-2177, May 13-16, 2012 Graz, Austria.
- C 115. Corey M. Thibeault, Joshua Hegie, Laurence Jayet Bray, and Frederick C Harris, Jr. “Simplifying Neurorobotic Development with NCSTools”, in *Proceedings of the 2012 Conference on Computers and Their Applications*, (CATA 2012) March 12-14, 2012, Las Vegas, NV.
- C 114. Joseph M. Vesco, Katie Gilgen, Anne Paine, Marissa Owens, E. Michael Nussbaum, Gale M. Sinatra, Sajjad Ahmad, Kent J. Crippen, Sergiu M. Dascalu, Frederick C Harris, Jr. “Losing the Lake: Development and Deployment of an Educational Game”, in *Proceedings of the 2012 Conference on Computers and Their Applications*, (CATA 2012) March 12-14, 2012, Las Vegas, NV.
- C 113. Michael J. McMahon, Jr., Frederick C. Harris, Jr., Sergiu M. Dascalu, Scotty Strachan “S.E.N.S.O.R. - Applying Modern Software and Data Management Practices to Climate Research”, in *Proceedings of the 2011 Workshop on Sensor Network Applications* November 16-18, 2011, Honolulu, HI.
- C 112. Matthew R. Scambati, Steven Koepnick, Daniel S. Coming, Nick Lancaster, and Frederick C Harris, Jr. “Immersive Visualization and Interactive Analysis of Ground Penetrating Radar Data”, in *Proceedings of the 7th International Symposium on Visual Computing (ISVC 2011)* Lecture Notes in Computer Science September 26-28, 2011, Las Vegas, NV.
- C 111. Sridhar R. Anumadla, Laurence C. Jayet Bray, Corey M. Thibeault, Roger V. Hoang, Sergiu M. Dascalu, Frederick C Harris, Jr., and Philip H. Goodman “Modeling Oxytocin Induced Neurorobotic Trust and Intent Recognition in Human Robot Interaction”, in *Proceedings of the International Joint Conference on Neural Networks (IJCNN 2011)* July 31-Aug 5, 2011, San Jose, CA.
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- C 109. Cody J. White, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “Software Development Aspects of Out-Of-Core Data Management for Planetary Terrain”, in *Proceedings of ICSoft-2011*, July 18-21, 2011, Sevilla, Spain.
- C 108. Michael J. McMahon, Jr., Sergiu M. Dascalu, Frederick C. Harris, Jr., Scotty Strachan, and Franco Biondi “Architecting Climate Change Data Infrastructure for Nevada”, in C. and Pastor, O. (eds.), *Advanced Information Systems Engineering Workshops CAISE-2011*, Lecture Notes in Business Information Processing, LNBIP-83, June 2011, Springer, pp. 354-365. June 20-24, 2011, London, England.
- C 107. C.M. Thibeault, R. Hoang, and F.C. Harris, Jr. “A Novel Multi-GPU Neural Simulator”, in *Proceedings of 3rd International Conference on Bioinformatics and Computational Biology (BICoB 2011)* March 23-25, 2011, New Orleans, LA

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- C 105. Rakhi Motwani, Mukesh Motwani, Frederick Harris, Jr., Sergiu Dascalu “Towards a Scalable and Interoperable Global Environmental Sensor Network using Service Oriented Architecture” in *Proceedings of the Sixth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP 2010)* December 7-10, 2010, Brisbane Australia.
- C 104. R.C. Motwani, K.E. Bekris, M.C. Motwani, F.C. Harris, Jr. “Fragile Watermarking of 3D Motion Data”, in *Proceedings of ISCA’s 23rd International Conference on Computer Applications in Industry and Engineering, (CAINE ’10)* November 12-14, 2010, Imperial Palace, Las Vegas, NV.
- C 103. R.C Motwani, M.C. Motwani, S.M. Dascalu, F.C. Harris, Jr. “VoiceMarc3D: Software Specifications and Implementation Design”, in *Proceedings of ISCA’s 23rd International Conference on Computer Applications in Industry and Engineering, (CAINE ’10)* November 12-14, 2010, Imperial Palace, Las Vegas, NV.
- C 102. C. M. Thibeault, O. Sessions, P. H. Goodman, and F. C. Harris Jr. “Real-Time Emotional Speech Processing for Neurorobotics Applications”, in *Proceedings of ISCA’s 23rd International Conference on Computer Applications in Industry and Engineering, (CAINE ’10)* November 12-14, 2010, Imperial Palace, Las Vegas, NV.
- C 101. Roger Hoang Joshua Hegie Frederick C. Harris, Jr. “Scrybe: A Tablet Interface for Virtual Environments”, in *Proceedings of ISCA’s 23rd International Conference on Computer Applications in Industry and Engineering, (CAINE ’10)* November 12-14, 2010, Imperial Palace, Las Vegas, NV.
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- C 096. Adrienne E. Breland, Karen A. Schlauch, Mehmet Gunes, and Frederick C. Harris Jr., “Fast Graph Approaches to Measure Influenza Transmission Across Geographically Dis-

- tributed Host Types”, in *Proceedings of the International Workshop on Graph Theoretic Approaches for Biological Analysis (IWBNA 2010)* August 2-4, 2010, Niagra Falls, New York.
- C 095. Adrienne E. Breland, Karen A. Schlauch, Monica Nicolescu, and Frederick C. Harris Jr., “An Annotated k-deep Prefix Tree for (1-k)-mer Based Sequence Comparisons”, in *Proceedings of the ACM International Conference on Bioinformatics and Computational Biology (ACM-BCB 2010)*, August 2-4, 2010, Niagra Falls, New York.
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- C 092. Eugene Essa, Andrew Dittrich, Sergiu Dascalu, Frederick C. Harris, Jr. “ACAT: A Web-based Software Tool to Facilitate Course Assessment for ABET Accreditation”, in *Proceedings of the 7th International Conference on Information Technology : New Generations (ITNG 2010)* April 12-14, 2010, Las Vegas, Nevada
- C 091. John R. Kearney, Dwight Egbert, Frederick C. Harris, Jr. “A Unique Instrumentation System Design for Measuring Forces on a Rotating Shaft”, in *Proceedings of CATA 2010*, March 24-26, 2010, Honolulu, HI **Best Paper Award**
- C 090. Marcel A. Levy, Sergiu M. Dascalu, Frederick C. Harris, Jr. “Ringermute: An audio data mining toolkit” in *Proceedings of CATA 2010*, March 24-26, 2010, Honolulu, HI
- C 089. Mukesh Motwani, Balaji Sridharan, Rakhi Motwani, Frederick C. Harris Jr. “Copyright Protection of 3D Models using Hausdorff Distance” in *Proceedings of IEEE International Advance Computing Conference (IACC 2010)*, February 19-20, 2010, Patiala, India
- C 088. Rakhi Motwani, Mukesh Motwani, Frederick Harris Jr., Bobby Bryant, Akshata Agarwal “Watermark Embedder Optimization for 3D Mesh Objects using Classification Based Approach”, in *Proceedings of IEEE International Conference on Signal Acquisition and Processing (ICSAP 2010)*, February 9-10, 2010, Bangalore, India
- C 087. Mukesh Motwani, Nishith Tirpankar, Rakhi Motwani, Monica Nicolescu, Frederick C. Harris, Jr. “Towards Benchmarking Of Video Motion Tracking Algorithms”, in *Proceedings of IEEE International Conference on Signal Acquisition and Processing (ICSAP 2010)*, February 9-10, 2010, Bangalore, India
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- C 083. Rakhi Motwani, Frederick Harris Jr., Kostas Bekris “A Proposed Digital Rights Management System for 3D Graphics using Biometric Watermarks”, in *Proceedings of IEEE International Workshop on Digital Rights Management (CCNC 2010)*, January 9-12, 2010, Las Vegas, NV
- C 082. Rakhi C. Motwani, Mukesh C. Motwani, Frederick C. Harris Jr., “Using Radial Basis Function Networks For Watermark Determination In 3D Models”, in *Proceedings of the IEEE INDICON*, Dec 18-20, 2009, Gujarat, India.
- C 081. Sermsak Buntha, Muhanna Muhanna, Sohei Okamoto, Sergiu Dascalu, and Frederick C. Harris, Jr. “A GUI Wizard for Developing Command & Control Applications in CAVE” in *Proceedings of The Fourth IASTED International Conference on Human-Computer Interaction (IASTED-HCI 2009)*, November 23-24, 2009 St. Thomas, US Virgin Islands, pp. 301-308.
- C 080. Mukesh C. Motwani, Rakhi C. Motwani, and Frederick C. Harris, Jr. “Wavelet Based Perceptual Mask for Images,” in *Proceedings of the 2009 IEEE International Conference on Image Processing (IPIV’09)* Nov 7-11, 2009, Cairo, Egypt.
- C 079. Rakhi Motwani and Frederick C. Harris, Jr. “Robust 3D Watermarking Using Vertex Smoothness Measure,” in *Proceedings of the 2009 International Conference on Image Processing, Computer Vision, and Pattern Recognition (ICCV’09)* July 13-16, 2009, Las Vegas, Nevada.
- C 078. Mukesh Motwani and Frederick C. Harris, Jr. “Fuzzy Perceptual Watermarking For Ownership Verification” in *Proceedings of the 2009 International Conference on Image Processing, Computer Vision, and Pattern Recognition (ICCV’09)* July 13-16, 2009, Las Vegas, Nevada.
- C 077. Hrishikesh Kulkarni Sergiu Dascalu Frederick C. harris, Jr. “Software Development Aspects of a Mobile Food Ordering System” in *Proceedings of the ISCA 18th International Conference on Software Engineering and Data Engineering (SEDE ’09)* June 22-24, 2009, Las Vegas, Nevada.
- C 076. David T. Brown, Roger V. Hoang, Matthew R. Sgambati, and Frederick C. Harris, Jr. “An Application for Tree Detection Using Satellite Imagery and Vegetation Data,” in *Proceedings of the ISCA 18th International Conference on Software Engineering and Data Engineering (SEDE ’09)* June 22-24, 2009, Las Vegas, Nevada.
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- CP 37. “A Virtual Environment Framework for Embedding Neural Models”, *The 2014 International Conference on Computer and Their Applications (CATA 2014)*, March 24-26, 2014, Las Vegas, NV.
- CP 36. “NCS: A Novel CPU/GPU Simulation Environment for Large-Scale Biologically Realistic Neural Modeling”, *Neural Information Processing Systems (NIPS 2013)*, South Shore, Lake Tahoe, CA (December 6, 2013).
- CP 35. “Embodied modeling with spiking neural networks for neuromorphic hardware: a simulation study,” *The 2013 International Conference on Computer Applications in Industry and Engineering (CAINE 2013)* September 25-27, 2013, Los Angeles, CA. **Best Paper Runner-up**

