

# Frederick C. Harris, Jr.

Dept. of Computer Science & Engineering  
University of Nevada  
Reno, Nevada 89557  
phone: 775-784-6571  
e-mail: Fred.Harris@cse.unr.edu

## CITIZENSHIP: US

## EDUCATION:

Ph.D. Clemson University, Computer Science, 5/1994  
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:

Department of Computer Science and Engineering,  
University of Nevada, Reno, Nevada 89557

7/2007 - present Professor  
7/2000 - 6/2007 Associate Professor  
8/1994 - 6/2000 Assistant Professor

Desert Research Institute,  
Reno, Nevada 89512

3/2015-present 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  
Graduate Student Teaching Assistantship,  
CCCS Research Assistantship  
NASA Research Assistantship  
Department of Defense Research Assistantship

8/1986 - 5/1988: Department of Computer Science,  
Bob Jones University, Greenville, South Carolina 29614  
Graduate Student Teaching Assistantship

## PUBLICATIONS:

### Journals:

- 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
- 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)
- 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.
- Frederick C. Harris, Jr. “Editor’s Note: March 2016”, *International Journal of Computers and Their Applications*, Vol 23, No 1, pg 1, March 2016.
- 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.
- 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.
- Frederick C. Harris, Jr. “Editor’s Note: March 2015”, *International Journal of Computers and Their Applications*, Vol 22, No 1, pg 1, March 2015.
- 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.
- 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.
- 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.
- Frederick C. Harris, Jr. “Editor’s Note: March 2014”, *International Journal of Computers and Their Applications*, Vol 21, No 1, pg 1, March 2014.
- 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.
- 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.
- 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.

- 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.
- 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 Neurorobotics Through Emotional Speech Processing", *Frontiers in Neurorobotics*, Vol 7, No 8, April 2013.
- Frederick C. Harris, Jr. "Editor's Note", *International Journal of Computers and Their Applications*, Vol 20, No 1, pg 1, March 2013.
- 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.
- 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
- 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.
- 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.
- 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.
- Bei Yuan, Eelke Folmer, Frederick C. Harris, Jr. "Game Accessibility: a Survey", *Universal Access in the Information Society* Vol 10, issue 1, March, 2011.
- 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.
- 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
- Mukesh Motwani, Rakhi Motwani, and Frederick C. Harris, Jr., "Fragile Watermarking of 3D Models using Genetic Algorithms", *Journal of Electronic Science and Technology (JEST)* Vol 8, No 3, September 2010, pp 244-250.
- Rakhi Motwani, Mukesh Motwani, Frederick C Harris, Jr., and Sergiu M Dascalu "An Eigen-Normal Approach For 3D Mesh Watermarking Using Support Vector Machines", *Journal of Electronic Science and Technology (JEST)* Vol 8, No 3, September 2010, pp 237-243.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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 Natschlager, 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.
- 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.
- 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.
- 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.
- 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
- Beifang Yi, Frederick C. Harris, Jr., Ling Wang, and Yusong Yan “Generating Natural Hand Gestures in Real Time.” *IEEE Computing in Science and Engineering*, **7**, (3), May/June 2005, pp. 92-97.
- Ripplinger MC, Wilson CJ, King JG, J, Drewes R, Harris FC, and Goodman PH, “Computational Model of Interacting Brain Networks,” *Journal of Investigative Medicine*, **52**, (1), Jan 2004, pp. S155.
- Bei Yuan, Sean C. Martin, Judith R. Fredrickson, and Frederick C. Harris, Jr., “A Generic Queuing System for Computationally Intensive Problems.” *Congr. Numer.*, **171**, (2004) pp. 193–206.
- 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.
- Brian T. Westphal, Frederick C. Harris, Jr., and Sergiu M. Dascalu, “Snippets: Support for Drag-and-Drop Programming in the Redwood Environment.” *Journal of Universal Computer Science*, **10**(7), 2004, pp 859-871.

- Brian T. Westphal, Frederick C. Harris, Jr., and Sergiu M. Dascalu, “Redwood: A Visual Environment for Software Design and Implementation.” *WSEAS Transactions on Computers*, **3**(2), April 2004 pp 380-386.
- Juan Carlos Macera Rios, Philip H. Goodman, Rich Drewes, and Frederick C. Harris, Jr., “Remote-Neocortex Control of Robotic Search and Threat Identification” *Robotics and Autonomous Systems*, **46**(2), February 2004, pp 97-110.
- Pingyan Tan and Frederick C. Harris, Jr., “A Low-Cost Algorithm for Multicast Routing in Computer Networks,” *Congr. Numer.*, **145**, (2000) pp. 81–96.
- Frederick C. Harris, Jr., “Steiner Minimal Trees: Their Computational Past, Present, and Future,” *J. of Combin. Math. Combin. Comput.*, (**30**), (1999), pp. 195-220.
- John T. Thorpe, and Frederick C. Harris, Jr., “A Parallel Stochastic Optimization Algorithm for Finding Mappings of the Rectilinear Minimal Crossing Problem,” *Ars Comb.*, **43**, (1996), pp. 135 – 148.
- Frederick C. Harris, Jr., “An Introduction to Steiner Minimal Trees on Grids,” *Congr. Numer.*, **111**, (1995) pp. 3–17.
- Jean E. Dunbar, Frederick C. Harris, Jr., Sandra M. Hedetniemi, Stephen T. Hedetniemi, Alice A. McRae, and Renu C. Laskar, “Nearly Perfect Sets in Graphs,” *Discrete Math.* **138**(1995), pp. 229-246.
- Frederick C. Harris, Jr., “A Stochastic Optimization Algorithm for Steiner Minimal Trees,” *Congr. Numer.*, **105**, (1994) pp. 54 – 64.
- Robert Geist, A. Jefferson Offutt, and Frederick C. Harris, Jr., “Estimation and Enhancement of Real-Time Software Reliability through Mutation Analysis,” *IEEE Trans. on Comp., Special Issue on Fault-Tolerant Computing*, **41**(5)(1992), pp. 550-558.

#### Chapters in Books:

- 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.
- 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.
- 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.

#### Refereed Conferences:

- Jessica Smith, Lee Barford, Sergiu M. Dascalu, and Frederick C. Jr. Harris, Jr., “Highly Parallel Implementation of Forest Fire Propagation Models on the GPU” **Best Paper Finalist**, in *Proceedings of the 2016 International Conference on High Performance Computing and Simulations (HPCS 2016)* July 18-22, 2016, Innsbruck, Austria.
- Eric Klukovich, Mehmet Hadi Gunes, Lee Barford, and Frederick C. Jr. Harris, Jr., “Accelerating BFS Shortest Paths Calculations Using CUDA for Internet Topology Measurements” in *Proceedings of the 2016 International Conference on High Performance Computing and Simulations (HPCS 2016)*, July 18-22, 2016, Innsbruck, Austria.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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. 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.
- 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.
- 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.
- 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.

- 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., “NeoCortical 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.
- 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.
- 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
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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
- Jigar Patel, Sohei Okamoto, Sergiu M Dascalu, Frederick C Harris, Jr. “A Web-enabled Approach for Generating Data Processors”, in *Proceedings of the 10th International Conference on Information Technology: New Generations (ITNG 2013)* April 15-17, 2013, Las Vegas, NV



- 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
- 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
- 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.
- 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.
- Eric Fritzinger, 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Vinitha 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- Sergiu Dascalu, Eric Fritzing, Sohei Okamoto and Fred Harris “Towards a Software Framework for Model Interoperability”, in *Proceedings of IEEE 9th International Conference on Industrial Informatics (INDIN 2011)* July 26-29, 2011, Lisbon, Portugal.
- 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.
- 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.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
- Rakhi C. Motwani, Mukesh C. Motwani, Kostas .E. Bekris, and Frederick C. Harris, Jr. “Watermarking Space Curves”, in *Proceedings of 7th IEEE International Workshop on Digital Rights Management Impact on Consumer Communications (DRM 2011)* part of IEEE Consumer Communications and Networking Conference (CCNC 2011) January 9-12, 2011, Las Vegas, NV
- 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.

