

## **PRESENTATIONS and PUBLICATIONS**

### **Keynote/Invited Talks**

1. A. Majumdar (invited talk), "Computational Science: TeraFlop to PetaFlop," Kobe University, Japan, Sept 5, 2007.
2. A. Majumdar (invited talk), "High Performance Computational Science - Teraflop to Petaflop," High Performance Computing and Simulation Symposium (HPC 2009), 2009 Spring Simulation Multiconference (SpringSim'09), March 22-27, 2009, San Diego, CA.
3. A. Majumdar (invited talk), "Teraflop to Petaflop - Computational Science," 1st International Supercomputing Conference in Mexico, Guadalajara, Jalisco, Mexico, March 2-5, 2010.
4. A. Majumdar (invited talk), "Application of High Performance Computing to Situation Awareness Simulations," Interactive Situation Awareness Simulation (ISAS) Workshop, UCSD, May 25, 2010
5. A. Majumdar, (invited talk), "Cyberinfrastructure Enabling Science", 7<sup>th</sup> International Supercomputing Conference in Mexico, April 2016, Puebla, Mexico
6. A. Majumdar (keynote talk), "High Performance Computing and Big Data with RDMA-enabled High Speed Interconnects – Delivering Science at SDSC for a Decade," Keynote talk MVAPICH User Group (MUG) Meeting, Columbus, OH, August 6-8, 2018.
7. A. Majumdar (invited talk), "High Performance Computing Enabling Scientific Advances via Simulations and Data Processing," Instituto Politécnico Nacional, Mexico City, October 26, 2018.
8. A. Majumdar, G. Jacobs, C. Song, W. Gropp, D. Hancock, P. Buitrago, Plenary Panel "Introduction of the new NSF Innovative HPC Systems", PEARC2020, July 27-31, 2020

### **Presentations, Workshops, Posters:**

1. Center d'Etudes, Saclay, France, April 1993: "Experiences with Different Parallel Programming Paradigms for Monte Carlo Particle Transport Leads to a Portable Toolkit for Parallel Monte Carlo." (with W. R. Martin, J. A. Rathkopf and M. Litvin)
2. Bettis Atomic Power Lab., Pittsburg, April, 1995: "Development of a Multiple Perturbation Monte Carlo Method for Criticality Problems and Impelmentaion on Parallel Processors." (with W. R. Martin)
3. University of Houston, Center for Parallel Computing, April, 1996: "Development of a Multiple Perturbation Monte Carlo Method for Eigenvalue Problems and Impelmentaion on Parallel Processors."(with W. R. Martin)
4. Texas A&M University, Nuclear Engineering Department, April, 1996: "Development of a Multiple Perturbation Monte Carlo Method for Eigenvalue Problems and Impelmentaion on Parallel Processors." (with W. R. Martin)
5. Argonne National Laboratory, Reactor Engineering and Reactor Analysis Department Joint Seminar, December, 1995: "Monte Carlo Perturbation Methods and Implementation on Parallel Computers."