- CP 34. "Design and Implementation of a Graphical Visualization Tool for NCS," *The 2013 International Conference on Software Engineering and Data Engineering (SEDE 2013)* September 25-27, 2013, Los Angeles, CA.
- CP 33. "Workflow Job Manager for the Nevada Climate Change Portal," *The 2013 International Conference on Collaboration Technologies and Systems (CTS 2013)* May 20-24, 2013, San Diego, CA.
- CP 32. "Runtime Generation of Data Processors on Local User Computers," *The 2013 International Conference on Collaboration Technologies and Systems (CTS 2013)* May 20-24, 2013, San Diego, CA.
- CP 31. "Semi-Automated Analysis Software for a Novel Biochemistry Assay," *The 10th International Conference on Information Technology: New Generations (ITNG 2013)* April 15-17, 2013, Las Vegas, NV
- CP 30. "An Introduction to Proactive Server Preservation in an HPC Environment," *ISCA's Advanced Computing and Communication (ACC 2012)* June 27-29, 2012 Los Angeles, CA
- CP 29. "A Novel Multi-GPU Neural Simulator," *ISCA's Bioinformatics and Computational Biology (BICoB 2011)* March 23-25, 2011, New Orleans, LA
- CP 28. "A Unique Instrumentation System Design for Measuring Forces on a Rotating Shaft," *ISCA's Computers And Their Applications (CATA 2010)*, March 24-26, 2010, Honolulu, HI. **Best Paper Award.**
- CP 27. "Ringermute: An audio data mining toolkit," *ISCA's Computers And Their Applications (CATA 2010)*, March 24-26, 2010, Honolulu, HI.
- CP 26. "An Inexpensive Terrain Awareness and Warning System for Small Aircraft," *ISCA's Computer Applications in Industry and Engineering (CAINE 2008)*. Honolulu, HI, November 12-14, 2008.
- CP 25. "Managing Data and Computational Complexity for Immersive Wildfire Visualization," *High Performance Computing Systems (HPCS '07)* Prague, Czech, June 4-6, 2007.
- CP 24. "Volumetric Visualization Methods for Atmospheric Model Data in an Immersive Virtual Environment," *High Performance Computing Systems (HPCS '07)* Prague, Czech, June 4-6, 2007.
- CP 23. "DiRT - Dust in Real-Time: The Specification Process," *The 2005 International Conference on Software Engineering Research and Practice (SERP '05)*, June 27-30, 2005, Las Vegas, NV.
- CP 22. "A Framework for Reuse and Parallelization of Large-Scale Scientific Simulation Code," *The 4th International Workshop on System/Software Architectures*, June 27-30, 2005, Las Vegas, NV.
- CP 21. "A Generic Queuing System for Computationally Intensive Problems." *35th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 3-12, 2004, Florida Atlantic University, Boca Raton, FL.
- CP 20. "A Large-Scale Biologically Realistic Cortical Simulator" *SC 2001* November 12-16, 2001, Denver, CO.
- CP 19. "Linear Time Computation of QFT Feasible Regions" *Computers and their Applications in Industry and Engineering (CAINE '01)* November 27-29, 2001, Las Vegas, NV.

- CP 18. "A Low-Cost Algorithm for Multicast Routing in Computer Networks," 31st *Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 13-17, 2000, Florida Atlantic University, Boca Raton, FL.
- CP 17. "Virtual Reality in Mine Safety Training", 1999 Training Resources Applied to Mining Conference (TRAM), October 12-13, 1999, National Mine Health and Safety Academy, Beaver, WV.
- CP 16. "Virtual Reality in Mine Safety Training", 1999 National Mine Instructors Seminar, October 13-14, 1999, National Mine Health and Safety Academy, Beaver, WV.
- CP 15. "Surface Mine Truck Safety Training." 30th *Institute on Mining, Health, Safety, and Research* August 9-13, 1999, Salt Lake City, UT.
- CP 14. "Virtual Reality and Mine Safety Training." *The 1999 Spring Great Basin Trainers Association Conference*, May 13-14, 1999, Round Mountain, NV.
- CP 13. "Parallelization of Non-Equilibrium Radiation Transport Code." *The Ninth SIAM Conf. on Parallel Process. for Sci. Comp.*, March 22-24, 1999, Adam's Mark San Antonio-Riverwalk Hotel, San Antonio, TX.
- CP 12. "Strategies for Effective Group Project-Based Courses." *The 1999 ASEE-PSW Conference*, March 19-20, 1999, Harrah's, Las Vegas, NV.
- CP 11. "Parallel Computation of the Minimum Crossing Number of a Graph", *The Eighth SIAM Conf. on Parallel Process. for Sci. Comp.*, March 14-17, 1997, Hyatt Regency Minneapolis on Nicollet Mall Hotel, Minneapolis, MN.
- CP 10. "Steiner Minimal Trees: Their Computational Past, Present, and Future," 11th *Midwestern Conference on Combinatorics, Cryptography, and Computing*, Oct 31 - Nov 2, 1996, The University of Nevada, Las Vegas, Las Vegas, NV.
- CP 09. "A Genetic Algorithm for the Steiner Minimal Tree Problem," 5th *International Conference on Intelligent Systems (IS '96)*, June 19-21, 1996, The Flamingo Hilton Hotel, Reno, Nevada.
- CP 08. "A Proposed Algorithm for Calculating the Minimum Crossing Number of a Graph," *Eighth Quadrennial International Conference on Graph Theory, Combinatorics, Algorithms and Application*, June 3-7, 1996, Western Michigan University, Kalamazoo, MI.
- CP 07. "Solving Quadratic Assignment Problems Through Parallel Genetic Algorithms," *Golden West International Conference on Intelligent Systems - (GWIC-IV)*, June 12-14, 1995, Sir Francis Drake Hotel, San Francisco, California.
- CP 06. "An Introduction to Steiner Minimal Trees on Grids," 26th *Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 6-10, 1995, Florida Atlantic University, Boca Raton, FL.
- CP 05. "Parallel Computation of Steiner Minimal Trees," 7th *SIAM Conference on Parallel Processing for Scientific Computing*, February 15-17, 1995, The Hotel Nikko, San Francisco, CA.
- CP 04. "An Initial Characterization of Steiner Minimal Trees on Grids," 7th *Cumberland Conference on Graph Theory and Computing*, May 10-13, 1994, The University of Alabama in Huntsville, Huntsville, AL.

- CP 03. "A Stochastic Optimization Algorithm for Steiner Minimal Trees," *25th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 7-11, 1994, Florida Atlantic University, Boca Raton, FL.
- CP 02. "Parallel Solutions for Minimizing Network Connection Distances," *CCCS 4th Annual Conference*, November 11-12, 1993, Clemson University, Clemson, SC, *Second Place, Paper Competition*.
- CP 01. "New and Improved Results for the Rectilinear Minimal Crossing Problem," *6th Cumberland Conference on Graph Theory and Computing*, May 17-19, 1993, Rhodes College, Memphis, TN.