- 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.
- 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. 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.
- Roger Hoang Joshua Hegie Frederick C. Harris, Jr. “Scribe: 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.
- William E. Brandstetter III, Joseph D. Mahsman, Cody J. White, Sergiu M. Dascalu, Frederick C. Harris, Jr. “Multi-Resolution Deformation in Out-of-Core Terrain Rendering,” 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.
- Muhanna Muhanna, Sermsak Buntha, Sohei Okamoto, Michael J. McMahon, Jr. Sergiu Dascalu, Frederick C. Harris, Jr. “CAVEMANDER: Creating 3-D Command-and-Control Scenarios for the CAVE Automatic Virtual Environment”, in *Proceedings of the 2010 International Workshop on Visual Languages and Computing*, October 14-16, 2010, Hyatt Lodge at McDonald’s Campus, Oak Brook, Illinois
- Murat Yuksel, Kostas Bekris, Cansin Evrenosoglu, Mehmet Gunes, Sami Fadali, Mehdi Etazadi-Amoli and Frederick C. Harris Jr., “Open Cyber-Architecture for Electrical Energy Markets”, in *Proceedings of the 1st IEEE LCN Workshop on Smart Grid Networking Infrastructure* October 11-14, 2010, Sheraton, Denver Downtown, Denver, CO.
- Sohei Okamoto, Eric Fritzinger, Sergiu M. Dascalu, Frederick C Harris, Jr., Shahram Latifi, and Michael McMahon, Jr. “Towards an Intelligent Software Tool for Enhanced Model Interoperability in Climate Change Research”, in *Proceedings of the World Automation Congress* September 19-23, 2010, Kobe, Japan.
- Adrienne E. Breland, Karen A. Schlauch, Mehmet Gunes, and Frederick C. Harris Jr., “Fast Graph Approaches to Measure Influenza Transmission Across Geographically Distributed Host Types”, in *Proceedings of the International Workshop on Graph Theoretic Approaches for Biological Analysis (IWBA 2010)* August 2-4, 2010, Niagra Falls, New York.
- 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.
- Adrienne E. Breland, Mehmet H. Gunes, Karen A. Schlauch, and Frederick C. Harris Jr., “Mixing Patterns in a Global Influenza A Virus Network Using Whole Genome Comparisons”, in *Proceedings of Computational Intelligence in Bioinformatics and Computational Biology (CIBCB 2010)*, May 2-5, 2010, Montreal Canada

- Rakhi Motwani, Sergiu M. Dascalu, Frederick C. Harris Jr. “A Voice Biometric Watermark For 3D Models”, in *Proceedings of IEEE International Conference on Computer Engineering and Technology (ICCET 2010)*, April 16-18, 2010, Sichuan, China
- 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
- 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**
- 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
- 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
- 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
- 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
- Mukesh Motwani, Balaji Sridharan, Rakhi Motwani, Frederick C. Harris, Jr. “Tamper Proofing 3D Models”, in *Proceedings of IEEE International Conference on Signal Acquisition and Processing (ICSAP 2010)*, February 9-10, 2010, Bangalore, India
- Rakhi Motwani, Mukesh Motwani, Frederick C. Harris, Jr. “An Intelligent Learning Approach for Information Hiding in 3D Multimedia”, in *Proceedings of IEEE International Conference on Future Networks (ICFN 2010)*, January 22-24, 2010, Sanya, China
- Mukesh C. Motwani, Bobby D. Bryant, Sergiu M. Dascalu, Frederick C. Harris, Jr. “3D Multimedia Protection using Artificial Neural Networks”, in *Proceedings of the 6th IEEE International Workshop on Digital Rights Management (CCNC 2010)* January 9 -12, 2010, Las Vegas, Nevada.
- 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
- 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.
- 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.
- 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.

- 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 (IPCV'09)* July 13-16, 2009, Las Vegas, Nevada.
- 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 (IPCV'09)* July 13-16, 2009, Las Vegas, Nevada.
- 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.
- 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.
- Kelvin Parian, Joshua Hegie, Andrew Kimmel Sergiu M. Dascalu, Frederick C. Harris, Jr. WiELD-CAVE: Wireless Ergonomic Lightweight Device for use in the CAVE,” in *Proceedings of the ISCA 18th International Conference on Software Engineering and Data Engineering (SEDE '09)* June 22-24, 2009, Las Vegas, Nevada.
- Frederick Harris, Gordon Lee, Stuart Rubin, T.C. Ting, Billy Gaston, and Gongzhu Hu “Impact of Computing on the World Economy: A Position Paper,” in *Proceedings of International Conference on Computers and their Applications (CATA 09)* April 8-10, 2009, New Orleans, Louisiana.
- Frederick Harris, Gordon Lee, Stuart H Rubin, TC Ting, Billy Gaston, Gongzhu Hu “The Role of Computing in Education: The Next Revolution,” in *Proceedings of the American Society of Engineering Education Pacific Southwest (ASEE/PSW-2009)* March 19-20, 2009, San Diego, CA.
- John Kenyon, Sergiu M Dascalu, and Frederick C Harris, Jr “The C++ Hybrid Imperative Meta-Programmer: CHIMP,” in *Proceedings of the International Conference on Innovation in Software Engineering - ISE'2008*, December 10-12, 2008, Vienna Austria
- Adrienne Breland, Sara Nasser, Karen Schlauch, and Frederick C. Harris, Jr. “Influenza A Virus (H3N2) Genomic Sequence Difference Measures Based on Word Absence and Expression Levels,” in *Proceedings of ISCA's Computer Applications in Industry and Engineering (CAINE 2008)*. November 12-14, 2008, Honolulu, HI, Pages 1-6.
- Michael J. Smith, Roger V. Hoang, Matthew R. Sgambati, Sergiu M. Dascalu, and Frederick C. Harris, Jr., “A Dynamic Multi-contextual GPU-based Particle System using Vector Fields for Particle Propagation,” in *Proceedings of ISCA's Computer Applications in Industry and Engineering (CAINE 2008)*. November 12-14, 2008, Honolulu, HI, Pages 203-208.
- Jesse D. Phillips, Roger V. Hoang, Joseph D. Mahsman, Matthew R. Sgambati, Xiaolu Zhang, Sergiu M. Dascalu, and Frederick C. Harris, Jr. “Scripted Artificially Intelligent Basic Online Tactical Simulation,” in *Proceedings of ISCA's Computer Applications in Industry and Engineering (CAINE 2008)*. November 12-14, 2008, Honolulu, HI, Pages 292-297.
- Kim P. Martin, Dwight D. Egbert, and Frederick C. Harris, Jr. “An Inexpensive Terrain Awareness and Warning System for Small Aircraft,” in *Proceedings of ISCA's Computer Applications in Industry and Engineering (CAINE 2008)*. November 12-14, 2008, Honolulu, HI, Pages 221-226.

- Sara Nasser, Adrienne Breland, and Frederick C. Harris, Jr., “Parallel Assembler for Fuzzy Genome Sequence Assembly,” in *Proceedings of ISCA’s Computer Applications in Industry and Engineering (CAINE 2008)*. November 12-14, 2008, Honolulu, HI, Pages 13-19. **Best Paper Award**
- Sara Nasser, Adrienne Breland, Frederick C. Harris, Jr., Monica Nicolescu “A fuzzy classifier to taxonomically group DNA fragments within a metagenome,” in *Proceedings of the Annual Meeting of the North American Fuzzy Information Processing Society, 2008. (NAFIPS 2008)*. New York City, May 19-22, 2008 Pages 1 - 6.
- Rakhi Motwani, Ameya Amberdekar, Mukesh Motwani, and Frederick C. Harris, Jr. “Robust watermarking of 3D skinning mesh animations,” in *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing 2008 (ICASSP 2008)*, March 21 - April 4, 2008. Pages 1752-1756.
- Roger V. Hoang, Joseph D. Mahsman, David T. Brown, Michael A. Penick, Frederick C. Harris, Jr., and Timothy J. Brown, “VFire: Virtual Fire in Realistic Environments,” in *Proceedings of IEEE Virtual Reality 2008 (IEEE VR 2008)* Reno, Nevada, March 8-12, 2008, pp. 261-262.
- Muhanna Muhanna, Sergiu Dascalu, Frederick Harris, Sherif Elfass, and Marcel Karam, “Specification and Design Aspects of the Academic Researcher’s Assistant (ARA) Software for Mobile Devices,” in *Proceedings of the 1st International Conference on Advances in Computer-Human Interaction (ACHI-2008)*, St. Luce, Martinique, French Caribbean, February 2008, pp. 95-100.
- Mukesh Motwani, Nikhil Beke, Abhijit Bhoite, Pushkar Apte, Frederick C. Harris, Jr. “Adaptive Fuzzy Watermarking for 3D Models,” in *Proceedings of IEEE International Conference on Computational Intelligence and Multimedia Applications 2007*, December 13-15, 2007, Volume 4, Page(s):49 - 53
- Michael J. McMahon, Jr., Sergiu M. Dascalu, Frederick C. Harris, Jr., and Juan Quiroz, “An Extensible Architecture for Network-Attached Device Management,” in *Proceedings of the 2nd International Conference on Software Engineering Advances (ICSEA-2007)*, Cap Esterel, France, Aug 2007, IEEE Computer Society Press, pp. 66/1-6.
- Alexander Redei, Ed Tumbusch, Josh Koberstein, Sergiu Dascalu, and Frederick C. Harris, Jr., “Avratar: A Virtual Environment for Puppet Animation,” in *Proceedings of the International Conference on Software Engineering and Data Engineering (SEDE-2007)*, Las Vegas, NV, July 2007, pp. 14-19.
- James Motta, Fares Qeadan, Sergiu Dascalu, Siraj Malik, and Frederick C. Harris, Jr., “GoSmart: A New Solution for Home Automation,” in *Proceedings of the International Conference on Software Engineering and Data Engineering (SEDE-2007)*, Las Vegas, NV, July 2007, pp. 1-8.
- Michael A. Penick, Roger V. Hoang, Frederick C. Harris Jr., Sergiu M. Dascalu, Timothy J. Brown, William R. Sherman, Philip A. McDonald, “Managing Data and Computational Complexity for Immersive Wildfire Visualization,” *Proceedings of High Performance Computing Systems (HPCS ’07)* Prague, Czech, June 4-6, 2007.
- Michael Dye, Frederick C. Harris Jr., William R. Sherman, Philip A. McDonald, “Volumetric Visualization Methods for Atmospheric Model Data in an Immersive Virtual Environment,” *Proceedings of High Performance Computing Systems (HPCS ’07)* Prague, Czech, June 4-6, 2007.
- Gregory Vert, Rawan Alkhalidi, Sara Nasser, Frederick C. Harris. Jr., Sergiu M. Dascalu, “A Taxonomic Model Supporting High Performance Spatial-Temporal Queries in Spatial Databases,” *Proceedings of High Performance Computing Systems (HPCS ’07)* Prague, Czech, June 4-6, 2007.