6. University of Michigan, Nuclear Engineering Department, April, 1995: "Calculation of Reactivity Perturbations Using Monte Carlo Methods."
7. J. Boisseau, L. Carter, K.S. Gatlin, A. Majumdar and A. Snavely, "NAS Benchmarks on the Tera MTA," Workshop on Multi-Threaded Execution, Architecture and Compilation (M-TEAC 98), February 1998.
8. IBM T. J. Watson Research Center, New York, October 7, 1999: "Parallelization and Performance Issues of a Monte Carlo Photon Transport Code on Nighthawk and other machines".
9. Hitachi Research Lab, Hitachi, Japan, December 28, 1999: "Parallelization and Performance Issues of a Monte Carlo Photon Transport Code".
10. San Diego, American Chemical Society National Meeting, April 1-5, 2001: "Mapping of Parallel Monte Carlo and Fast Multipole Algorithms on Parallel Machines".
11. Berkeley, IBM SP SciComp6, August 19-23, 2002: "Parallel Medical and Genomics Applications on Power3 and Power4 Machines".
12. A. Majumdar, Simon K. Warfield, Florin Talos, Ron Kikinis, Ferenc A. Jolesz, Adam Birnbaum, Dong Ju Choi, and Kim Baldrige, Grid Enabled High Performance Computing for Image Guided Therapy, 5th Interventional MRI Symposium, Boston, MA, Oct 15-16, 2004.
13. A. Majumdar, A. Birnbaum, T. Devadithya, J. Andrews, K. Bladridge, D. Choi, S. Warfield, N. Archip, "Grid Enabled Image Guided Neurosurgery Using High Performance Computing," Fifth Virtual Conference on Genomics and Bioinformatics, Oct. 25-28, 2005.
14. L. Hoyte, P. Krysl, G. Chukkapalli, A. Majumdar, D. Choi, A. Trivedi, S. K. Warfield, M. Damaser, "Computational Model of Levator Ani Muscle Stretch During Vaginal Delivery," 5th World Congress of Biomechanics, Munich, Germany, July, 2006.
15. Lennox Hoyte, Margot S. Damaser, Simon K. Warfield, Giridhar Chukkapalli, Amitava Majumdar, Dong Ju Choi, Abhishek Trivedi, and Petr Krysl, "Quantity and Distribution of Levator Ani Stretch during Vaginal Childbirth," South Atlantic Association of Obstetricians and Gynecologists 70th Conference, January 20-23, 2008, Sarasota, Florida.
16. A. Majumdar (panel), "HPC at Major Universities," HPC User Forum, Sept. 25-27, 2007, Santa Fe, New Mexico.
17. A. Majumdar (panel), "Dynamic Data Driven Application Systems - New Drivers for Networking and Communications," IEEE GLOBECOM 2007, Nov. 26 - 30, 2007, Washington, DC.
18. A. Majumdar, "HPC and Applications Benchmark on Windows HPC Cluster," Microsoft HPC User Forum, SC2008, Austin, TX, Nov. 15-21, 2008.
19. H. Karimabadi, H.X. Vu, Y. Omelchenko, M. Tatineni, A. Majumdar, D. Krauss-Varban, "Enabling Breakthrough Kinetic Simulations of the Magnetosphere Using Petascale Computing," AGU Fall Meeting, San Francisco, Dec. 14-18, 2009.
20. A. Majumdar, D. Choi, Workshop: Introduction to Parallel Computing, GPU programming, one-sided MPI, Instituto Politecnico Nacional, Mexico City, August 16 - 20, 2010.
21. NSF OCI Campus Bridging Task Force Workshop, Denver, CO, August 25-27, 2010.