INVITED PRESENTATIONS:

- IP 21. "Software Systems Lab: An Overview of Ongoing Projects" Frederick C Harris, Jr. and Sergiu Dascalu, Discovery Series, College of Information, University of North Texas, September 29, 2023.
- IP 20. "Multi-user Virtual Reality" Grambling State University, September 16, 2021
- IP 19. "Steiner Minimal Trees: An Introduction, Parallel Computation, and Future Work," *The 7th International Conference on Multimedia Computing and Systems (ICMCS 20)* Keynote Address, October 1, 2020, Morocco.
- IP 18. "Forest Fire Simulation and Visualization," *Workshop on Cybersecurity, Cloud Computing and Data Analytics*, Grambling State University, Keynote Address August 29-30, 2019
- IP 17. "Forest Fire Simulation and Visualization," *The 6th International Conference on Multimedia Computing and Systems (ICMCS 18)* Keynote Address, May 10, 2018, Rabat, Morocco.
- IP 16. "Building a Robot's Brain: Decision making in an artificial environment," Neuroscience Retreat, University of Nevada, Reno May 20, 2016
- IP 15. "Building a Robot's Brain: Decision making in an artificial environment," Society for Neuroscience Reno Research Conference, November 14, 2015
- IP 14. "Building a Robot's Brain: Decision making in an artificial environment," Wagner Conference, Reno, NV December 10, 2015
- IP 13. "Forest Fire Simulation and Visualization," University of Idaho, April 17, 2014
- IP 12. "The Future of Computer Science," Utah State University, March 23, 2012
- IP 11. "Computer Applications and the Research they Drive," ICCBALI 2011 Keynote Address, March 3, 2011, Ghaziabad, Uttar Pradesh, India
- IP 10. "Neo Cortical Simulation: Hardware, Software and Future Directions," ITNG 2009 Keynote Address, April 27, 2009, Las Vegas, NV
- IP 09. "Advanced Computation and Visualization," *Nevada KEEP Seminar* February 27, 2007
- IP 08. "Neo Cortical Simulation: Software Design and Future Directions," *INCF Workshop on Large-scale Modeling of the Nervous System* Karolinska Institute, Stockholm, Sweden, December 12, 2006
- IP 07. "Cool Science, Cool Places, Cool Things," *Northern Nevada Math Council: Math and Science Mini-Conference* Reno, NV, October 13, 2006

- IP 06. “Advanced Computation and Immersive Visualization” Junior Science Humanities Symposium for Western Nevada and Northern California. Reno, NV, March 9-11, 2006
- IP 05. “Advanced Computation and Visualization” Honors Program Lecture Series, University of Nevada, Reno, September 28, 2005.
- IP 04. “Advanced Computation and Visualization” Computational Science Workshop Reno, NV, June 19-25, 2005.
- IP 03. “Cool Science, Cool Places, Cool Things,” *Nevada KEEP Seminar* March 15, 2005
- IP 02. “Cool Science, Cool Places, Cool Things” *Nevada Regional Science Bowl* Las Vegas, NV February 11-12, 2005.
- IP 01. “Cluster Computing and Beyond” *2002 Government Information Technology Conference* Carson City, NV, October 16, 2002.

FUNDED PROPOSALS:

- FP 28. *Elements: Innovating for Edge-to-Edge Climate Services*
Co-PI with Sergiu Dascalu (PI), Stephanie McAfee (Co-PI), Scotty Strachan (Co-PI)
NSF, July 1, 2022 - June 30, 2025
\$589,234
- FP 27. *CC* Compute: Nevada Bridge to AI-enabled Scientific & Engineering Computing (NvBAISEC)*
Co-PI with Alireza Tavakkoli (PI), Kenton Sanders (Co-PI), Tanya Kelley (Co-PI), Michael Webster (Co-PI)
NSF, July 1, 2022 - June 30, 2025
\$400,000
- FP 26. *Collaborative Research: A Student-Centered Personalized Learning Framework to Advance Undergraduate Robotics Education*
Co-PI with Rui Wu (PI), David Feil-Seifer (UNR-PI), Sergiu Dascalu (Co-PI)
NSF, July 1, 2022 - June 30, 2025
\$600,000
- FP 25. *RII Track 1: Harnessing the Data Revolution for Fire Science*
PI with Hans Moosmuller (Science Lead and Co-PI-DRI), Scotty Strachan (Co-PI-NSHE), Haroon Stephen (Co-PI-UNLV), Alireza Tavakkoli (Co-PI-UNR)
NSF, June 1, 2022 - May 31, 2027
\$20,000,000 + \$4,000,000 state match
- FP 24. *RII Track-2 FEC: Leveraging Big Data to Improve Prediction of Tick-Borne Disease Patterns and Dynamics*
(Co-PI Nevada) with Xiaogang Ma (PI-Idaho), Barrie Robinson (Co-PI Idaho), and Xun Shi (Co-PI Dartmoth)
NSF, August 1, 2020 - July 31, 2024
\$5,830,709
- FP 23. *The Solar Energy-Water-Environment Nexus in Nevada*
PI and UNR CO-PI with Gayle Dana (former PI), Sergiu Dascalu (Co-PI-UNR), Jacimaria Batista (Co-PI-UNLV), Markus Berli (Co-PI-DRI), and Robert F Boehm (Co-PI-UNLV)
NSF, August 1, 2013 - April 30, 2019
\$20,000,000 + \$4,000,000 state match
\$802,969 NSF supplemental through - May 31, 2020
\$802,969 NSF supplemental through - May 31, 2021
\$778,481 NSF supplemental through - Nov 30, 2022
- FP 22. *Collaborative Research: The Western Consortium for Watershed Analysis, Visualization, and Exploration (WC-WAVE)*
Co-PI and Tri-State Visualization Component Lead with Gayle Dana (NV-PI), William Michener (NM-PI), Peter Goodwin (ID-PI), Sajjad Ahmad (NV Co-PI), Thomas Jackman (NV Co-PI)
NSF, July 1, 2013 - June 30, 2017,
\$6,000,000
- FP 21. *Project Synapse,*
DARPA/HRL,
PI with Phillip H. Goodman

Phase 0: \$203,086 November 4, 2008 - September 6, 2009

Phase 1: \$175,095 September 7, 2009 - March 28, 2011,

FP 20. *Cyberinfrastructure Development for the Western Consortium of Idaho, Nevada, and New Mexico,*

Tri-State CI Component Lead and UNR PI - with Gayle Dana (PI-NV), William Michner (Co-PI-NM), Greg Bohach (Co-PI-ID),

NSF, October 1, 2009 - June 30, 2013,

\$6,000,000

FP 19. *Cortical Microcircuit Dynamics*

PI with Phillip H. Goodman and Sergiu Dascalu

ONR, October 1, 2009-March 30, 2013.

\$827,466.00.

FP 18. *Nevada Infrastructure for Climate Change Science, Education, and Outreach,*

Senior Personnel and CI Steering Committee Member with Gayle Dana (PI), Tom Pichote (UNLV Co-PI), Nick Lancaster (DRI Co-PI), Scott Mensing (UNR Co-PI)

NSF, September 1, 2008 - August 30, 2013,

\$15,000,000 + \$3,000,000 state match

FP 17. *Exploring Planetary Surfaces: Earth, Moon, and Mars,*

NASA EPSCoR,

CO-PI with Chris Fritzen (PI), Wendy Calvin, Nick Lancaster, Henry Sun, Sergiu Dascalu, Scott Bassett,

NASA, September 1, 2007 - August 31, 2010,

\$1,500,000

FP 16. *Parallel Beowulf Computing Phase IV*

DURIP 2007

CO-PI with Phillip H. Goodman (PI)

Office of Naval Research, June 1, 2007 - May 30, 2008

\$287,000.00

FP 15. *Cortical Microcircuit Dynamics*

CO-PI with Phillip H. Goodman (PI)

ONR, October 1, 2006-September 30, 2009.

\$877,000.00.

FP 14. *Scientific Visualization*

PI

NSF EPSCoR, November 1, 2005 - January 31, 2006

\$16,110.00

FP 13. *Immersive Visualization*

Senior Personnel at DRI

DoD-STTC, July 1, 2004 - June 30, 2010

\$8,200,477.00

FP 12. *Development of a Nationally Competitive Program in Computer Vision Technologies for Effective Human-Computer Interaction in Virtual Environments,*

CO-PI with George Bebis (PI), Angelo Yfantis, and Peter Stubberud

NASA, September 1, 2004 - August 31, 2006.