- Jeremy Murray, Frederick C. Harris, Jr., Danny L Taylor “Mining in the Cave: a beginning,” *Proceedings of the 33rd International Symposium on Application of Computers and Operations Research in the Mineral Industry (APCOM 2007)* Santiago, Chile April 24-27, 2007.
- William R. Sherman, Michael A. Penick, Simon Su, Timothy J. Brown, Frederick C. Harris, Jr. “VRFire: an Immersive Visualization Experience for Wildfire Spread Analysis,” *Proceedings of IEEE VR 2007*, March 12-15, 2007. Charlotte, NC.
- Simon Su, William Sherman, Frederick Harris, Mike Dye “TAVERNS: Visualization and Manipulation of GIS data in 3D Large Screen Immersive Environments,” *Proceedings of the 16th International Conference on Artificial Reality and Telexistence (ICAT 2006)*, Zhejiang University of Technology, Hangzhou, P.R.China, November 29 - December 1st, 2006.
- Frederick C. Harris, Jr., Mark C. Ballew, Jason Baurick, James Frye, Lance Hutchinson, James G. King, Phillip H. Goodman, Rich Drewes “A Novel Parallel Hardware and Software Solution for A Large-Scale Biologically Realistic Cortical Simulation,” *Proceedings of the 19th International Conference on Computer Applications in Industry and Engineering*, (CAINE 2006), Las Vegas, NV, November 13-15, 2006
- Vert, G., Dascalu, S.M., Harris, F.C., Jr., and Buntha, S., “A Visual Environment for the Characterization of State Changes in Computer Systems,” *Proceedings of the International Conference on Security and Management (SAM-06)*, Las Vegas, NV, June 2006, pp. 435-440.
- Beifang Yi, Frederick C. Harris, Jr., and Sergiu M. Dascalu, “vHand: A Human Hand Simulation System,” *Proceedings of the 21st International Conference on Computers and Their Applications*, (CATA-2006), Seattle, WA, March 2006 **Best Paper Award**.
- Jeff Stuart, Joseph Jaquish, Scott Bassett, Frederick Harris, and William Sherman, “An Interactive Visualization Method for Integrating Digital Elevation Models and Geographic Information Systems Vector Layers,” *Proceedings of the First International Symposium of Visual Computing (ISVC 2005)* December 5-7, 2005. *Advances in Visual Computing, Lecture Notes in Computer Science LNCS 3804*, pp 553-561.
- Sergiu M Dascalu, Yaakov L Varol, Frederick C. Harris, Jr., and Brian T. Westphal, “Computer Science Capstone Course Senior Projects: From Project Idea to Prototype Implementation,” *Proceedings of Frontiers in Education 2005 (FIE 2005)*
- Westphal, B.T., Harris, F.C., Jr., and Dascalu, S.M., “Design Aspects of the Redwood Programming Environment,” *Proceedings of the 11th International Conference on Distributed Multimedia Systems (DMS-2005)*, Workshop on Visual Languages and Computing (VLC-2005), Banff, Alberta, Canada, September 5-7, 2005, pp. 321-326.
- Jeffery A. Stuart, Sergiu M. Dascalu, and Frederick C. Harris, Jr., “Towards a Unified Approach for Cross-Platform Software Development,” in *Proceedings of the 14th International Conference on Intelligent and Adaptive Systems and Software Engineering (IASSE-2005)*, July 20-22, 2005, Toronto, Canada, pp. 235-242.
- John D. Studebaker, Justin T. Gerthoffer David D. Colborne, Jeff A. Stuart, Frederick C. Harris, Jr., “Thraxion: Three-Dimensional Action Simulator,” in *Proceedings of The 2005 International Conference on Software Engineering Research and Practice (SERP '05)*, June 27-30, 2005, Las Vegas, NV
- Marcos C. Bagby, Ryan A. Romero Brett L. Sulprizio, Hiroko Uda, Joseph R. Jaquish, Frederick C. Harris, Jr., “DiRT - Dust in Real-Time: The Specification Process,” in *Proceedings of The 2005 International Conference on Software Engineering Research and Practice (SERP '05)*, June 27-30, 2005, Las Vegas, NV

- William E. Brandstetter, Michael P. Dye, Jesse D. Phillips, Jason C. Porterfield, Frederick C. Harris, Jr., Brian T. Westphal, “SAI-BOTS: Scripted Artificial Intelligent Basic On-Line Tank Simulator,” in *Proceedings of The 2005 International Conference on Software Engineering Research and Practice (SERP '05)*, June 27-30, 2005, Las Vegas, NV
- Frederick C. Harris, Michael A. Penick, Grant M. Kelly, Juan C. Quiroz, Sergiu M. Dascalu, Brian T. Westphal, “V-FIRE: Virtual Fire in Realistic Environments,” The 4th International Workshop on System/Software Architectures in *Proceedings of The 2005 International Conference on Software Engineering Research and Practice (SERP '05)*, June 27-30, 2005, Las Vegas, NV
- Manolo E. Sherrill, Roberto C. Mancini, Frederick C. Harris, Jr. and Sergiu M. Dascalu, “A Framework for Reuse and Parallelization of Large-Scale Scientific Simulation Code,” The 4th International Workshop on System/Software Architectures in *Proceedings of The 2005 International Conference on Software Engineering Research and Practice (SERP '05)*, June 27-30, 2005, Las Vegas, NV
- Sergiu Dascalu, Maryann Chandy, Frederick Harris, Daniela Saru, “Software Assistant for Students with Learning Disabilities,” *Proceedings of The 15th International Conference on Control Systems and Computer Science (CSCS-15)* May 25-27, 2005, University “Politechnica” of Bucharest, Romania
- Robert Larmore, Matthew Knaus, Sergiu Dascalu, and Frederick C. Harris, Jr. “Virtual Environment for On-Campus Orientation,” *Proceedings of The 2005 International Symposium on Collaborative Technologies and Systems (CTS 2005)* May 15-20, 2005, Saint Louis, Missouri.
- James Frye, James G. King, Christine J. Wilson, and Frederick C. Harris, Jr., “QQ: Nanoscale Timing and Profiling,” in *Proceedings of the 4th International Workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems PMEOPDS (2005)*, April 4-8, 2005, Omni Interlocken Resort, Denver CO.
- Beifang Yi, Frederick C. Harris, Jr., and Sergiu Dascalu “From Creating Virtual Gestures to ‘Writing’ in Sign Language,” in *Proceedings of Conference on Human Factors in Computing Systems (CHI 2005)*, April 2-7, 2005, Portland, OR.
- Marcel Levy, Sergiu Dascalu, Frederick C. Harris Jr., “ARS VEHO: Augmented Reality System for Vehicle Operation,” in *Proceedings of Computers and Their Applications (CATA 2005)*, pp 282-289, March 16-18, 2005, New Orleans, LA.
- Beifang Yi, Frederick C. Harris Jr., Sergiu M. Dascalu, “A Visualization Tool for Displaying Hand Gestures,” in *Proceedings of Computers and Their Applications (CATA 2005)*, pp 150-155, March 16-18, 2005, New Orleans, LA.
- Mukesh Motwani, Mukesh Gadiya, Rakhi Motwani, and Frederick C. Harris, Jr., “A Survey of Image Denoising Techniques,” in *Proceedings of GSPx 2004*, September 27-30, 2004, Santa Clara Convention Center, Santa Clara, CA
- Mukesh Motwani, Rakhi Motwani, and Frederick C. Harris, Jr., “Eye Detection using Wavelets and ANN,” in *Proceedings of GSPx 2004*, September 27-30, 2004, Santa Clara Convention Center, Santa Clara, CA
- Jacob W. Kallman, Pedrum Minaie, Jason Truppi, Sergiu M. Dascalu, Frederick C. Harris, Jr. “Software Modeling of the Open Distributed Network Monitoring System,” in *Proceedings of The 2004 Service Assurance with Partial and Intermittent Resources (SAPIR 2004)*, August 1-6, 2004, Hotel Vila Gale, Fortaleza, Brazil  
Also appeared in *Lecture Notes in Computer Science LNCS-3126*, Springer-Verlag, August 2004, pp. 158-169