22. NSF and AFOSR workshop on Dynamic Data Driven Application Systems (DDDAS), Washington D.C., August 29-31, 2010.
23. A. Majumdar, "On-Demand Dynamic Data Driven Real-Time Computing for Scientific Applications", The 2nd Workshop on "Frontiers of Multicore Computing", University of Maryland, Baltimore County (UMBC), Sept 21-23, 2010.
24. D. Choi, O. Fluck, M. Folkerts, X. Gu, X. Jia, S. Jiang, A. Majumdar, Z. Tian, F. Vidal, D. Unat, "Short Course on GPU Programming for Medical Physics and Medical Imaging Research," San Diego Supercomputer Center (organized by Center for Advanced Radiotherapy Technologies (CART), Dept of Radiation Oncology, UCSD), Oct 29-30, 2010.
25. H. Karimabadi, B. Loring, A. Majumdar, M. Tatineni, "I/O Strategies for Massively Parallel Kinetic Simulations", SC2010, New Orleans, Nov. 13-19, 2010 (poster).
26. C. Men, DJ Choi, X Gu, SB Jiang, A. Majumdar, "A New On-line Re-Optimization Model for IMRT Treatment Planning", INFORMS Annual Meeting, San Diego, Oct. 11-14, 2009.
27. H. Karimabadi, H.X. Vu, Y. Omelchenko, M. Tatineni, A. Majumdar, U.V. Catalyurek, and E. Saule, "Enabling Global Kinetic Simulations of the Magnetosphere via Petascale Computing," 51st Annual Meeting of the APS Division of Plasma Physics, November 2-6, 2009, Atlanta, GA.
28. H. Karimabadi, H. X. Vu, B. Loring, Y. Omelchenko, M. Tatineni, A. Majumdar, and J. Dorelli, "Enabling Breakthrough Kinetic Simulations of the Magnetosphere Using Petascale Computing," Asia Oceania Geosciences Society (AOGS) Hyderabad, India, July 5-9, 2010.
29. A. E. Bandrowski, S. Sivagnanam, K. Yoshimoto, V. Astakhov, A. Majumdar, "Performance of parallel neuronal models on the Triton cluster," Poster, Society for Neuroscience Annual Meeting, Washington D.C., Nov 12-16, 2011.
30. N.T. Carnevale, S. Sivagnanam, K. K. Yoshimoto, V. Astakhov, A. E. Bandrowski, M. E. Martone, A. Majumdar, "A Neuroscience Gateway for High Performance Computing," Poster, Society for Neuroscience Annual Meeting, New Orleans, October 13-17, 2012.
31. N.T. Carnevale, A. Majumdar, S. Sivagnanam, K. Yoshimoto, V. Astakhov, A. Bandrowski, M. Martone, "The Neuroscience Gateway Portal: facilitating access to high performance computing resources," Poster, Society for Neuroscience Annual Meeting, San Diego, Nov. 9-13, 2013.
32. Shi, F and Sivagnanam, S and Folkerts, M and Gautier, Q and Jia, X and Majumdar, A and Jiang, S, "A Gateway for GPU Computations in Radiotherapy", *Medical Physics*, 40, 260-260 (2013), <http://dx.doi.org/10.1118/1.4814677>
33. Ted Carnevale, Amit Majumdar, Subhashini Sivagnanam, Kenneth Yoshimoto, Vadim Astakhov, Anita Bandrowski, Maryann Martone, "The Neuroscience Gateway Portal - High Performance Computing Made Easy," Poster, Computational Neuroscience (CNS) 2014 Annual Meeting, Quebec City, Canada, July 26-31, 2014.
34. Ted Carnevale, Amit Majumdar, Subhashini Sivagnanam, Kenneth Yoshimoto, Vadim Astakhov, Anita Bandrowski, Maryann Martone, " High performance computing in neuroscience via the Neuroscience Gateway Portal", Poster, Society for Neuroscience Annual Meeting, Washington D.C, Nov. 15 - 19, 2014.
35. A. Majumdar, S. Sivagnanam, K. Yoshimoto, T. Carnevale, .Neuroscience Gateway. Seamless Access to

XSEDE High Performance Computing Resources for the Computational Neuroscience Community, XSEDE 15 Conference (poster), St. Louis, MO, July 26-30, 2015.