\$520,892.00

- FP 11. *Modeling the Effect of Mountainous Terrain on Stratospheric/Tropospheric Exchange, Atmospheric Chemistry, Deposition and Water Quality*,
CO-PI with William Stockwell(PI), Gayle Dana, Vanda Grubisic, Darko Koracin, and John Lewis
NASA, September 1, 2004 - August 31, 2006.
\$496,170.00
- FP 10. Brain Simulation
PI, Sun Microsystems September 10, 2004
\$101,189.00
- FP 09. Parallel Beowulf Computing Phase III
DURIP 2004
CO-PI with Phillip H. Goodman(PI)
Office of Naval Research, June 1, 2004 - May 30, 2005
\$250,000.00
- FP 08. *Models of Cortical Microcircuit Dynamics*,
CO-PI with Phillip H. Goodman(PI)
ONR, July 1, 2003-June 30, 2006.
\$660,000.00
- FP 07. Parallel Beowulf Computing Phase II
DURIP 2002
CO-PI with Phillip H. Goodman(PI)
Office of Naval Research, June 1, 2002 - May 30, 2003
\$240,952.00
- FP 06. *Advanced Computing in the Environmental Sciences*,
CO-PI with Vanda Grubisic(PI), Ania Panorska, David Benson, Doug Boyle, Gayle Dana, Giles Marion, Jichun Li, Joe McConnell, Kelly Redmond, Kenneth McGwire, Peter Barber, Regina Tempel, Lyle Pritchett, Angkul Kongmunvattana, Ahmed Hassan
NSF, January 1, 2002 - December 31, 2004.
\$3,500,000.00.
- FP 05. *Development of a Nationally Competitive Program in Computer Vision Technologies for Effective Human-Computer Interaction in Virtual Environments*,
CO-PI with George Bebis(PI), Angelo Yfantis, and Peter Stubberud
NASA, October 1, 2001 - September 30, 2004.
\$1,148,940
- FP 04. *Modeling the Effect of Mountainous Terrain on Stratospheric/Tropospheric Exchange, Atmospheric Chemistry, Deposition and Water Quality*,
CO-PI with William Stockwell(PI), Gayle Dana, Vanda Grubisic, Darko Koracin, and John Lewis
NASA, October 1, 2001 - September 30, 2004.
\$1,094,412
- FP 03. Parallel Beowulf Computing Phase I
DURIP 2001
CO-PI with Phillip H. Goodman(PI) and Sushil Louis
Office of Naval Research, March 1, 2001 - February 28, 2002
\$265,000.00

FP 02. *Cortical Microcircuit Dynamics*

CO-PI with Phil Goodman(PI), Henrey Markram, and Sushil Louis

Office of Naval Research, April 1, 2000 - May 31, 2003.

\$541,325

FP 01. *Development of a Mine Truck Driving Simulator Program for Accident prevention*

CO-PI with Pierre Mousset-Jones(PI)

Nevada Division of Industrial Relations, Newmont Gold Co., and Echo Bay Minerals Co. Oct 2,1996 - Set 30, 1998.

\$19,200

TEACHING EXPERIENCE:

Introduction to Computer Science
Computer Applications
Computer Science I
Computer Science II
Introduction to PASCAL Programming
Introduction to BASIC Programming
Introduction to C Programming
Introduction to MODULA-II Programming
Programming Methodology
Computer Systems Laboratory: C and Unix
Data Structures
Programming Languages
Compiler Construction
Parallel Computation
Computer System Administration
Computer Graphics
Topics: Programming Contest
Topics: Biomedical Computing
Topics: Programming Languages
Compilers and Translators
Parallel and Distributed Processing
Seminar: Advanced Graphics
Topics: Advanced Graphics
Topics: GPU Computing
Topics: Virtual Reality
Topics: Affective Computing

ACADEMIC SUPERVISION:**Ph.D. Degree:****PhD 14. Jalal Hasan Ahmed Al Kiswani**

“Smart-Cloud: A Framework for Cloud Native Applications Development,”

Ph.D., Computer Science and Engineering,

University of Nevada, Reno,

May, 2019.

Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

PhD 13. Yan Yan

“Robust Fuzzy Cluster Ensemble on Cancer Gene Expression Data,”

Ph.D., Computer Science and Engineering,

University of Nevada, Reno,

May, 2019.

PhD 12. Rui Wu

“Framework for Large Data Processing under Constrained Resources”,

Ph.D., Computer Science and Engineering,

University of Nevada, Reno,

May, 2018.

Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

PhD 11. Damien Ennis

“Using Pre- and Post-Process Labeling Techniques for Cluster Analysis”,

Ph.D., Computer Science and Engineering,

University of Nevada, Reno,

December, 2014.

PhD 10. Roger V. Hoang

“An Extensible Component-based Approach to Simulation Systems on Heterogeneous Clusters”,

Ph.D., Computer Science and Engineering,

University of Nevada, Reno,

May, 2014.

PhD 09. Corey M. Thibeault

“Computational Neuroscience: Theory, Development and Applications in Modeling the Basal Ganglia,”

Ph.D. Biomedical Engineering,

University of Nevada, Reno,

December, 2012.

Co-Advised with Dr. Narayan Srinivasa (HRL)

PhD 08. Mukesh Motwani

“Third Generation 3D Watermarking: Applied Computational Intelligence Techniques,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

August, 2011.

PhD 07. Adrienne E. Breland

“A Fast-Graph Approach to Modeling Similarity of Whole Genomes,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

August 2011.

Co-Advised with Dr. Karen Schlauch (UNR-Bioinformatics)

PhD 06. Laurence Christine Jayet Bray

“A Circuit-Level Model of Hippocampal, Entorhinal and Prefrontal Dynamics Underlying Rodent Maze Navigational Learning,”

Ph.D. Biomedical Engineering Program,

University of Nevada, Reno,

December 2010.

Co-Advised with Dr. Philip H. Goodman (UNSoM)

PhD 05. Rakhi Motwani

“A Voice-Based Biometric Watermarking Scheme For Digital Rights Management of 3D Mesh Models,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

May 2010

PhD 04. Bei Yuan

“Towards Generalized Accessibility of Video Games for the Visually Impaired,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

May 2009.

Co-Advised with Dr. Eelke Folmer (UNR CSE)

PhD 03. Sara Nasser

“Fuzzy Sequence Classification and Assembly of Environmental Genomes,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

May 2007

PhD 02. Beifang Yi

“A Framework for a Sign Language Interfacing System,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

May 2006

PhD 01. Judith R. Fredrickson

“On the Crossing Number of Complete Graphs,”

Ph.D. Computer Science and Engineering,

University of Nevada, Reno,

May 2006

M.S. Degree:**MS 84. Christopher John Lewis**

“Virtual Reality Applications and Development,”

MS Computer Science and Engineering, University of Nevada, Reno,

August 2022

MS 83. Justice Steven Colby

“American Sign Language Gesture Recognition using Motion Tracking Gloves in VR,”

MS Computer Science and Engineering, University of Nevada, Reno,

May 2022

MS 82. Brianna Blain-Castelli

“Facilitating Data Driven Research Through a Hardware- and Software-Based Cyberinfrastructure Architecture,”

MS Computer Science and Engineering University of Nevada, Reno,

Co-Advised with Dr. Sergiu Dascalu (UNR CSE)

May 2022

MS 81. Andrew Edward Munoz

“LDAT: A Web Data Visualization Tool for LiDAR Point Cloud Data Analysis,”

MS Computer Science and Engineering University of Nevada, Reno,

Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

August 2021.

MS 80. Andrew Flangas

“Virtual Reality: Locomotion, Multi-player, and External Camera Integration,”

MS Computer Science and Engineering University of Nevada, Reno,

May 2021.

MS 79. Xiang Li

“Private Multi-Cloud Architectural Solutions for NRDC Data Streaming Services,”

MS Computer Science and Engineering University of Nevada, Reno,

December 2020.

MS 78. Lucas Emio Antonio Calabrese

“A Software Template for Multi-User Virtual Reality Applications,”

MS Computer Science and Engineering University of Nevada, Reno,

August 2020.

MS 77. Kurt T. Andersen

“A Comparison of Effectiveness and Immersion of Different Gait Techniques in Virtual Reality,”

MS Computer Science and Engineering University of Nevada, Reno,

December 2019.

MS 76. Connor Francis Scully-Allison

“Keystone: A Streaming Data Management Model for the Environmental Sciences,”

MS Computer Science and Engineering University of Nevada, Reno,

May 2019.

Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 75. Samuel Francis Delaney

“RealPi - A Real Time Operating System on the Raspberry Pi,”

MS Computer Science and Engineering, University of Nevada, Reno,

December 2018.

Co-Advised with Dr. Dwight Egbert (UNR CSE)

MS 74. Andy Mario Garcia

“An Advanced Wildfire Simulator: vFirelib.v2,”

MS Computer Science and Engineering, University of Nevada, Reno,
December 2018.

MS 73. Vinh Dac Le

“Microservice-Based System for Environmental Science Software Applications,”

MS Computer Science and Engineering, University of Nevada, Reno,
August 2018.

Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 72. Hannah Jane Muñoz

“CSEWIS: Cloud and Snow Estimates from Webcam Image Streams,”

MS Computer Science and Engineering University of Nevada, Reno,
August 2018.

Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 71. Daniel Anthony Lopez

“Evolving GPU-Accelerated Capsule Networks,”

MS Computer Science and Engineering University of Nevada, Reno,
August 2018

MS 70. Aswathi Mohan

“A Web-Based Application for Automatic Evaluation of Programming Assignments,”

MS Computer Science and Engineering University of Nevada, Reno,
August 2017.

MS 69. Jose Thomas Painumkal

“Solutions for Improving Model Simulation in the Virtual Watershed Platform,”

MS Computer Science and Engineering University of Nevada, Reno,
August 2017.