- Beifang Yi, Frederick C. Harris, Jr., Sergiu M. Dascalu, Ali Erol, “User Interface Aspects of a Human-Hand Simulation System,” in *Proceedings of the International Conference on Education and Information Systems, Technologies and Applications (EISTA '04)* July 21-25, 2004, Orlando, FL.
- Pedrum Minaie, Jacob W. Kallman, Jason Truppi, Sergiu M. Dascalu, Frederick C. Harris, Jr. “Practical Educational Uses of the Open Distributed Network Monitor (ODNM)” in *Proceedings of the International Conference on Education and Information Systems, Technologies and Applications (EISTA '04)* July 21-25, 2004, Orlando, FL.
- Sergiu Dascalu, Frederick C. Harris, Jr., Matthew Knaus, Robert Larmore, Gianpaolo Sorreta, Devin Connell “Virtual UNR Campus: The Specification Process” in *Proceedings of The 2004 International Conference on Software Engineering Research and Practice (SERP '04)*, June 21-24, 2004, Monte Carlo Resort, Las Vegas, NV.
- Frederick C. Harris, Jr., Brent Devaney, John Kenyon, Charles Robertson, and Tchad Rogers “Modeling Aspects of the Dynasty 3-D Game” in *Proceedings of The 2004 International Conference on Software Engineering Research and Practice (SERP '04)*, June 21-24, 2004, Monte Carlo Resort, Las Vegas, NV.
- Frederick C. Harris, Jr., Leandro Basallo, Ryan Leigh, Regan Snyder, and Sam Talie “Software Specification of MERTIS: Modifiable, Extensible Real-Time Interactive Simulation System” in *Proceedings of The 2004 International Conference on Software Engineering Research and Practice (SERP '04)*, June 21-24, 2004, Monte Carlo Resort, Las Vegas, NV.
- Brian T. Westphal, Frederick C. Harris, Jr., and Sergiu M. Dascalu “Snippets: Support for Drag-and-Drop Programming in the Redwood Environment,” in *Proceedings of 4th Int. Conf. on Automation and Information (ICAI '03)*, Tenerife, Canary Islands, Spain, December 19-21, 2003.
- Brian T. Westphal, Frederick C. Harris, Jr., and Sergiu M. Dascalu “Redwood: A Visual Environment for Software Design and Implementation” in *Proceedings of 4th WSEAS Int. Conf. on Automation and Information (ICAI '03)* December 19-21, 2003, Tenerife, Canary Islands, Spain.
- Brian T. Westphal, Frederick C. Harris, Jr., and M. Sami Fadali, “Graphical programming: A vehicle for teaching computer problem solving” in *Proceedings of Frontiers in Education (FIE '03)* November 5-8, 2003 Bolder, CO.
- Alina Solovyova-Vincent, Frederick C. Harris, Jr., and M. Sami Fadali, “Parallel Inversion of Polynomial Matrices” in *Proceedings of ISCA's International Conference on Parallel and Distributed Computing Systems (PDCS 2003)* August 13-15, 2003, Reno, NV
- Deanna M. Needel, Jeff A. Stuart, Tamara C. Thiel, Sergiu M. Dascalu, and Frederick C. Harris, Jr., “Software requirements specification for a university class scheduler” in *Proceedings of The 2003 International Conference on Software Engineering Research and Practice (SERP '03)*, June 23-26, 2003, Monte Carlo Resort, Las Vegas, NV.
- Christian Rayburn, James Hays, Bryan Phillips, and Frederick C. Harris, Jr., “Specification of an online advisement system” in *Proceedings of The 2003 International Conference on Software Engineering Research and Practice (SERP '03)*, June 23-26, 2003, Monte Carlo Resort, Las Vegas, NV.
- Frederick C. Harris, Jr., Yan W. Ha, Dianne M. Yumul, Joshua S. Estes, and Christopher E. Miles, “Software specification of a mining truck simulator and trainer” in *Proceedings of The 2003 International Conference on Software Engineering Research and Practice (SERP '03)*, June 23-26, 2003, Monte Carlo Resort, Las Vegas, NV.

- Thoren McDole, Hapin Cua, Chang Huang, Leon Kania, Sergiu Dascalu, Fred Harris, “Software Specification of the GORT Environment for 3D Modeling” in *Proceedings of The 7th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2003)* July 27-30, 2003, Orlando, FL. **Best Paper Award**
- Lixing Ma and Frederick C. Harris, Jr., “A Parallel Algorithm for Solving a Tridiagonal Linear System with the ADI Method” in W.W. Smari and M. Guizani, editors, *Proceedings of the ISCA’s International Conference on Parallel and Distributed Computing Systems (PDCS 2002)*, Louisville, KY, September 19-21, 2002, pp 379-385.
- Kishor K. Waikul, Lianjun Jiang, E. Courtenay Wilson, Frederick C. Harris, Jr., and Philip H. Goodman, “Design and Implementation of a Web Portal for a NeoCortical Simulator” in R. Gantenbein and S. Shin editors, *Proceedings of Computers and Their Applications (CATA) 2002* San Francisco, CA, April 4-6, 2002, pp. 349-353.
- E. Courtenay Wilson, Frederick C. Harris, Jr., and Phillip H. Goodman, “A Large-Scale Biologically Realistic Cortical Simulator” in *Proceedings of SC2001* November 12-16, 2001, Denver, Colorado.
- M. Sami Fadali, L. LaForge, and F. Harris, Jr., “Linear Time Computation of QFT Feasible Regions” in A. Chung, editor, *Proceedings of Computers and their Applications in Industry and Engineering (CAINE ’01)*, November 27-29, 2001, Las Vegas, NV, pp. 23-28,
- Nancy LaTourrette, Yaakov Varol, and Frederick C. Harris, Jr., “Empowerment to Success: The Class Structure in an Honors Engineering Course,” in *Proceedings of Frontiers in Education 2001 (FIE 2001)* October 10-13, 2001. Reno, NV,
- E. Courtenay Wilson, Phillip H. Goodman, and Frederick C. Harris, Jr., “Implementation of a Biologically Realistic Parallel Neocortical-Neural Network Simulator,” in *Proceedings of the Tenth SIAM Conf. on Parallel Process. for Sci. Comp.* March 12-14, 2001. Portsmouth, Virginia,
- Benjamin Lucchesi, Nerissa Oberlander, Frederick C. Harris, Jr., and Pierre Mousset-Jones, “Surface Mine Truck Safety Training: Scenario Setup for a VR Driving Simulator.” in Q. Yang, editor, *Proceedings of the 12th International Conference on Computer Applications in Industry and Engineering (CAINE ’99)*, November 4-6, 1999, Atlanta, GA, pp. 62-65.
- Damien Ennis, Benjamin Lucchesi, Nerissa Oberlander, Keith Wesolowski, Frederick C. Harris, Jr., and Pierre Mousset-Jones, “Surface Mine Truck Safety Training: A VR Approach to Pre-Operational Vehicle Inspection,” in Kadri Dagelen, editor, *Proceedings of APCOM ’99: Computer Applications in the Minerals Industries 28th International Symposium*, Colorado School of Mines, Golden, CO, October 20-22, 1999, pp. 811–818.
- Jane Niehues-Brooks and Frederick C. Harris, Jr., “Automated Digital Image Analysis of Video Ice Crystal Data.” in R. Y. Lee, editor, *Proceedings of the ISCA 14<sup>th</sup> International Conference on Computers and Their Applications*, April 7-9, 1999, Cancun, Mexico, pp. 91–94.
- Igor Golovkin, Roberto C. Mancini, and Frederick C. Harris, Jr., “Parallelization of Non-Equilibrium Radiation Transport Code.” in Bruce Hendrickson, Katherine A. Yelick, Christian H. Bischof, Iain S. Duff, Alan S. Edelman, George A. Geist, Michael T. Heath, Michael A. Heroux, Chuck Koelbel, Robert S. Schrieber, Richard F. Sincovec, and Mary F. Wheeler, editors, *Proceedings of The Ninth SIAM Conf. on Parallel Process. for Sci. Comp.*, San Antonio, TX, March 22-24, 1999.
- Frederick C. Harris, Jr. and Carl G. Looney, “Strategies for Effective Group Project-Based Courses.” in Brendan J. O’Toole, editor, *Proceedings of the 1999 ASEE-PSW Conference*, Las Vegas, NV, March 19-20, 1999. pp 59-66.