36. T. Carnevale, A. Majumdar, S. Sivagnanam, K. Yoshimoto, P. Gleeson, R.A. Silver. Seamless integration of neuroscience models and tools with high performance computing. Poster, Society for Neuroscience Annual Meeting, Chicago, IL, Oct. 17 - 21, 2015.
37. A. Majumdar, S. Sivagnanam, K. Yoshimoto (UCSD), N.T. Carnevale (Yale U.), "Using the Neuroscience Gateway Portal for Parallel Simulation", Satellite Workshop, Society for Neuroscience Annual Meeting, Chicago, IL, Oct 17-21, 2015.
38. Sivagnanam, A. Majumdar, P. Kumbhar, M. Hines, K. Yoshimoto, T. Carnevale, Neuroscience Gateway - Enabling HPC for Computational Neuroscience, Supercomputing 2015 (poster), Austin, TX, November, 2015.
39. S. Dura-Bernal, S. A. Neymotin, W. L. Lytton, A. Majumdar, and S. Sivagnanam, " A Dynamic Data-Driven Approach to Closed-loop Neuroprosthetics Based on Multiscale Biomimetic Brain Models," Dynamic data Driven Application Systems Workshop, IEEE International Conference on High Performance Computing, Dec. 16-19, 2015, Bengaluru, India.
40. A. Majumdar, "Introduction to HPC and Big Data," University of California Santa Barbara, February, 2016.
41. S. Sivagnanam, A. Majumdar, K. Yoshimoto, T. Carnevale, "NSG-R: Programmatic Access to Neuroscience Applications on HPC," Poster XSEDE16, Miami, July 17-21, 2016.
42. Majumdar, A., Sivagnanam, S., Yoshimoto, K., Carnevale, N. T., Quintana, A., Gleeson, P. and Silver, R. A., "NSG-R Programmatic access to neuroscience applications", poster, Workshop Collaborative Development of Data-Driven Models of Neural Systems, HHMI Janelia Research Campus, Virginia, USA, Sept 18-21, 2016.
43. S. Sivagnanam, A. Majumdar, P. Kumbhar, M. Hines, K. Yoshomoto, T. Carnevale, "Neuroscience Gateway - Understanding the scaling behavior of NEURON application, " Poster, SC16, Salt Lake City, Utah, November, 2016.
44. N. T. Carnevale, P. Gleeson, R. A. Silver, A. Majumdar, S. Sivagnanam, K. Yoshimoto, "Seamless Integration of Neuroscience Models and Tools with High Performance Computing, " Poster, Society for Neuroscience Annual Meeting, San Diego, Nov 12-16, 2016.
45. A. Majumdar, S. Sivagnanam, K. Yoshimoto (UCSD), N.T. Carnevale (Yale U.), "Using the Neuroscience Gateway Portal for Parallel Simulation", Satellite Workshop, Society for Neuroscience Annual Meeting, San Diego, Nov 12-16, 2016.
46. A. Majumdar, S. Sivagnanam, T. Carnevale, K. Yoshimoto, "The Neuroscience Gateway - Enabling Large-Scale Neuroscience Simulations and Data Processing Using Supercomputers, " Poster, Third Annual BRAIN Initiative PI Meeting, Bethesda, MD, Dec 12-14, 2016.
47. Majumdar A, Sivagnanam S, Carnevale NT, Yoshimoto K, Gleeson P, Quintana A and Silver RA (2016), "Neuroscience Gateway - Cyberinfrastructure Providing Supercomputing Resources for Large Scale Computational Neuroscience Research," Front. Neuroinform. Conference Abstract: Neuroinformatics

