**Amit Majumdar, Ph.D**
Division Director, Data Enabled Scientific Computing Division
San Diego Supercomputer Center
Associate Professor, Department of Radiation Medicine and Applied Sciences
University of California at San Diego
amajumdar@ucsd.edu, Ph: 858-534-8356

## EDUCATIONAL BACKGROUND

| School, college, university, or hospital (internship, residency, or fellowship) | Dates of attendance | Location | Major subject or field | Degrees or certificates | Date received |
|---|---|---|---|---|---|
| Jadavpur University | 07/81-06/85 | Calcutta, India | Electronics and Telecommunication | B.S. | 06/85 |
| Idaho State University | 08/85-07/88 | Pocatello, ID | Nuclear Science and Engineering | M.S. | 07/88 |
| University of Michigan | 08/92-12/93 | Ann Arbor, MI | Mathematics | M.S. | 01/94 |
| University of Michigan | 08/88-01/96 | Ann Arbor, MI | Nuclear Engineering and Scientific Computing | Ph.D | 02/96 |

Ph.D. Dissertation Title: *Development of a Multiple Perturbation Monte Carlo Method for Eigenvalue Problems and Implementation on Parallel Processors*
Ph.D. Advisor: William R. Martin, Nuclear Engineering Department, University of Michigan, Ann Arbor, MI

## EMPLOYMENT HISTORY

| Period of employment From: To: | Institution, firm or organization | Location | Rank, title, or position |
|---|---|---|---|
| 09/01/86-04/30/87 | Idaho National Engineering Lab | Idaho Falls, ID | Research Assistant |
| 03/01/96-02/28/97 | Ford Research Lab | Dearborn, MI | Prog. Analyst |
| 03/01/97-12/31/00 | San Diego Supercomputer Center (SDSC) | San Diego, CA | Prog. Analyst |
| 01/01/01-01/31/02 | SDSC | San Diego, CA | Staff Scientist |
| 02/01/02-09/30/13 | SDSC | San Diego, CA | Director, Scientific Computing Applications; Sr. Computational Scientist |
| 08/01/08-07/31/11 | SDSC/TeraGrid | San Diego, CA | TeraGrid Area Director |

| | | | |
|---|---|---|---|
| 12/01/09-present | Dept. of Radiation Medicine and Applied Sciences | San Diego, CA | Clinical Assoc. Prof |
| 10/01/13-present | SDSC | San Diego, CA | Division Director, Data Enabled Scientific Computing |

**University Service**

2008 – 2009 Member of SDSC's next generation management reorganization committee
2013 – present Member of SDSC's executive team
2016 – 2016 Member of SDSC's Strategic Planning Committee
2021 – 2022 Member of UCSD Committee (appointed by EVC for Research, Dr. Elizabeth Simmons) on creating a new school at UCSD titled, Halıcıoğlu School of Data Science and Computing (HSDSC)
2025 - Halıcıoğlu School of Data Science and Computing (HSDSC), Dean Search Committee

**Professional Membership**

1991 – present: Institute of Electrical and Electronics Engineering (IEEE)
1992 – 2008: American Nuclear Society (ANS)
2000 – 2025 Society of Industrial and Applied Mathematics (SIAM)
2008 – present: American Physical Society (APS)
2015 – present: Organization for Computational Neuroscience (OCNS)
2017 – present: Society for Neuroscience (SfN)

**Honors and Awards**

SDSC Excellence Award, January 2015
SDSC Pi Person of the year 2017, July 2017

**GRANTS**

**GRANTS AWARDED - CURRENT (as of June 2026)**

1. NSF OAC award "Category I: Expanse 2 - Continuing to Serve the Long Tail of Science and AI Innovation with New Technologies", Co-PI Amit Majumdar; PI Mike Norman, Other Co-PIs: Mahidhar Tatineni, Subha Sivagnanam, Ilkay Altintas, $10,000,000, 6/2026 - 5/2028

2. NSF OAC award "Category II: iDLab - A Federated Interactive Discovery Lab for Data-Driven Research and Education", Co-PI Amit Majumdar, PI: Amit Chourasia, UCLA; Other Co-PIs: Joe Stubbs, TACC, Brett M Bode, NCSA, Philip D Blood, PSC, 7/2026 – 5/2029

3. NIH NIMH R24: BRAIN INITIATIVE RESOURCE: Development of a Human Neuroelectromagnetic Data Archive and Tools Resource (NEMAR); MPIs Scott Makeig, Amit Majumdar, Arnaud Delorme, UCSD; Russ Poldrack (Stanford); $4,400,000 (approx. total); 08/01/19 – 07/31/24

4. DOE NNSA: "Center for Advancing the Radiation Resilience of Electronics (CARRE) (PSC)",

PSAAP-IV, Co-PI Amit Majumdar, Lead PI Todd Palmer, Oregon State; Partner institutions include: Vanderbilt University, University of California - San Diego, North Carolina State University, University of California - Berkeley, Seattle University, and the University of Notre Dame; $17,000,000 total; 09/2025-08/30