- Frederick C. Harris, Jr. and Cynthia R. Harris, “A Proposed Algorithm for Calculating the Minimum Crossing Number of a Graph,” In Yousef Alavi and Ronald L. Graham and Allen J. Schwenk, editors, *Proceedings of the Eighth International Conference on Graph Theory, Combinatorics, Algorithms and Applications*, Western Michigan University, Kalamazoo, MI, June 3-7, 1996. pp 469-478, Vol II. (1998).
- Umid Tadjiev and Frederick C. Harris, Jr., “Parallel Computation of the Minimum Crossing Number of a Graph”, In Michael Heath and Virginia Torczon and Greg Astfalk and Petter E. BJORSTAD and Alan H. Karp and Charles H. Koelbel and Vipin Kumar and Robert F. Lucas and Layne T. Watson and David E. Womble, editors, *Proceedings of The Eighth SIAM Conf. on Parallel Process. for Sci. Comp.*, Minneapolis, MN, March 14-17, 1997.
- Marat Zhaksilikov, and Frederick C. Harris, Jr. “Global Parallelization of Genetic Algorithms: Comparison of Implementations,” In F.C. Harris, Jr., editor, *Proceedings of the ISCA, 5<sup>th</sup> International Conference on Intelligent Systems (IS '96)*, Reno, Nevada, June 19-21, 1996, pp. 40 – 44.
- Joseph Jones, and Frederick C. Harris, Jr. “A Genetic Algorithm for the Steiner Minimal Tree Problem,” In F.C. Harris, Jr., editor, *Proceedings of the ISCA, 5<sup>th</sup> International Conference on Intelligent Systems (IS '96)*, Reno, Nevada, June 19-21, 1996, pp. 35 – 39.
- Jerri Hines, John T. Thorpe, Kenneth B. Winiecki, Jr. and Frederick C. Harris, Jr., “Solving Quadratic Assignment Problems With Parallel Genetic Algorithms,” In S. Louis, editor, *Proc. Fourth Golden West International Conference on Intelligent Systems – GWIC-IV*, San Francisco, California, June 12-14, 1995, pp. 11 – 15.
- Frederick C. Harris, Jr., “Parallel Computation of Steiner Minimal Trees,” In David H. Bailey and Petter E. BJORSTAD and John R. Gilbert and Michael V. Mascagni and Robert S. Schreiber and Horst D. Simon and Virginia J. Torczan and Layne T. Watson, editors, *Proc. 7<sup>th</sup> SIAM Conf. on Parallel Process. for Sci. Comput.*, San Francisco, California, February, 1995, pp. 267 – 272.
- Robert Geist, Darrell Suggs, Robert Reynolds, Shardul Divatia, Fred Harris, Evan Foster, and Priyadarshan Kolte, “Disk Performance Enhancement through Markov-based Cylinder Remapping,” In Cherri M. Pancake and Douglas S. Reeves, editors, *Proc. ACM Southeast Regional Conf.*, Raleigh, North Carolina, April, 1992, pp. 23-28. (*Highest-rated Paper*)

#### **Technical Papers:**

- Frederick C. Harris, Jr., “Parallel Computation of Steiner Minimal Trees,” Ph.D. dissertation, Department of Computer Science, Clemson University, Clemson, SC 29634, May 1994.
- Frederick C. Harris, Jr., “Data Diversity: A Search for Direction,” Master’s Thesis, Department of Computer Science, Clemson University, Clemson, SC, December 1991.

#### **CONFERENCE PRESENTATIONS:**

- “Accelerating BFS Shortest Paths Calculations Using CUDA for Internet Topology Measurements” *The 2016 International Conference on High Performance Computing and Simulations (HPCS 2016)*, July 18-22, 2016, Innsbruck, Austria.
- “CUDA Implementation of Computer Go Game Tree Search ‘’, *The 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV.

- “Maximum Clique Solver using Bitsets on GPUs”, *The 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV.
- “Accelerating the Critical Line Algorithm for Portfolio Optimization Using GPUs”, *The 2016 International Conference on Information Technology: New Generations (ITNG 2016)*, April 18-20, 2016, Las Vegas, NV.
- “Smoke Detection Prescreening in Sequential Images”, *The 2016 ISCA International Conference on Computers and Their Applications (CATA 2016)*, April 4-6, 2016, Las Vegas, DC.
- “Neocortical Virtual Robot”, *The 2016 ISCA International Conference on Computers and Their Applications (CATA 2016)*, April 4-6, 2016, Las Vegas, DC.
- “GPU Based Sound Simulation and Visualization”, *The 2015 International Conference on Information Technology: New Generations (ITNG 2015)*, April 13-15, 2015, Las Vegas, NV.
- “Modeling particle diffusion in laminar tube flow with spectral collocation”, *The 2015 International Conference on Computers and Their Application (CATA 2015)*, March 9-11, 2015, Honolulu, HI.
- “ModFossa: A Python Library for Ion Channel Modeling”, *The 2015 International Conference on Bioinformatics and Computational Biology (BICOB 2015)*, March 9-11, 2015, Honolulu, HI.
- “Design and Implementation of a Repository Service and Reporting Interface for the NCS”, *The 2014 International Conference on Software Engineering and Data Engineering (SEDE 2014)*, October 13-15, 2014, New Orleans, LA.
- “NeoCortical Builder: A Web Based Front End for NCS”, *The 2014 International Conference on Computer Applications in Industry and Engineering (CAINE 2014)*, October 13-15, 2014, New Orleans, LA.
- “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.
- “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).
- “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**
- “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.
- “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.
- “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.

- “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
- “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
- “A Novel Multi-GPU Neural Simulator,” *ISCA’s Bioinformatics and Computational Biology (BICoB 2011)* March 23-25, 2011, New Orleans, LA
- “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.**
- “Ringermute: An audio data mining toolkit,” *ISCA’s Computers And Their Applications (CATA 2010)*, March 24-26, 2010, Honolulu, HI.
- “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.
- “Managing Data and Computational Complexity for Immersive Wildfire Visualization,” *High Performance Computing Systems (HPCS ’07)* Prague, Czech, June 4-6, 2007.
- “Volumetric Visualization Methods for Atmospheric Model Data in an Immersive Virtual Environment,” *High Performance Computing Systems (HPCS ’07)* Prague, Czech, June 4-6, 2007.
- “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.
- “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.
- “A Generic Queuing System for Computationally Intensive Problems.” *35<sup>th</sup> Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 3-12, 2004, Florida Atlantic University, Boca Raton, FL.
- “A Large-Scale Biologically Realistic Cortical Simulator” *SC 2001* November 12-16, 2001, Denver, CO.
- “Linear Time Computation of QFT Feasible Regions” *Computers and their Applications in Industry and Engineering (CAINE ’01)* November 27-29, 2001, Las Vegas, NV.
- “A Low-Cost Algorithm for Multicast Routing in Computer Networks,” *31<sup>st</sup> Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 13-17, 2000, Florida Atlantic University, Boca Raton, FL.
- “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.
- “Virtual Reality in Mine Safety Training”, 1999 National Mine Instructors Seminar, October 13-14, 1999, National Mine Health and Safety Academy, Beaver, WV.