2016. Neuroinformatics 2016, Reading, United Kingdom, 3 Sep - 4 Sep, 2016. doi: 10.3389/conf.fninf.2016.20.00008

48. A. Majumdar, "HPC Resources and Science Gateways," University of California Davis, March, 2017.
49. A. Majumdar, "Science Gateways – Access to HPC", University of California Los Angeles, April, 2017
50. T. Carnevale, A. Majumdar, S. Sivagnanam, K. Yoshimoto, "The Neuroscience Gateway Portal – High Performance Computing for Neuroscientists," Computational Neuroscience Annual Meeting (CNS 2017) Poster Presentation, Antwerp, Belgium, July 2017
51. A. Majumdar, S. Sivagnanam, T. Carnevale, "Neuroscience Gateway: Enabling Developers and Users to Utilize Open High Performance Computing Resources for Large Scale Simulations", Workshop Computational Neuroscience Annual Meeting (CNS 2017), July 2017, Antwerp, Belgium
52. A. Majumdar, "Neuroscience Gateway," August, 2017, NEUROCOMP17, Madison, WI
53. N.T. Carnevale, A. Majumdar, S. Sivagnanam, K. Yoshimoto, "The Neuroscience Gateway Portal: High Performance Computing for Neuroscience," Poster, Society for Neuroscience Annual Meeting 2017, Washington D.C., November 2017
54. A. Majumdar, S. Sivagnanam, K. Yoshimoto (UCSD), N.T. Carnevale (Yale U.), A. Peyser (Jülich Supercomputer Center), "High Performance Computing (HPC) Resources for Parallel Simulations and Data Analysis: NSG and HPAC", Satellite Workshop, Society for Neuroscience Annual Meeting 2017, Washington D.C., November 2017.
55. A. Majumdar, S. Sivagnanam, K. Yoshimoto, T. Carnevale, "Neuroscience gateway - enabling easy path to supercomputing for neuroscience research and education", BRAIN Initiative PI Meeting, Bethesda, MD, April 9-14, 2018.
56. A. Majumdar, "HPC Application and Performance for In-situ Visualization and Parallel I/O", Center for Extreme Events Research Summit, UCSD, May 1, 2018
57. A. Wagner, K Pezzoli, A. Majumdar, J. Bottum, N. Wilkins-Diehr, "Science Gateways and their impact on research and scholarship nationally and internationally," Internet 2, Global Summit, May 6-9, 2018, San Diego, CA
58. A. Majumdar, M. Shantharam, D. Choi, "Department of Defense High Performance Computing Modernization Program, User Productivity Enhancement, Training, and Technology Transfer Workshop – Performance Portability Libraries for DoD Applications," Naval Research Laboratory, Washington D.C. May 25, 2018.
59. S. Sivagnanam, A. Majumdar, K. Yoshimoto, T. Carnevale, "Neuroscience Gateway: Enabling Easy Path to Supercomputing for Neuroscience Research and Education," Poster, Neural Interfaces Conference 2018, Minneapolis, MN, June 25-27, 2018.
60. A. Majumdar, "High Performance and Portable Parallel I/O – Performance Analysis and Technologies for Naval Computational Science Library," NAVY HPC Workshop, Port Hueneme, CA, June 27-28, 2018.
61. A. Majumdar, S. Sivagnanam, K. Yoshimoto, T. Carnevale, "Neuroscience Gateway – Enabling Large Scale Simulations and Data Processing and Dissemination of Neuroscience

Tools/Software”, Poster, Organization of Computational Neuroscience (CNS) Annual Conference, Seattle, WA, July 13-18, 2018.

62. A. Majumdar, S. Sivagnanam, K. Yoshimoto, T. Carnevale, “Neuroscience Gateway and Large Scale Neural Systems Simulations and Tools”, Workshop, Organization of Computational Neuroscience (CNS) Annual Conference, Seattle, WA, July 13-18, 2018.
63. M. Pierce, M. Miller, A. Majumdar, S. Pamidighantam, S. Marru, “Introduction to Science Gateways for New Users,” Tutorial, Practice & Experience in Advanced Research Computing – PEARC18, Pittsburgh, July 22-26, 2018.
64. A. Majumdar, S. Sivagnanam, K. Yoshimoto (all SDSC), T. Carnevale, Yale U., Alex Peyser, Jülich Supercomputing Center, Society for Neuroscience Annual Conference Workshop – High Performance Computing Resources for Parallel Simulations and Data Analysis – NSG and HPAC, November 3<sup>rd</sup>, 2018, San Diego CA.
65. N. T. Carnevale, S. Sivagnanam, K. Yoshimoto, A. Majumdar, “The Neuroscience Gateway: Enabling large scale modeling and data processing in neuroscience”, Poster, Society for Neuroscience Annual Meeting, November 6, 2018, San Diego CA.
66. NSF Workshop on Future Directions for Parallel and Distributed Computing (SPX 2019), Phoenix, AZ, June, 2019.
67. A. Majumdar , S. Sivagnanam, K. Yoshimoto (all SDSC), N. T. Carnevale (Yale U), The Neuroscience Gateway Enabling Large Scale Modeling and Data Processing in Neuroscience on Supercomputers, Society for Neuroscience Annual Meeting Poster, October 18-23, 2019, Washington D.C.
68. A. Majumdar, S. Sivagnanam, K. Yoshimoto (all SDSC), T. Carnevale, Yale U., Alex Peyser, Jülich Supercomputing Center, Society for Neuroscience Annual Conference Workshop – NSG and HPAC Large Scale Modeling and Data Analysis – NSG and HPAC, October 10, 2019, Chicago, IL.
69. NSGPORTAL: High-Performance Computing with EEGLAB. Martínez-Cancino, M., Delorme, A., Truong, D., Artoni, F., Kreutz-Delgado, K., Sivagnanam, S., Yoshimoto, K., Majumdar, A., Makeig, S. Brain, Mind, and Body: Cognitive Neuroengineering for Health and Wellness An IEEE EMBS Symposium and Workshop, Dec. 19-20, 2019, UC San Diego, La Jolla CA.
70. Amitava Majumdar, Scott Makeig, Arnaud Delorme, Dave Nadeau, Dung Truong, Kenneth Yoshimoto, Ramon Martinez-Cancino, Subhashini Sivagnanam, Russell A. Poldrack, “NEMAR: A Human Neuroelectrophysiological Data, Tools, and Compute Resource”, Poster 6th Annual BRAIN Initiative Investigators Meeting, June 1-2, 2020, Virtual Conference.
71. A. Majumdar, S. Sivagnanam, K. Yoshimoto, T. Carnevale, “Neuroscience Gateway Enabling Large Scale Modeling and Data Processing”, Poster 6th Annual BRAIN Initiative Investigators Meeting, June 1-2, 2020, Virtual Conference.
72. S. Sivagnanam, K. Yoshimoto, T. Carnevale, D. Nadeau, M. Kandes, T. Petersen, D. Truong, R. Martinez, A. Delorme, S. Makeig, and A. Majumdar. “Neuroscience Gateway Enabling Large Scale Modeling and Data Processing in Neuroscience Research”, Poster Paper, July 26-30, 2020, PEARC2020 Virtual Conference.