Co-Advised with Sergiu M. Dascalu (UNR CSE)

MS 68. Nolan Perry Burfield

“New Money Data Vending,”

MS Computer Science and Engineering University of Nevada, Reno,
December 2016.

MS 67. Cameraon Jason Rowe

“A Web Based Application for Model Creation and Output Visualization with the NCS Brain Simulator,”

MS Computer Science and Engineering University of Nevada, Reno,
May 2016.

MS 66. Marlon Daniel Chavez

“HeartMate: A Competitive and Motivational Fitness Application for iOS Devices,”

MS Computer Science and Engineering University of Nevada, Reno,
May 2016.

MS 65. Chase Dwayne Carthen

“Rewind: A Music Transcription Method,”

MS Computer Science and Engineering University of Nevada, Reno,
May 2016.

MS 64. Jessica Elizabeth Smith

“vFireLib: A Forest Fire Simulation Library Implemented on the GPU,”
MS Computer Science and Engineering University of Nevada, Reno,
May 2016.

MS 63. Rui Wu

“Environment for Large Data Processing and Visualization Using MongoDB,”
MS Computer Science and Engineering University of Nevada, Reno,
December 2015.
Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 62. Christine Johnson

“A Centralized Service for Accessing the NCS Brain Simulator Through a Web Interface,”
MS Computer Science and Engineering University of Nevada, Reno,
December 2015.

MS 61. Joshua Hegie

“A Parallel Application for Tree Selection in the Steiner Minimal Tree Problem,”
MS Computer Science and Engineering University of Nevada, Reno,
August 2015.

MS 60. Erin S. Keith

“Optimizing Local Least Squares Regression for Short Term Wind Prediction,”
MS Computer Science and Engineering University of Nevada, Reno,
August 2015.

MS 59. Thomas J. Kelly

“Neocortical Virtual Robot: A Framework to Allow Simulated Brains to Interact With a
Virtual Reality Environment,”
MS Computer Science and Engineering University of Nevada, Reno,
May 2015

MS 58. William C. Kurt

“Talks in Maths: Visualizing Repetition in Text and the Fractal Nature of Lyrical Verse,”
MS Computer Science and Engineering University of Nevada, Reno,
August 2014

MS 57. Devyani Tanna

“NCS: Neuron Models, User Interface, and Modeling,”
MS Computer Science and Engineering University of Nevada, Reno,
August 2014

MS 56. Nathan Michael Jordan

“HTTP-based Solutions to The Extension of the NCS Brain Simulator,”
MS Computer Science and Engineering University of Nevada, Reno,
May 2014

MS 55. Torbjorn Loken

“A Comparison of Massively Parallel Programming Models Through Applications in Sound
Propagation and Jitter Measurement,”
MS Computer Science and Engineering University of Nevada, Reno,
May 2014

MS 54. Derek Eiler

“The Cooperative Defense Overlay Network: A Collaborative Automated Threat Information
Sharing Framework for a Safer Internet,”

MS Computer Science and Engineering University of Nevada, Reno,
May 2014

MS 53. Gareth B. Ferneyhough

“A Python Library for Ion Channel Modeling,”
MS Computer Science and Engineering University of Nevada, Reno,
May 2013.

MS 52. Corey M Thibeault

“Applications in Neurorobotics,”
MS Computer Engineering University of Nevada, Reno,
December 2012.

MS 51. Aarti K. Dhone

“A Video Library Management Software Toolkit for the Nevada Climate Change Portal,”
MS Computer Science University of Nevada, Reno,
August 2012.
Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 50. Chad E. Feller

“Beyond Monitoring: Proactive Server Preservation in an HPC Environment,”
MS Computer Science University of Nevada, Reno,
May 2012.

MS 49. Joseph M. Vesco

“Semi-Automated Analysis Software for a Novel Biochemistry Assay,”
MS Computer Science University of Nevada, Reno,
December 2011.

MS 48. Victor Ivanov

“VIVA: A Survey management Toolkit,”
MS Computer Science University of Nevada, Reno,
August 2011.
Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 47. Cody J. White

“Out-of-Core Data Management for Planetary Terrain,”
MS Computer Science University of Nevada, Reno,
May 2011.

MS 46. Joseph D. Mahsman

“Projective Grid Mapping for Planetary Terrain,”
MS Computer Science University of Nevada, Reno,
December 2010.

MS 45. Michael E. Levrington

“The Five Step Programming Process,”
MS Computer Science, University of Nevada, Reno,
December 2010.

MS 44. Eugene O. Essa

“ACAT: ABET Course Assessment Tool,”
MS Computer Science, University of Nevada, Reno,
May 2010.
Co-Advised with Dr. Sergiu M. Dascalu (UNR CSE)

MS 43. Matthew Sgambati

“Immersive Visualization and Analysis of Ground Penetrating Radar Data,”
MS Computer Science, University of Nevada, Reno,
May 2010.
Co-Advised with Dr. Daniel S. Coming (UNR CSE)

MS 42. Roger V. Hoang

“Wildfire Simulation on the GPU,”
MS Computer Science, University of Nevada, Reno,
December 2008

MS 41. David T. Brown

“Identification of Tree Locations in Geographic Images,”
MS Computer Engineering, University of Nevada, Reno,
December 2008

MS 40. Jeremy W. Murray

“Conversion of Thin Surface Solids to BSP Solid Sets: with Visualization and Simulation Applications,”
MS Computer Science, University of Nevada, Reno,
August 2008.

MS 39. Michael J. Smith

“Sandstorm: A Dynamic Multi-contextual GPU-based Particle System using Vector Fields for Particle Propagation,”
MS Computer Science, University of Nevada, Reno,
May 2008

MS 38. John R. Kearney

“A Unique Instrumentation System Design for Measuring Forces on a Rotating Shaft,”
MS Computer Engineering, University of Nevada, Reno,
May 2008

MS 37. Jesse D. Phillips

“Scripted Artificially Intelligent Basic Online Tactical Simulation,”
MS Computer Science, University of Nevada, Reno,
May 2008

MS 36. Adrienne E. Breland

“A Supervised Strain Classifier,”
MS Computer Science, University of Nevada, Reno,
May 2008

MS 35. John L. Kenyon

“CHIMP The C/C++ Hybrid Imperative Meta-Programmer,”
MS Computer Science, University of Nevada, Reno,
May 2008

MS 34. Milind A. Zirpe

“RAIN and NCS5 Benchmarks,”
MS Computer Science, University of Nevada, Reno,
December 2007.

MS 33. Michael P. Dye

“Vesuvius: Interactive Atmospheric Visualization in a Virtual Environment,”

MS Computer Science, University of Nevada, Reno,
December 2007.

MS 32. William E. Brandstetter III

“Multi-Resolution Deformation in Out-of-Core Terrain Rendering,”
MS Computer Science, University of Nevada, Reno,
December 2007.

MS 31. Michael A. Penick

“VFIRE: Virtual Fire in Realistic Environments A Framework for Wildfire Visualization in Immersive Environments,”
MS Computer Science, University of Nevada, Reno,
May 2007.

MS 30. Linda Humphrey

“Efficient Generation of Minimal Graphs Using Independent Path Analysis,”
MS Computer Engineering, University of Nevada, Reno,
December 2006.

MS 29. Qunming Peng

“Brainstem: A NeoCortical Simulator Interface for Robotic Studies,”
MS Computer Science, University of Nevada, Reno,
December 2006.

MS 28. Joseph Richard Jaquish

“Terrain Analyzing in a Virtual Environment with Real-Time Native Shape Creation,”
MS Computer Science, University of Nevada, Reno,
December 2005.

MS 27. Marcel Andrew Levy

“Ringermute: An audio data mining toolkit,”
MS Computer Science, University of Nevada, Reno,
August 2005.

MS 26. Jeffery Alan Stuart

“A Unified Approach for Cross-Platform Software Development,”
MS Computer Science, University of Nevada, Reno,
August 2005.

MS 25. James G. King

“Brain Communication Server: A Dynamic Data Transferal System for A Parallel Brain Simulator,”
MS Computer Science, University of Nevada, Reno,
May 2005.

MS 24. Rich Drewes

“Brainlab: a toolkit to aid in the design, simulation, and analysis of spiking neural networks with the NCS environment,”
MS Computer Science, University of Nevada, Reno,
May 2005.

MS 23. Scott Crow

“Evolution of the Graphical Processing Unit,”
MS Computer Science, University of Nevada, Reno,
May 2005.

MS 22. Bei Yuan

“A Generic Queuing System and Time Saving Region Restrictions for Calculating the Crossing Number of K_n ,”

MS Computer Science, University of Nevada, Reno,
August 2004.

MS 21. Brian Westphal

“The Redwood Programming Environment,”

MS Computer Science, University of Nevada, Reno,
August 2004.

MS 20. James Frye

“Parallel Optimization of a NeoCortical Simulation Program,”

MS Computer Science, University of Nevada, Reno,
December 2003.

MS 19. Sean Martin

“A Parallel Queuing System for Computationally Intensive Problems on Medium to Large Beowulf Clusters,”

MS Computer Engineering, University of Nevada, Reno,
December 2003.