- “Surface Mine Truck Safety Training.” *30<sup>th</sup> Institute on Mining, Health, Safety, and Research* August 9-13, 1999, Salt Lake City, UT.
- “Virtual Reality and Mine Safety Training.” *The 1999 Spring Great Basin Trainers Association Conference*, May 13-14, 1999, Round Mountain, NV.
- “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.
- “Strategies for Effective Group Project-Based Courses.” *The 1999 ASEE-PSW Conference*, March 19-20, 1999, Harrah’s, Las Vegas, NV.
- “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.
- “Steiner Minimal Trees: Their Computational Past, Present, and Future,” *11<sup>th</sup> Midwestern Conference on Combinatorics, Cryptography, and Computing*, Oct 31 - Nov 2, 1996, The University of Nevada, Las Vegas, Las Vegas, NV.
- “A Genetic Algorithm for the Steiner Minimal Tree Problem,” *5<sup>th</sup> International Conference on Intelligent Systems (IS ’96)*, June 19-21, 1996, The Flamingo Hilton Hotel, Reno, Nevada.
- “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.
- “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.
- “An Introduction to Steiner Minimal Trees on Grids,” *26<sup>th</sup> Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 6-10, 1995, Florida Atlantic University, Boca Raton, FL.
- “Parallel Computation of Steiner Minimal Trees,” *7<sup>th</sup> SIAM Conference on Parallel Processing for Scientific Computing*, February 15-17, 1995, The Hotel Nikko, San Francisco, CA.
- “An Initial Characterization of Steiner Minimal Trees on Grids,” *7<sup>th</sup> Cumberland Conference on Graph Theory and Computing*, May 10-13, 1994, The University of Alabama in Huntsville, Huntsville, AL.
- “A Stochastic Optimization Algorithm for Steiner Minimal Trees,” *25<sup>th</sup> Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 7-11, 1994, Florida Atlantic University, Boca Raton, FL.
- “Parallel Solutions for Minimizing Network Connection Distances,” *CCCS 4<sup>th</sup> Annual Conference*, November 11-12, 1993, Clemson University, Clemson, SC, *Second Place, Paper Competition*.
- “New and Improved Results for the Rectilinear Minimal Crossing Problem,” *6<sup>th</sup> Cumberland Conference on Graph Theory and Computing*, May 17-19, 1993, Rhodes College, Memphis, TN.

## INVITED PRESENTATIONS:

- “Building a Robot’s Brain: Decision making in an artificial environment,” Society for Neuroscience Reno Research Conference, November 14, 2015
- “Building a Robot’s Brain: Decision making in an artificial environment,” Wagner Conference, Reno, NV December 10, 2015
- “Forest Fire Simulation and Visualization,” University of Idaho, April 17, 2014
- “The Future of Computer Science,” Utah State University, March 23, 2012
- “Computer Applications and the Research they Drive,” ICCBALI 2011 Keynote Address, March 3, 2011, Ghaziabad, Uttar Pradesh, India
- “Neo Cortical Simulation: Hardware, Software and Future Directions,” ITNG 2009 Keynote Address, April 27, 2009, Las Vegas, NV
- “Advanced Computation and Visualization,” *Nevada KEEP Seminar* February 27, 2007
- “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
- “Cool Science, Cool Places, Cool Things,” *Northern Nevada Math Council: Math and Science Mini-Conference* Reno, NV, October 13, 2006
- “Advanced Computation and Immersive Visualization” Junior Science Humanities Symposium for Western Nevada and Northern California. Reno, NV, March 9-11, 2006
- “Advanced Computation and Visualization” Honors Program Lecture Series, University of Nevada, Reno, September 28, 2005.
- “Advanced Computation and Visualization” Computational Science Workshop Reno, NV, June 19-25, 2005.
- “Cool Science, Cool Places, Cool Things,” *Nevada KEEP Seminar* March 15, 2005
- “Cool Science, Cool Places, Cool Things” *Nevada Regional Science Bowl* Las Vegas, NV February 11-12, 2005.
- “Cluster Computing and Beyond” *2002 Government Information Technology Conference* Carson City, NV, October 16, 2002.

## FUNDED PROPOSALS:

- *The Solar Energy-Water-Environment Nexus in Nevada*  
Senior Personnel and UNR CO-PI with Gayle Dana (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 - July 31, 2018  
\$20,000,000

- *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
- *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,
- *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
- *Cortical Microcircuit Dynamics*  
 PI with Phillip H. Goodman and Sergiu Dascalu  
 ONR, October 1, 2009-March 30, 2013.  
 \$827,466.00.
- *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
- *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
- *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
- *Cortical Microcircuit Dynamics*  
 CO-PI with Phillip H. Goodman (PI)  
 ONR, October 1, 2006-September 30, 2009.  
 \$877,000.00.
- *Scientific Visualization*  
 PI  
 NSF EPSCoR, November 1, 2005 - January 31, 2006  
 \$16,110.00



- *Immersive Visualization*  
 Senior Personnel at DRI  
 DoD-STTC, July 1, 2004 - June 30, 2010  
 \$8,200,477.00
- *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
- *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
- Brain Simulation  
 PI, Sun Microsystems September 10, 2004  
 \$101,189.00
- 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
- *Models of Cortical Microcircuit Dynamics,*  
 CO-PI with Phillip H. Goodman(PI)  
 ONR, July 1, 2003-June 30, 2006.  
 \$660,000.00
- 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
- *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.
- *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
- *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

- 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
- *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
- *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
- *Instructional Enhancement Grant,*  
with S. Louis, R. Langsner, and Y. Varol  
Academic Affairs, University of Nevada, Reno, June 1996 - June 1997.  
\$2,472.

## **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: Parallel Computing

## ACADEMIC SUPERVISION:

### Doctoral Degree - Those Finished:

- **Damien Ennis**  
“Using Pre- and Post-Process Labeling Techniques for Cluster Analysis”,  
Ph.D., Computer Science and Engineering, University of Nevada, Reno, NV. December, 2014.
- **Roger V. Hoang**  
“An Extensible Component-based Approach to Simulation Systems on Heterogeneous Clusters”,  
Ph.D., Computer Science and Engineering, University of Nevada, Reno, NV. May, 2014.
- **Corey M. Thibeault**  
*Co-Advised with Dr. Narayan Srinivasa (HRL)*  
“Computational Neuroscience: Theory, Development and Applications in Modeling the Basal Ganglia,”  
Ph.D. Biomedical Engineering, University of Nevada, Reno,  
December, 2012.
- **Mukesh Motwani**  
“Third Generation 3D Watermarking: Applied Computational Intelligence Techniques,”  
Ph.D. Computer Science and Engineering, University of Nevada, Reno,  
August, 2011.
- **Adrienne E. Breland**  
*Co-Advised with Dr. Karen Schlauch (UNR-Bioinformatics)*  
“A Fast-Graph Approach to Modeling Similarity of Whole Genomes,”  
Ph.D. Computer Science and Engineering, University of Nevada, Reno,  
August 2011.
- **Laurence Christine Jayet Bray**  
*Co-Advised with Dr. Philip H. Goodman (UNSoM)*  
“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.
- **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
- **Bei Yuan**  
*Co-Advised with Dr. Eelke Folmer (UNR-CSE)*  
“Towards Generalized Accessibility of Video Games for the Visually Impaired,”  
Ph.D. Computer Science and Engineering, University of Nevada, Reno,  
May 2009.
- **Sara Nasser**  
“Fuzzy Sequence Classification and Assembly of Environmental Genomes,”  
Ph.D. Computer Science and Engineering, University of Nevada, Reno,  
May 2007

- **Beifang Yi**  
“A Framework for a Sign Language Interfacing System,”  
Ph.D. Computer Science and Engineering, University of Nevada, Reno,  
May 2006
- **Judith R. Fredrickson**  
“On the Crossing Number of Complete Graphs,”  
Ph.D. Computer Science and Engineering, University of Nevada, Reno,  
May 2006

#### **Doctoral Students currently under Supervision:**

- **Yan Yan**  
Computer Science and Engineering, University of Nevada, Reno,  
Expected Graduation: May 2017.
- **James Frye**  
Computer Science and Engineering, University of Nevada, Reno,  
Expected Graduation May 2017.
- **Joel Fredrickson**  
Computer Science and Engineering, University of Nevada, Reno,  
Expected Graduation: May 2017.
- **Rui Wu**  
Computer Science and Engineering, University of Nevada, Reno,  
Expected Graduation: May 2018.