73. C. Song, B. Gropp, D. Y. Hancock, P. Buitrago, A. Majumdar, PEARC20 Panel: Introduction of the new NSF Innovative HPC systems, July 26-30, 2020, PEARC2020 Virtual Conference.
74. S. Sivagnanam, K. Yoshimoto, A. Delorme, R. Martinez, D. Truong, M. Kandes, S. Yeu, S. Makeig, T. Carnevale, A. Majumdar, "Neuroscience Gateway - Large Scale Data Processing and Modeling Using High Performance and High Throughput Computing Resources", Poster, SfN Global Connectome, Jan 11-13, 2021.
75. A. Majumdar, SDSC Site Showcase Lightning talk, Dell HPC Meeting May 30-31, 2021.
76. A. Majumdar, S. Sivagnanam, K. Yoshimoto, M. Kandes, S. Yeu, T. Carnevale, "Neuroscience Gateway Enabling Large Scale Neuroscience Computing and Software Dissemination" Poster, BRAIN Initiative PI Meeting, June 15-17, 2021, Virtual Meeting
77. A. Majumdar, S. Sivagnanam, K. Yoshimoto, M. Kandes, S. Yeu, T. Carnevale, "Neuroscience Gateway enabling large scale modeling, data processing and software dissemination", Poster, 30th Annual Computational Neuroscience Meeting, July 3-7, 2021, Virtual conference
78. S. Sivagnanam, K. Yoshimoto, M. Kandes, S. Yeu, T. Carnevale, A. Majumdar, "Neuroscience Gateway Enabling Large Scale Neuroscience Modeling and Data Processing and Software Dissemination", Poster, PEARC21, July 19-22, 2021, Virtual conference