MS 18. Juan Carlos Macera

“Design and Implementation of a Hierarchical Robotic System: a Platform for Artificial Intelligence Investigation,”

MS Computer Engineering, University of Nevada, Reno,
December 2003.

MS 17. Beifang Yi

“Virtual Hand: a HCI Testbed for Computer Vision Research on the Human Hand,”

MS Computer Engineering, University of Nevada, Reno,
August 2003.

MS 16. Wenwu Chen

“Parallel Computation, Pattern Recognition, and Scientific Visualization,”

MS Computer Engineering, University of Nevada, Reno,
August 2003.

MS 15. Kishor Waikul

“Implementation of the Integrated Courseware Manager for Computer Science,”

MS Computer Science, University of Nevada, Reno,
May 2003.

MS 14. Alina Solovyova-Vincent

“Parallel Implementation of the Inversion of Polynomial Matrices,”

MS Computer Science, University of Nevada, Reno,
May 2003.

MS 13. Mukesh Motwani

“Robust 3D Head Pose Classification using Wavelets,”

MS Computer Engineering, University of Nevada, Reno,
May 2003.

MS 12. Benjamin J. Lucchesi

“A Parallel Linear Octree Collision Detection Algorithm,”

MS Computer Science, University of Nevada, Reno,
May 2002.

MS 11. E. Courtenay Wilson

“Parallel Implementation of a Biologically Correct Neo-Cortical Neural Network Simulator,”
MS Computer Engineering, University of Nevada, Reno,
August 2001.

MS 10. Mohammed Islam

“Implementation of Interactive Course Web Site,”
MS Computer Science, University of Nevada, Reno,
August 2000.

MS 09. Lu-Chun Liao

“Large Scale Software Transitions: A Case Study of the Second Half of MFIRE,”
MS Computer Science, University of Nevada, Reno,
August 2000.

MS 08. Lingjiang Cheng

“Large Scale Software Transitions: A Case Study of the First Half of MFIRE,”
MS Computer Science, University of Nevada, Reno,
May 2000.

MS 07. Damien Ennis

“A Computer Analysis of Hit Frequency for a Complex Video Gaming Machine,”
MS Computer Science, University of Nevada, Reno,
May 2000.

MS 06. Ulvi Cetin

“A Foundation for On-Line Course Ware,”
MS Computer Science, University of Nevada, Reno,
May 2000.

MS 05. Umid Tadjiev

“Parallel computation and graphical visualization of the minimum crossing number of a graph,”
MS Computer Science, University of Nevada, Reno,
August 1998.

MS 04. Guo-Liang Sun

“Image Maker,”
MS Computer Science, University of Nevada, Reno,
May 1998.

MS 03. Jane A. Niehues-Brooks

“Automated Digital Image Analysis of Video Ice Crystal Data,”
MS Computer Science, University of Nevada, Reno,
December 1997.

MS 02. Marat Zhaksilikov

“Parallel Genetic Algorithms: A Survey and Comparative Study,”
MS Computer Science, University of Nevada, Reno,
May 1997.

MS 01. Pingyan Tan

“A Lowcost Algorithm for Dynamic Multicast Routing in Computer Networks,”

MS Computer Science, University of Nevada, Reno,
December 1995.

Post Doctoral Scholar Supervision:**PD 05. Riad Belkhatir**

High Performance Computation and Visualization Lab:
January 2016 - May 2016
Co-Supervised with Dr. Sergiu Dascalu

PD 04. Sohei Okamoto

High Performance Computation and Visualization Lab:
January 2012 - October 2012
Co-Supervised with Dr. Sergiu Dascalu

PD 03. Laurence Jayet Bray

Brain Computation Lab:
January 2011 - June 2013

PD 02. Adrienne Breland

High Performance Computation and Visualization Lab:
August 2011 - June 2012
Co-Supervised with Dr. Sergiu Dascalu

PD 01. Rakhi Motwani

High Performance Computation and Visualization Lab:
May 2010 - December 2010
Co-Supervised with Dr. Sergiu Dascalu

Visiting Scholar:**VS 01. Norhaslinda Kamaruddin**

Fulbright Malaysian Scholar Program:
January 2022 - June 2022
Universiti Teknologi MARA, Malaysia

AWARDS:**Teaching Awards:**

- May 2020 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- May 2018 Senior Scholar Mentor, College of Engineering, University of Nevada, Reno
- December 2017 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- May 2017 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- May 2017 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- May 2016 Senior Scholar Mentor, College of Engineering, University of Nevada, Reno
- May 2016 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- December 2015 Senior Scholar Mentor, College of Engineering, University of Nevada, Reno
- December 2014 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- May 2013 Senior Scholar Mentor, College of Engineering, University of Nevada, Reno
- May 2013 Honors Program Convocation, Graduate Mentor, University of Nevada, Reno
- May 2007 Honors Program Cording Ceremony, Graduate Mentor, University of Nevada, Reno
- May 2006 Honors Program Cording Ceremony, Graduate Mentor, University of Nevada, Reno
- Nominee, Nevada Regents Distinguished Teaching Award, 2005
- Fall 2005 Honors Program Cording Ceremony, Graduate Mentor, University of Nevada, Reno
- F. Donald Tibbitts University Distinguished Teacher Award, University of Nevada, Reno, May 11, 2005
- Who's Who Among America's Teachers, 9th edition, 2005.
- Runner-up, F. Donald Tibbitts University Distinguished Teacher Award, University of Nevada, Reno, May 12, 2004
- Fall 2003 Senior Scholar Mentor, College of Engineering, University of Nevada, Reno
- Who's Who Among America's Teachers, 7th edition, 2002.
- Who's Who Among America's Teachers, 6th edition, 2000.
- Runner-up, F. Donald Tibbitts University Distinguished Teacher Award, University of Nevada, Reno, May 12, 1999
- Nominee, Nevada Regents Academic Advising Award, 1999.
- Who's Who Among America's Teachers, 5th edition, 1998.

- Who's Who Among America's Teachers, 4th edition, 1996.
- Outstanding Graduate Teaching Assistant, College of Sciences, Clemson University, April 3, 1993
- Outstanding Graduate Teaching Assistant, Department of Computer Science, Clemson University, April 3, 1993

Research Awards:

- Best Paper Award, 18th International Conference on Information Technology : New Generations (ITNG 2021), Las Vegas, NV April 2021
- Best Paper Finalist, 35th International Conference on Computers and Their Applications (CATA-2020), San Francisco, CA, March 2020.
- Best Paper Award, The 16th International Conference on Information Technology : New Generations (ITNG 2019), April 1-3, Las Vegas, NV.
- Best Paper Award, The 13th International Conference on Information Technology : New Generations (ITNG 2016), April 1-3, Las Vegas, NV.
- Best Paper Award Runner-Up, 26th International Conference on Computers and Their Applications in Industry and Engineering, (CAINE-2013), Los Angeles, CA, March 2013.
- Best Paper Award, 25th International Conference on Computers and Their Applications, (CATA-2010), New Orleans, LA, March 2010.
- Best Paper Award, 21st International Conference on Computers and Their Applications in Industry and Engineering, (CAINE-2008), Honolulu, HI, March 2008.
- Best Paper Award, 21st International Conference on Computers and Their Applications, (CATA-2006), Seattle, WA, March 2006.
- Best Paper Award, Information Systems Development Session, The 7th World Multi-conference on Systemics, Cybernetics and Informatics (SCI 2003) Orlando, FL, July, 2003.
- Second Place, Paper Competition, *CCCS 4th Annual Conference*, Clemson University, Clemson, SC, Nov 11-12, 1993
- CCCS Research Assistantship, Clemson University, August 1993
- Highest rated paper, ACM 30th Southeast Conference, North Carolina State University, Raleigh, NC April 8-10, 1992
- NASA Research Assistantship, Clemson University, August 1989
- Dept. of Defense Research Assistantship, Clemson University, May 1989

Other Awards:

- Donald W. Reynolds, Nevada Governor's Cup Award, May 2014 (2nd place)
- Senior Member, ISCA, 2013.
- Senior Member, ACM, 2011.
- Sabbatical, University of Nevada, Reno, July 2007 - June 2008.
- Nevada Honor Court Inductee University of Nevada, Reno, June 23, 2005, 2022
- Upsilon Pi Epsilon membership, Computer Science Honor Society, Clemson University, November 1990
- Graduate Assistant Excellence Award, Bob Jones University, April 1988

- Bank of America Achievement Award in Science and Mathematics, August 1982
- Who's Who Among American High School Students, 1982
- Who's Who Among American High School Students, 1981

OTHER PROFESSIONAL ACTIVITIES:**Editor in Chief:**

- International Journal of Computers and Their Applications
January 2013–December 2018

Board of Directors:

- International Society for Computers and Their Applications
Member: January 2010-December 2019
Vice President: January 2010-December 2013

Special Issue Guest Editor:

- International Journal of Computers and Their Applications,
Vol 30, No 1, March 2023.
with Rui Wu and Alex Redei
- International Journal of Computers and Their Applications,
Vol 29, No 1, March 2022.
with Rui Wu and Alex Redei
- International Journal of Computers and Their Applications,
Vol 28, No 1, March 2021.
with Rui Wu and Alex Redei
- International Journal of Computers and Their Applications,
Vol 27, No 1, March 2020.
with Sergiu M. Dascalu, Sharad Sharma, and Rui Wu
- International Journal of Computers and Their Applications,
Vol 26, No 1, March 2019.
with Sergiu M. Dascalu, and Sharad Sharma
- International Journal of Computers and Their Applications,
Vol 25, No 1, March 2018.
with Sergiu M. Dascalu, Sharad Sharma
- International Journal of Computers and Their Applications,
Vol 24, No 1, March 2017.
with Sergiu M. Dascalu, and Yan Shi
- International Journal of Computers and Their Applications,
Vol 23, No 1, March 2016.
with Gongzhu Hu, Takaaki Goto, Yan Shi, and Wenying Feng
- IEEE Transactions on Autonomous Mental Development
Vol 4, No 3, September 2012.
With Jeffrey L. Krichmar, Hava T. Siegelmann, and Hiroaki Wagatsuma
- International Journal of Computers and Their Applications,
Vol 18, No 4, December 2011.
with Gordon Lee and Fei Hu,

Referee for journals:

- Computer Engineering Research
- Computers and Graphics
- Discrete Mathematics
- Frontiers in Computational Neuroscience
- IBM Journal of Research and Development
- IEEE Computer
- IEEE Transactions on Education
- IEEE Transactions on Evolutionary Computation
- IEEE Transactions on Reliability
- IEEE Transactions on Software Engineering and Methodology
- IEEE Transactions on Visualization and Computer Graphics
- Information Processing Letters
- Intelligent Automation and Soft Computing
- International Journal of Computers and Their Applications
- Iranian Journal of Electrical and Computer Engineering
- ISRN Computer Graphics
- Neural Networks
- Networks
- PLoS ONE
- Science of Computer Programming
- Supercomputing
- Systems and Software
- Visual Communication and Image Representation

Program Committee member for annual conferences:

- 38th International Conference on Computers and Their Applications (CATA-2023),
- 37th International Conference on Computers and Their Applications (CATA-2022),
- 36th International Conference on Computers and Their Applications (CATA-2021),
- 35th International Conference on Computers and Their Applications (CATA-2020),
- The Eighth International Conference on Internet Technologies and Applications 2017 (ITA 2017)
- 32nd International Conference on Computers and Their Applications (CATA-2017),
- The Seventh International Conference on Internet Technologies and Applications 2016 (ITA 2016)
- 31st International Conference on Computers and Their Applications (CATA-2016),
- The Sixth International Conference on Internet Technologies and Applications 2015 (ITA 2015)
- 30th International Conference on Computers and Their Applications (CATA-2015),
- The Third International Conference on Communications, Computation, Networks and Technologies (INNOV 2015)

- 29th International Conference on Computers and Their Applications (CATA-2014),
- 23rd International Conference on Software Engineering and Data Engineering (SEDE 2014),
- The Third International Conference on Communications, Computation, Networks and Technologies (INNOV 2014)
- ISCA's 3rd International Conference on Advanced Computing and Communication, (ACC 2013)
- 28th International Conference on Computers and Their Applications (CATA-2013),
- The Second International Conference on Communications, Computation, Networks and Technologies (INNOV 2013)
- Workshop on Collaboration in Virtual Environments (CoVE-2013) at CTS-2013 (Co-Organizer with Dr. Sergiu Dascalu)
- 22nd International Conference on Software Engineering and Data Engineering (SEDE 2013),
- The First International Conference on Communications, Computation, Networks and Technologies (INNOV 2012)
- Workshop on Collaboration in Virtual Environments (CoVE-2012) at CTS-2012 (Co-Organizer with Dr. Sergiu Dascalu)
- The 11th International Workshop on System/Software Architectures (IWSSA 2012)
- 21st International Conference on Software Engineering and Data Engineering (SEDE 2012),
- 27th International Conference on Computers and Their Applications (CATA-2012),
- The 10th International Workshop on System/Software Architectures (IWSSA 2011)
- Sixth International Conference on Software Engineering Advances (ICSEA 2011),
- 20th International Conference on Software Engineering and Data Engineering (SEDE 2011),
- 26th International Conference on Computers and Their Applications (CATA-2011),
- Fourth International Conference on Internet Technologies and Applications (ITA 11),
- International Conference on Business Applications and Legal Issues (ICBALI-2011)
- The Fourth International Conference on Advances in Computer-Human Interaction, (ACHI 2011),
- The Third International Conference on Advances in Computer-Human Interaction, (ACHI 2010),
- 25th International Conference on Computers and Their Applications (CATA-2010),
- 19th International Conference on Software Engineering and Data Engineering (SEDE 2010),
- Visual Environments, Languages, and Tools for Software Engineering (VELT-SE)
- International Workshop on Visual Languages and Computing (VLC 2009): Special Session on Visual Languages and Environments in Software Engineering (VLE-SE)
- 18th International Conference on Software Engineering and Data Engineering (SEDE 2009),
- The Second International Conference on Advances in Computer-Human Interaction, (ACHI 2009),

- 24th International Conference on Computers and Their Applications (CATA-2009),
- Information Technology: New Generations, ITNG 2009: Special Session on Human Computer Interaction
- Information Technology: New Generations, ITNG 2009: Special Session on Software Engineering
- Internet Technologies and Applications 2009 (ITA 2009)
- 17th International Conference on Software Engineering and Data Engineering (SEDE 2008), June 30 - July 2, 2008, Omni Hotel, Los Angeles.
- The First International Conference on Advances in Computer-Human Interaction, (ACHI 2008), February 10-15, 2008 - St. Luce, Martinique
- The Third International Conference on Internet and Web Applications and Services (ICIW 2008), June 8-13, 2008 - Athens, Greece
- 23rd International Conference on Computers and Their Applications (CATA-2008), April 9-11, 2008, Hyatt Regency Cancun, Cancun, Mexico.
- Workshop on Software Specification and Modeling (ITNG-2008), Las Vegas, NV, April 7-9, 2008
- IEEE Virtual Reality (IEEE VR 2008), March 8-14, 2008, Reno, NV. Local Arrangements Co-Chair.
- 6th International Workshop on System/Software Architectures (IWSSA 2007)
- 17th International Conference on Software Engineering and Data Engineering (SEDE 2007), Las Vegas, July 2007
- Workshop on Software Specification and Modeling (ITNG-2007), Las Vegas, NV, April 2-4, 2007
- ISCA's 19th Computer Applications in Industry and Engineering (CAINE '06)
- 5th International Workshop on System/Software Architectures (IWSSA 2006)
- International Conference on Entertainment Systems and Applications (ENSYS-2006)
- ISCA's 18th Computer Applications in Industry and Engineering (CAINE '05) November 9-11, 2005.
- 4th International Workshop on System/Software Architectures (IWSSA '05)
- Software Engineering Research and Practice (SERP '05)
- Software Engineering Research and Practice (SERP '04)
- Golden West International Conference on Intelligent Systems (GWIC IV) June 12 - 14, 1995. Sir Francis Drake Hotel, San Francisco, CA

Special Session Organizer:

- Human Computer Interaction, (Co-Organizer with Dr. Sergiu Dascalu) Part of the 19th International Conference on Information Technology: New Generations, ITNG 2022, April 10-13, 2022, Las Vegas, Nevada, USA
- Virtual Reality Applications, Part of the 17th International Conference on Information Technology: New Generations, ITNG 2020, April 1-3, 2020, Las Vegas, Nevada, USA
- GPU Computing, Part of the 16th International Conference on Information Technology: New Generations, ITNG 2019, April 1-3, 2019, Las Vegas, Nevada, USA

- From Neuroscience to Robotics and Human-Computer Interfaces, A Special Session in memory of Philip Goodman, Part of the 2011 International Joint Conference on Neural Networks (IJCNN) July 31-Aug 5, 2011, San Jose, CA. With Jeffrey L. Krichmar, and Hava T. Siegelmann
- High Performance Information Retrieval and Visualization: Algorithms and Applications, part of The 2007 High Performance Computing & Simulation (HPCS'07) Conference, June 4 - 6, 2007, Prague, Czech Republic

Conference General Chair and Proceedings Editor:

- 31st International Conference on Software Engineering and Data Engineering (SEDE 2022), Online, Oct 17-19, 2022.
- 30th International Conference on Software Engineering and Data Engineering (SEDE 2021), Online, Oct 11-13, 2021.
- 29th International Conference on Software Engineering and Data Engineering (SEDE 2020), Online, Oct 19-20, 2020.
- 28th International Conference on Software Engineering and Data Engineering (SEDE 2019), San Diego, CA, USA, Sept. 30 - Oct 2, 2019.
- 27th International Conference on Software Engineering and Data Engineering (SEDE 2018), New Orleans, LA, USA, Oct 8-10, 2018.
- 26th International Conference on Software Engineering and Data Engineering (SEDE 2017), San Diego, CA, USA, Oct 2-4, 2017.
- 25th International Conference on Software Engineering and Data Engineering (SEDE 2016), Denver, CO, USA, Sept 26-28, 2016.
- 24th International Conference on Software Engineering and Data Engineering (SEDE 2015), San Diego, CA, USA, Oct 12-24, 2015.