#### **Masters Degree - Those Finished:**

- **Cameraon Jason Rowe**  
“A Web Based Application for Model Creation and Output Visualization with the NCS Brain Simulator,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2016.
- **Marlon Daniel Chavez**  
“HeartMate: A Competitive and Motivational Fitness Application for iOS Devices,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2016.
- **Chase Dwayne Carthen**  
“Rewind: A Music Transcription Method,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2016.
- **Jessica Elizabeth Smith**  
“vFireLib: A Forest Fire Simulation Library Implemented on the GPU,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2016.
- **Rui Wu**  
“Environment for Large Data Processing and Visualization Using MongoDB,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, December 2015. *Co-advised with Dr. Sergiu Dascalu*
- **Christine Johnson**  
“A Centralized Service for Accessing the NCS Brain Simulator Through a Web Interface,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, December 2015.

- **Joshua Hegie**  
 “A Parallel Application for Tree Selection in the Steiner Minimal Tree Problem,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, August 2015.
- **Erin S. Keith**  
 “Optimizing Local Least Squares Regression for Short Term Wind Prediction,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, August 2015.
- **Thomas J. Kelly**  
 “Neocortical Virtual Robot: A Framework to Allow Simulated Brains to Interact With a Virtual Reality Environment”, MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2015
- **William C. Kurt**  
 “Talks in Maths: Visualizing Repetition in Text and the Fractal Nature of Lyrical Verse”, MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, August 2014
- **Devyani Tanna**  
 “NCS: Neuron Models, User Interface, and Modeling”, MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, August 2014
- **Nathan Michael Jordan**  
 “HTTP-based Solutions to The Extension of the NCS Brain Simulator”, MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2014
- **Torbjorn Loken**  
 “A Comparison of Massively Parallel Programming Models Through Applications in Sound Propagation and Jitter Measurement”, MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2014
- **Derek Eiler**  
 “The Cooperative Defense Overlay Network: A Collaborative Automated Threat Information Sharing Framework for a Safer Internet”, MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2014
- **Gareth B. Ferneyhough**  
 “A Python Library for Ion Channel Modeling,” MS Computer Science and Engineering Department of Computer Science and Engineering, University of Nevada, Reno, May 2013.
- **Corey M Thibeault**  
 “Applications in Neurorobotics,” MS Computer Engineering Department of Computer Science and Engineering, University of Nevada, Reno, December 2012.
- **Aarti K. Dhone**  
 “A Video Library Management Software Toolkit for the Nevada Climate Change Portal,” MS Computer Science Department of Computer Science and Engineering, University of Nevada, Reno, August 2012 *Co-advised with Dr. Sergiu Dascalu*
- **Chad E. Feller**  
 “Beyond Monitoring: Proactive Server Preservation in an HPC Environment,” MS Computer Science Department of Computer Science and Engineering, University of Nevada, Reno, May 2012.

- **Joseph M. Vesco**  
“Semi-Automated Analysis Software for a Novel Biochemistry Assay,” MS Computer Science Department of Computer Science and Engineering, University of Nevada, Reno, December 2011.
- **Victor Ivanov**  
“VIVA: A Survey management Toolkit,” MS Computer Science Department of Computer Science and Engineering, University of Nevada, Reno, August 2011. *Co-Advised with Dr. Sergiu M. Dascalu*
- **Cody J. White**  
“Out-of-Core Data Management for Planetary Terrain,” MS Computer Science Department of Computer Science and Engineering, University of Nevada, Reno, May 2011.
- **Joseph D. Mahsman**  
“Projective Grid Mapping for Planetary Terrain,” MS Computer Science Department of Computer Science and Engineering, University of Nevada, Reno, December 2010.
- **Michael E. Levrington**  
“The Five Step Programming Process,” MS Computer Science, University of Nevada, Reno, December 2010.
- **Eugene O. Essa**  
“ACAT: ABET Course Assessment Tool,” MS Computer Science, University of Nevada, Reno, May 2010. *Co-Advised with Dr. Sergiu M. Dascalu*
- **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*
- **Roger V. Hoang**  
“Wildfire Simulation on the GPU,” MS Computer Science, University of Nevada, Reno, December 2008
- **David T. Brown**  
“Identification of Tree Locations in Geographic Images,” MS Computer Engineering, University of Nevada, Reno, December 2008
- **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.
- **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
- **John R. Kearney**  
“A Unique Instrumentation System Design for Measuring Forces on a Rotating Shaft,” MS Computer Engineering, University of Nevada, Reno, May 2008
- **Jesse D. Phillips**  
“Scripted Artificially Intelligent Basic Online Tactical Simulation,” MS Computer Science, University of Nevada, Reno, May 2008
- **Adrienne E. Breland**  
“A Supervised Strain Classifier,” MS Computer Science, University of Nevada, Reno, May 2008

- **John L. Kenyon**  
 “CHIMP The C/C++ Hybrid Imperative Meta-Programmer,” MS Computer Science, University of Nevada, Reno, May 2008
- **Milind A. Zirpe**  
 “RAIN and NCS5 Benchmarks,” MS Computer Science, University of Nevada, Reno, December 2007.
- **Michael P. Dye**  
 “Vesuvius: Interactive Atmospheric Visualization in a Virtual Environment,” MS Computer Science, University of Nevada, Reno, December 2007.
- **William E. Brandstetter III**  
 “Multi-Resolution Deformation in Out-of-Core Terrain Rendering,” MS Computer Science, University of Nevada, Reno, December 2007.
- **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.
- **Linda Humphrey**  
 “Efficient Generation of Minimal Graphs Using Independent Path Analysis,” MS Computer Engineering, University of Nevada, Reno, December 2006.
- **Qunming Peng**  
 “Brainstem: A NeoCortical Simulator Interface for Robotic Studies,” MS Computer Science, University of Nevada, Reno, December 2006.
- **Joseph Richard Jaquish**  
 “Terrain Analyzing in a Virtual Environment with Real-Time Native Shape Creation,” MS Computer Science, University of Nevada, Reno, December 2005.
- **Marcel Andrew Levy**  
 “Ringermute: An audio data mining toolkit,” MS Computer Science, University of Nevada, Reno, August 2005.
- **Jeffery Alan Stuart**  
 “A Unified Approach for Cross-Platform Software Development,” MS Computer Science, University of Nevada, Reno, August 2005.
- **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.
- **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.
- **Scott Crow**  
 “Evolution of the Graphical Processing Unit,” MS Computer Science, University of Nevada, Reno, May 2005.
- **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.
- **Brian Westphal**  
 “The Redwood Programming Environment,” MS Computer Science, University of Nevada, Reno, August 2004.

- **James Frye**  
“Parallel Optimization of a NeoCortical Simulation Program,” MS Computer Science, University of Nevada, Reno, December 2003.
- **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.
- **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.
- **Beifang Yi**  
“Virtual Hand: a HCI Testbed for Computer Vision Research on the Human Hand,” MS Computer Engineering, University of Nevada, Reno, August 2003.
- **Wenwu Chen**  
“Parallel Computation, Pattern Recognition, and Scientific Visualization,” MS Computer Engineering, University of Nevada, Reno, August 2003.
- **Kishor Waikul**  
“Implementation of the Integrated Courseware Manager for Computer Science,” MS Computer Science, University of Nevada, Reno, May 2003.
- **Alina Solovyova-Vincent**  
“Parallel Implementation of the Inversion of Polynomial Matrices,” MS Computer Science, University of Nevada, Reno, May 2003.
- **Mukesh Motwani**  
“Robust 3D Head Pose Classification using Wavelets,” MS Computer Engineering, University of Nevada, Reno, May 2003.
- **Benjamin J. Lucchesi**  
“A Parallel Linear Octree Collision Detection Algorithm,” MS Computer Science, University of Nevada, Reno, May 2002.
- **E. Courtenay Wilson**  
“Parallel Implementation of a Biologically Correct Neo-Cortical Neural Network Simulator,” MS Computer Engineering, University of Nevada, Reno, August 2001.
- **Mohammed Islam**  
“Implementation of Interactive Course Web Site,” MS Computer Science, University of Nevada, Reno, August 2000.
- **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.
- **Lingjiang Cheng**  
“Large Scale Software Transitions: A Case Study of the First Half of MFIRE,” MS Computer Science, University of Nevada, Reno, May 2000.
- **Damien Ennis**  
“A Computer Analysis of Hit Frequency for a Complex Video Gaming Machine,” MS Computer Science, University of Nevada, Reno, May 2000.
- **Ulvi Cetin**  
“A Foundation for On-Line Course Ware,” MS Computer Science, University of Nevada, Reno, May 2000.