#### Peer reviewed articles:

1. Majumdar and H. Makowitz, "Study of Algorithms to Enhance Vector Performance of Thermal-Hydraulic Codes Based on a Hopscotch Scheme," Transaction American Nuclear Society, 55, 331 (1987) (peer reviewed conference proceeding).
2. A. Majumdar and W.R. Martin, "Parallel Preconditioned Conjugate Gradient Algorithm Applied to Neutron Diffusion Problem," Transaction American Nuclear Society, 65, 209 (1992) (peer reviewed conference proceeding).
3. W.R. Martin, A. Majumdar, J.A. Rathkopf and M. Litvin, "Experiences with Different Parallel Programming Paradigms for Monte Carlo Particle Transport Leads to a Portable Toolkit for Parallel Monte Carlo," Proceedings International Joint Conference on Mathematical Methods and Supercomputing in Nuclear Applications, Karlsruhe, Germany, April 19-23, 1993, Vol. II, p. 418 (1993). (peer reviewed conference proceeding)
4. A. Majumdar and D. Majumdar, "Possible Locations of Monitored Retrievable Storage from a Spent-Fuel Transportation Perspective." Transaction American Nuclear Society, 70, 61 (1994) (peer reviewed conference proceeding).
5. A. Majumdar and W.R. Martin, "Calculation of Reactivity Perturbations Using Correlated Sampling Monte Carlo," Transaction American Nuclear Society, 71, 203 (1994) (peer reviewed conference proceeding).
6. A. Majumdar and W. R. Martin "Multiple Reactivity Calculation Using Single Correlated Sampling Monte Carlo Simulation," Proceedings International Conference on Mathematics and Computations, Reactor Physics and Environmental Analyses, Portland, Oregon, April 30 - May 4, 1995, Vol. 1, p. 85 (1995). (peer reviewed conference proceeding).

7. Snively, L. Carter, J. Boisseau, A. Majumdar, K. S. Gatlin, N. Mitchell, J. Feo, and B. Koblenz, "Multi-processor Performance on the Tera MTA," Proceedings Supercomputing 98, Orlando, Florida. (peer reviewed conference proceeding)
8. Y. Dewaraja, M. Ljungberg, A. Majumdar, A. Bose, and K. F. Koral, "A Parallel Monte Carlo Code for Planar and SPECT Imaging: Implementation, Verification and Applications in I-131 SPECT." IEEE Nuclear Science Symposium and Medical Imaging Conference, Lyon, France, October 15-20, 2000.
9. A. Majumdar, "Parallel Performance Study of Monte Carlo Photon Transport Code on Shared-, Distributed, and Distributed-Shared-Memory Architectures." Proceedings International Parallel & Distributed Processing Symposium 2000, Cancun, Mexico, May 1-5, 2000. (peer reviewed conference proceeding)
10. Y. Dewaraja, M. Ljungberg, A. Majumdar, A. Bose, and K. F. Koral, "A Parallel Monte Carlo Code for Planar and SPECT Imaging: Implementation, Verification and Applications in I-131 SPECT." Journal of Computer Methods and Programs in Biomedicine, Volume 67, Issue 2 (2002), pp. 115 – 124 (journal publication)
11. A. Majumdar, A. Birnbaum, D. Choi, A. Trivedi, S. K. Warfield, K. Baldrige, and P. Krysl, "A Dynamic Data Driven Grid System for Intra-operative Image Guided Neurosurgery," International Conf. On Computational Science, May 2005, Atlanta, GA, V. S. Sunderam et al (Eds), Springer-Verlag Berlin Heidelberg : ICCS 2005, LNCS 3515, pp. 672-679, 2005. (peer reviewed conference proceeding).
12. T. Devadithya, A. Birnbaum, A. Majumdar, D. Choi, R. Wolski, K. Baldrige, N. Archip, and S. K. Warfield, "On-demand High Performance Computing: Image Guided neuro-Surgery Feasibility Study", 12th International Conference on Parallel and Distributed Systems, Minneapolis, MN, July 12-15, 2006 (peer reviewed conference proceeding).
13. S.P. DiMaio, N. Archip, N. Hata, I.F. Talos, S.K. Warfield, A. Majumdar, N. McDannold, K. Hynynen, P.R. Morrison, W.M. Wells III, D.F. Kacher, R. E. Ellis, A.J. Golby, P.M. Black, F.A. Jolesz, and R. Kikinis, "Image-Guided Neurosurgery at Brigham and Women's Hospital: The integration of imaging, navigation and interventional devices," IEEE Engineering in Medicine and Biology, Vol. 25, Issue 5, pp 67-73, 2006. (journal publication)
14. Y. Cui, R. Moore, K. Olsen, A. Chourasia, P. Maechling, B. Minster, S. Day, Y. Hu, J. Zhu, A. Majumdar T. Jordan, "Enabling Very-Large Earthquake Simulations on Parallel Machines," International Conference on Computational Science, Beijing, China, May 27-30, 2007; Lecture Notes in Computer Science, Part 1, series 4487, pp 46-53, Springer, 2007. (peer reviewed conference proceeding)
15. Lennox Hoyte, Margot S. Damaser, Simon K. Warfield, Giridhar Chukkapalli, Amitava Majumdar, Dong Ju Choi, Abhishek Trivedi, and Petr Krysl, "Quantity and Distribution of Levator Ani Stretch during Vaginal Childbirth." American Journal of Obstetrics and Gynecology, Volume 199, Issue 2, August 2008. (journal publication)
16. C Men, X Gu, DJ Choi, A Majumdar, Z Zheng, K Mueller, and SB Jiang, "GPU-based ultrafast IMRT plan optimization", Phys Med Biol. 54(21):6565-6573, 2009. (journal publication)
17. Gu X, Choi DJ, Men C, Pan H, Majumdar A, Jiang SB, " GPU-based Ultra Fast Dose Calculation Using a Finite-Size Pencil Beam Model", Phys. Med. Biol. 54 (20):6287-6297, 2009. (journal publication)