Program Chair and Proceedings Editor:

- ISCA's 2nd International Conference on Advanced Computing and Communication, (ACC 2012) June 27-29, 2012, Omni, Los Angeles, CA
- ISCA's 23rd International Conference on Computer Applications in Industry and Engineering, (CAINE '10) November 12-14, 2010, Imperial Palace, Las Vegas, NV.
- ISCA's 21st International Conference on Computer Applications in Industry and Engineering, (CAINE '08) November 12-14, 2008, Sheraton Beachcomber, Honolulu, Hawaii.
- ISCA's 5th International Conference on Intelligent Systems (IS '96), June 19-21, 1996. Flamingo Hilton Hotel, Reno, Nevada.

Proceedings Associate Editor:

- Information Technology: New Generations (ITNG 2019)
April 1-3, 2019. Tuscany Suites, Las Vegas, NV
- Software Engineering Research and Practice (SERP '05)
June 27-30, 2005. Monte Carlo Resort, Las Vegas, NV
- Software Engineering Research and Practice (SERP '04)
June 21-24, 2004. Monte Carlo Resort, Las Vegas, NV

Referee, annual conferences:

- 9th International Conference on Industrial Informatics (IEEE INDIN 2011)

- IEEE Virtual Reality 2011
- IEEE Virtual Reality 2010
- International Conference on Internet and Web Applications and Services (ICIW'06)
- International Conference on Computational Intelligence for Modeling, Control and Automation (CIMCA 2005)
- International Conference on Computers and Their Applications (CATA '05)
- The Fifth International Conference on Computer Science and Informatics, February 27 - March 3, 2000.
- 1999 Annual Meeting of the ASEE Pacific Southwest Section.

Reviewer for book publishers:

- Addison Wesley Longman.
- Prentice Hall, Simon & Schuster Education Group.
- Computer Science Press, an imprint of W.H. Freeman and Company.
- DC Heath Publishing Co.
- Scott Jones, Inc. Publishers

Consultant to industry:

- IGT, Reno, NV, 1995-96
- Micro Pro International, Redwood City, CA, 1986-1992

Other:

- **Member, EPSCoR/IDeA Foundation Board**
2019-present
- **Member, EPSCoR/IDeA Foundation - Danek Award Selection Committee**
2023
- **Member, NSF EPSCoR Project Director Executive Committee**
At Large Member 2019-2021
Vice Chair 2021-2022
Chair 2022-2023
- **Member, Board of Trustees**
Northwest Baptist Seminary, Tacoma, WA, 1998-2002
Secretary of the Board 1999-2002

Academic Service, Current

- **Member, Department of Computer Science and Engineering Personnel Committee**
University of Nevada, Reno, 2007-present
- **Associate Dean for Faculty and Academic Affairs**
University of Nevada, Reno, 2023-present
- **ABET**
 - **ABET, Computing Accreditation Commission**
CAC Program Evaluator 2011-2017
CAC Team Chair 2017-2021
CAC Commissioner 2017-2021

- **ABET, Applied and Natural Science Accreditation Commission**
ANSAC Commissioner 2021-present
ANSAC Team Chair 2021-present

Academic Service, Past

- Departmental:
 - **Member, Department of Computer Science and Engineering Accreditation Committee**
University of Nevada, Reno, 2015-2023
 - **Member, Department of Computer Science and Engineering Curriculum Review Committee**
University of Nevada, Reno, 2022-2023
 - **Member, Department of Computer Science and Engineering Faculty Evaluation/Merit Committee**
University of Nevada, Reno, 1996-1998, 1999-2001, 2005-2007, 2015-2016
 - **Member, Department of Computer Science and Engineering Web Committee**
University of Nevada, Reno, 2013-2014
Chair 2013-2014
 - **Member, Department of Computer Science and Engineering Facilities Committee**
University of Nevada, Reno, 1995-1997, 2002-2007
 - **Member, Department of Computer Science and Engineering Graduate Committee**
University of Nevada, Reno, 2008-2009
 - **Coordinator, Computer Science Colloquium Series**
University of Nevada, Reno, 1994-95
 - **Member, Department of Computer Science and Engineering Undergraduate Committee**
University of Nevada, Reno, 1996-2007, 2008-2010, 2011-2013
Chair 1997-2007, 2011-2013
 - **Member, Department of Computer Science and Engineering Space Committee**
University of Nevada, Reno, 2014-2015
 - **Member, Department of Computer Science and Engineering Faculty Search Committee**
University of Nevada, Reno, 1999, 2000, 2000, 2001, 2002, 2002, 2003, 2003, 2006, 2013, 2013, 2013, 2014, 2014, 2015, 2015, 2022
Chair 1999, 2000, 2000, 2001, 2002, 2002, 2003, 2003, 2006,
- College:
 - **Associate Dean for Research College of Engineering**
University of Nevada, Reno, 2022-2023
 - **Member, College of Engineering Personnel Committee**
University of Nevada, Reno, 2003-2006, 2009-2012, 2014-2016
Chair 2009-2012, 2015-2016
 - **Member, CoE Differential Fees Committee**
University of Nevada, Reno, 2013-2014, 2017-2018
Chair 2017-2018

- **Member, College of Engineering Bylaws Committee**
University of Nevada, Reno, 2010-2012
Chair 2010-2012
- **Member, College of Engineering Building Committee**
University of Nevada, Reno, 2009-2010
- **Member, College of Engineering Curriculum Committee**
University of Nevada, Reno, 1997-2004, 2006-2007
- **Member, College of Engineering Banquet Committee**
University of Nevada, Reno, 1994-2001
- **Chair, College of Engineering Search Committee**
University of Nevada, Reno, 2000, 2012,
- **Member, College of Engineering Committee for the Engineering Center for Secondary Learning**
University of Nevada, Reno, 1996-1997
- **Member, College of Engineering Space Committee**
University of Nevada, Reno, 1995-1997
- **Member, Faculty Library Committee**
University of Nevada, Reno, 1995-96
- **Member of the College of Engineering Computer Systems Advisory Board**
University of Nevada, Reno, 1994-95
- **University:**
 - **Member, University Promotion and Tenure Committee**
University of Nevada, Reno, 2018-2021
 - **Member, Salary and Benefits Committee**
University of Nevada, Reno, 2018-2019
Chair 2018-2019
 - **Member, Faculty Senate**
University of Nevada, Reno, 2000-2003, 2014-2018
Chair Elect: 2015-2016
Chair: 2016-2017
Past-Chair: 2017-2018
 - **Member, Research and Grants Committee**
University of Nevada, Reno, 2015-2018
 - **Academic Leadership Council**
University of Nevada, Reno, 2015-2016
 - **Member, Campus Affairs Committee**
University of Nevada, Reno, 2015-2016
 - **Member, Facilities Resources Committee**
University of Nevada, Reno, 2015-2016
 - **Member, Program Review Committee**
University of Nevada, Reno, 2015-2016
 - **Member, Proposed UNCE, CABNR, AES Administrative Consolidation Review Committee**
University of Nevada, Reno, 2015-2016
 - **Member, Research Affairs Council**
University of Nevada, Reno, 2014-2015
 - **Member, CIO Search Committee**
University of Nevada, Reno, 2013, 2015

- **Member, Research Grid Steering Committee**
University of Nevada, Reno, 2006-2013
Chair 2006-2013
- **Member, Morale Task Force**
University of Nevada, Reno, 2005-2006
- **Member, Excellence in Teaching Program Advisory Board**
University of Nevada, Reno, 1999-2003
- **Member, Faculty Senate Nominating Committee**
University of Nevada, Reno, 2001, 2002, 2003.
- **Member, Distinguished Teaching Assistant Award Committee**
University of Nevada, Reno, 2005-2010
- **Member, President’s Council**
University of Nevada, Reno, 2016-2017
- **Member, Neuroscience Program Graduate Committee**
University of Nevada, Reno, 2014-2017
- **Member, Building Security and Access Committee**
University of Nevada, Reno, 2016-2017
- **Member, Student Fee Review Committee**
University of Nevada, Reno, 2016-2017
- **Member, Workday Change Network**
University of Nevada, Reno, 2016-2017
- **Member, Task Force on Work and Family**
University of Nevada, Reno, 1997
- System:
 - **Member, INBRE Bioinformatics Steering Committee**
Nevada System of Higher Education, 2006-2009
Chair 2006-2009
 - **Member, UCCSN Advisory Board for Advanced Computing in the Environmental Sciences**
2002-2006
 - **Member, Chancellor Search Committee Advisory Board**
Nevada System of Higher Education, 2016-2017
 - **Member, NSHE Committee of Faculty Senate Chairs**
Nevada System of Higher Education, 2016-2017

Member: ACM (Lifetime) (Senior Member), ISCA (Senior Member)