- **Umid Tadjiev**  
“Parallel computation and graphical visualization of the minimum crossing number of a graph,” MS Computer Science, University of Nevada, Reno, August 1998.
- **Guo-Liang Sun**  
“Image Maker,” MS Computer Science, University of Nevada, Reno, May 1998.
- **Jane A. Niehues-Brooks**  
“Automated Digital Image Analysis of Video Ice Crystal Data,” MS Computer Science, University of Nevada, Reno, December 1997.
- **Marat Zhaksilikov**  
“Parallel Genetic Algorithms: A Survey and Comparative Study,” MS Computer Science, University of Nevada, Reno, May 1997.
- **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:**

- **Laurence Jayet Bray**  
Brain Computation Lab:  
January 2011 - June 2013
- **Adrienne Breland**  
High Performance Computation and Visualization Lab:  
August 2011 - June 2012
- **Rakhi Motwani**  
High Performance Computation and Visualization Lab:  
May 2010 - December 2010

#### **AWARDS:**

##### **Teaching Awards:**

- 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 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, (SCI 2003) July, 2003, Orlando, FL.
- Second Place, Paper Competition, *CCCS 4<sup>th</sup> 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:**

- Sabbatical, University of Nevada, July 2007 - June 2008.

- Nevada Honor Court Inductee University of Nevada, Reno, June 23, 2005
- 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-present

### **Board of Directors:**

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

### **Editorial Board:**

- ISRN Computer Graphics  
January 2012-2013

### **Special Issue Guest Editor:**

- 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.

### **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

- 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:**

- 31<sup>st</sup> International Conference on Computers and Their Applications (CATA-2016),
- The Sixth International Conference on Internet Technologies and Applications 2015 (ITA 2015)
- 30<sup>th</sup> International Conference on Computers and Their Applications (CATA-2015),
- The Third International Conference on Communications, Computation, Networks and Technologies (INNOV 2015)
- 29<sup>th</sup> International Conference on Computers and Their Applications (CATA-2014),
- 23<sup>rd</sup> International Conference on Software Engineering and Data Engineering (SEDE 2014),
- The Third International Conference on Communications, Computation, Networks and Technologies (INNOV 2014)
- ISCA's 3<sup>rd</sup> International Conference on Advanced Computing and Communication, (ACC 2013)
- 28<sup>th</sup> 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)
- 22<sup>nd</sup> 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)
- 21<sup>st</sup> International Conference on Software Engineering and Data Engineering (SEDE 2012),
- 27<sup>th</sup> 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),
- 20<sup>th</sup> International Conference on Software Engineering and Data Engineering (SEDE 2011),

- 26<sup>th</sup> 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),
- 25<sup>th</sup> International Conference on Computers and Their Applications (CATA-2010),
- 19<sup>th</sup> 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)
- 18<sup>th</sup> International Conference on Software Engineering and Data Engineering (SEDE 2009),
- The Second International Conference on Advances in Computer-Human Interaction, (ACHI 2009),
- 24<sup>th</sup> 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)
- 17<sup>th</sup> 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
- 23<sup>rd</sup> 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.
- 6<sup>th</sup> International Workshop on System/Software Architectures (IWSSA 2007)
- 17<sup>th</sup> 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 19<sup>th</sup> Computer Applications in Industry and Engineering (CAINE '06)
- 5<sup>th</sup> International Workshop on System/Software Architectures (IWSSA 2006)
- International Conference on Entertainment Systems and Applications (ENSY-2006)

- ISCA's 18<sup>th</sup> Computer Applications in Industry and Engineering (CAINE '05) November 9-11, 2005.
- 4<sup>th</sup> 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:**

- 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:**

- 25<sup>th</sup> International Conference on Software Engineering and Data Engineering (SEDE 2016),
- 24<sup>th</sup> International Conference on Software Engineering and Data Engineering (SEDE 2015),

**Program Chair and Proceedings Editor:**

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

**Proceedings Associate Editor:**

- 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:**

- 9<sup>th</sup> International Confernece 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

**Service, Current**

- **Member, Department of Computer Science and Engineering Personnel Committee**  
University of Nevada, 2007-present
- **Member, Faculty Senate**  
University of Nevada, 2000-2003, 2014-present  
**Chair Elect:** 2015-2016  
**Chair:** 2016-2017
- **Member, President's Council**  
University of Nevada, 2016-2017
- **Member, Neuroscience Program Graduate Committee**  
University of Nevada, 2014-present
- **Program Evaluator**  
CAC, ABET, 2011-present

**Service, Past**

- Departmental:
  - **Member, Department of Computer Science and Engineering Faculty Evaluation/Merit Committee**  
University of Nevada, 1996-1998, 1999-2001, 2005-2007, 2015-2016
  - **Member, Department of Computer Science and Engineering Web Committee**  
University of Nevada, 2013-2014  
**Chair** 2013-2014
  - **Member, Department of Computer Science and Engineering Facilities Committee**  
University of Nevada, 1995-1997, 2002-2007
  - **Member, Department of Computer Science and Engineering Graduate Committee**  
University of Nevada, 2008-2009

- **Coordinator, Computer Science Colloquium Series**  
University of Nevada, 1994-95
- **Member, Department of Computer Science and Engineering Undergraduate Committee**  
University of Nevada, 1996-2007, 2008-2010, 2011-2013  
**Chair** 1997-2007, 2011-2013
- **Member, Department of Computer Science and Engineering Space Committee**  
University of Nevada, 2014-2015
- **Member, Department of Computer Science and Engineering Faculty Search Committee**  
University of Nevada, 1999, 2000, 2000, 2001, 2002, 2002, 2003, 2003, 2006, 2013, 2013, 2013, 2014, 2014, 2015, 2015  
**Chair** 1999, 2000, 2000, 2001, 2002, 2002, 2003, 2003, 2006,
- College:
  - **Member, College of Engineering Personnel Committee**  
University of Nevada, 2003-2006, 2009-2012, 2014-2016  
**Chair** 2009-2012, 2015-2016
  - **Member, CoE Differential Fees Committee**  
University of Nevada, 2013-2014
  - **Member, College of Engineering Bylaws Committee**  
University of Nevada, 2010-2012  
**Chair** 2010-2012
  - **Member, College of Engineering Building Committee**  
University of Nevada, 2009-2010
  - **Member, College of Engineering Curriculum Committee**  
University of Nevada, 1997-2004, 2006-2007
  - **Member, College of Engineering Banquet Committee**  
University of Nevada, 1994-2001
  - **Chair, College of Engineering Search Committee**  
University of Nevada, 2000, 2012,
  - **Member, Task Force on Work and Family**  
University of Nevada, 1997
  - **Member, College of Engineering Committee for the Engineering Center for Secondary Learning**  
University of Nevada, 1996-1997
  - **Member, College of Engineering Space Committee**  
University of Nevada, 1995-1997
  - **Member, Faculty Library Committee**  
University of Nevada, 1995-96
  - **Member of the College of Engineering Computer Systems Advisory Board**  
University of Nevada, 1994-95
- University:
  - **Academic Leadership Council**  
University of Nevada, 2015-2016
  - **Member, Campus Affairs Committee**  
University of Nevada, 2015-2016



- **Member, Facilitates Resources Committee**  
University of Nevada, 2015-2016
- **Member, Program Review Committee**  
University of Nevada, 2015-2016
- **Research and Grants Committee**  
University of Nevada, 2015-2016
- **Member, Proposed UNCE, CABNR, AES Administrative Consolidation Review Committee**  
University of Nevada, 2015-2016
- **Member, Research Affairs Council**  
University of Nevada, 2014-2015
- **Member, CIO Search Committee**  
University of Nevada, 2013, 2015
- **Member, Research Grid Steering Committee**  
University of Nevada, 2006-2013  
**Chair** 2006-2013
- **Member, Morale Task Force**  
University of Nevada, 2005-2006
- **Member, Excellence in Teaching Program Advisory Board**  
University of Nevada, 1999-2003
- **Member, Faculty Senate Nominating Committee**  
University of Nevada, 2001, 2002, 2003.
- **Member, Distinguished Teaching Assistant Award Committee**  
University of Nevada, 2005-2010
- Other:
  - **Member, INBRE Bioinformatics Steering Committee**  
Nevada System of Higher Education, 2006-2009  
**Chair** 2006-2009
  - **Member, Internal UCCSN Advisory Board for Advanced Computing in the Environmental Sciences**  
2002-2006
  - **Member, Board of Trustees**  
Northwest Baptist Seminary, Tacoma, WA, 1998-2002  
Secretary of the Board 1999-2002

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