18. H. Karimabadi, H.X. Vu, Y. Omelchnko, B. Loring, M. Tatineni, A. Majumdar, U. V. Catalyurek, E. Saule, "Enabling Breakthrough Kinetic Simulations of the Magnetosphere via Multi-zone Petascale Computing," TeraGrid 09 Conference, Washington D.C., June 22-26, 2009. (peer reviewed conference proceeding)
19. S. Potluri, P. Lai, K. Tomko, S. Sur, Y. Cui, M. Tatineni, K. Schulz, W. Barth, A. Majumdar, D. Panda, "Quantifying Performance Benefits of Overlap Using MPI-2 in a Seismic Modeling Application," 24th International Conference on Supercomputing (ICS' 10), Epochal Tsukuba, Tsukuba, Japan, June 1-4, 2010. (peer reviewed conference proceeding)
20. H. Karimabadi, H. X. Vu, B. Loring, Y. Omelchenko, M. Tatineni, A. Majumdar, and J. Dorelli, "3D Global Hybrid Simulations of the Magnetosphere and I/O Strategies for Massively Parallel Kinetic Simulations," TeraGrid10, Pittsburgh, August 2-5, 2010 (peer reviewed conference proceeding)
21. X Jia, X Gu, J Sempau, D Choi, A Majumdar, and SB Jiang, "Development of a GPU-based Monte Carlo dose calculation code for coupled electron-photon transport," Phys Med Biol. 55 (11): 3077-3086, 2010. (journal publication)
22. X Gu, H Pan, Y Liang, R Castillo, D Yang, DJ Choi, E Castillo, A Majumdar, T Guerrero, and SB Jiang, "Implementation and evaluation of various demons deformable image registration algorithms on a GPU," Phys Med Biol. 55(1):207-219,2010. (journal publication)
23. D. S. Katz, D. Hart, C. Jordan, A. Majumdar, J.P. Navarro, W. Smith, J. Towns, V. Welch, N. Wilkins-Diehr, "Cyberinfrastructure Usage Modalities on the TeraGrid," 2011 High-Performance Grid and Cloud Computing Workshop, Proceedings of 2011 IPDPS Workshops (May 16, 2011, Anchorage, Alaska), pp. 927-934, 2011. (peer reviewed conference proceeding)
24. Homa Karimabadi, Hoanh Vu, Burlen Loring, Yuri Omelchenko, Tamara Sipes, Vadim Roytershteyn, William Daughton, Mahidhar Tatineni, Amit Majumdar, Umit Catalyurek and Alper Yilmaz, "Petascale Kinetic Simulation of the Magnetosphere," TeraGrid 2011, Salt Lake City, Utah, July 18 - 21, 2011. (peer reviewed conference proceeding)
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