5. NIH NINDS: "Dissemination of the Human Neocortical Neurosolver (HNN) software for circuit level interpretation of human MEG/EEG", SDSC Subaward PI Amit Majumdar, Lead PI Stephanie Jones, Brown University, 09/2023 – 07/2028; total Approx $3,000,000

6. NSF IIS: "CRCNS US-Israel Data Sharing Proposal: EEG-DaSh electroencephalography data and tool sharing resource", Co-PI Amit Majumdar, PI Arno Delorme, 01/2025 – 12/2029; $1,100,000.00

7. NSF OAC: "Collaborative Research: Frameworks: hpcGPT: Enhancing Computing Center User Support with HPC-enriched Generative AI", PI: Amit Majumdar; Lead PI Zhao Zhang, Rutgers, 08/2024 – 07/2027; UCSD portion $359,615

8. NSF OAC: "ACO: An Open CI Ecosystem to Advance Scientific Discovery (OpenCI)", Co-PI: Amit Majumdar, PI John Towns, NCSA, UIUC; $5,554,826.00 05/2022 – 04/2027

9. NSF OAC: Collaborative Research: "Frameworks: Cybershuttle: An end-to-end Cyberinfrastructure Continuum to accelerate Discovery in Science and Engineering"; UCSD Co-PI Amit Majumdar; UCSD PI: Giri Krishnan; Co-PI Shava Smallen, Maksim Bazhenov; UCSD portion $750,000; 9/22 – 8/27.

10. DOE: A Fusion Machine Learning Data Science Platform to Support the Design and Safe Operation of a Fusion Pilot Plant", UCSD PI Frank Wuerthwein, Co-PI Amit Majumdar; Lead PI Brian Sammuli, General Atomics; General Atomics (GA), the San Diego Supercomputer Center (SDSC) and UC San Diego, Hewlett Packard Enterprise (HPE) and Sapientai; total $7,400,000; 08/01/2025 - 12/31/2026

11. NSF OAC: National AI Institute "Intelligent CyberInfrastructure with Computational Learning in the Environment (ICICLE)"; UCSD Site PI: Amit Majumdar; overall PI: DK Panda, Ohio State University; total $20M, UCSD portion $1,209,481 ; 11/1/21 – 10/31/26.

12. NSF OAC: Category I. Computing without Boundaries: Cyberinfrastructure for the Long Tail of Science; NSF OAC; PI Mike Norman, Co-PIs: Amit Majumdar, Ilkay Altintas, Shawn Strande (ex-Co-PI, Mahidhar Tatineni, Subha Sivagnanam (all UCSD); $ 37,758,328; 10/01/19 – 09/30/27

13. NSF OAC: Category II: Exploring Neural Network Processors for AI in Science and Engineering. PI: Amit Majumdar, Co-PIs: Rommie Amaro, Robert Sinkovits, Mai Nguyen, Javier Duarte, $11,250,000; 6/1/2020 – 12/31/2026.

**GRANTS AWARDED – COMPLETED (as of June 2026)**

14. NSF DBI: Collaborative Research: CIBR: Building Capacity for Data-driven Neuroscience Research. PI: Amit Majumdar, Co-PI: Subhashini Sivagnanam, Senior Personnel: Kenneth Yoshimoto; Ted Carnevale, PI Yale University; UCSD $630,486 and Yale $121,058; 4/15/20 – 3/31/23.

15. NIH NIBIB U24: Neuroscience Gateway to Enable Dissemination of Computational and Data Processing Tools and Software. PI: Amit Majumdar, Co-I: Subhashini Sivagnanam, UCSD; Ted Carnevale, Yale University; $1,869,957; 09/20/19 – 05/31/24

16. NIH NIMH R24: BRAIN INITIATIVE RESOURCE: Development of a Human Neuroelectromagnetic Data Archive and Tools Resource (NEMAR); MPIs Scott Makeig, Amit Majumdar, Arnaud Delorme, UCSD; Russ Poldrack (Stanford); $4,400,000 (approx. total); 08/01/19 – 07/31/24

17. NSF OAC: CSSI; Collaborative Research: Frameworks: Designing Next-Generation MPI Libraries for Emerging Dense GPU Systems; NSF Division: OAC; PI: Amit Majumdar; DK Panda (Ohio State) as the lead PI, and Bill Barth, the PI from TACC. Co-PIs of this project are Mahidhar Tatineni (SDSC), Karen Tomko (Ohio Supercomputer Center), Hari Subramoni (Ohio State), Samuel Khuvis (OSC) and Zhao Zhang (TACC); $350,612.00; 11/1/19 – 10/31/23

18. NSF CRI: CI-NEW: Trainable Reconfigurable Development Platform for Large-Scale Neuromorphic Cognitive Computing; NSF Division: CNS; PI Gert Cauwenberghs (UCSD), Co-PIs Amit Majumdar, Emre Neftci (UC Irvine); $1,500,000; 08/01/18 – 07/31/22

19. NIH NIBIB R01: The Open EEGLAB Portal Project; MPIs Scott Makeig, Amit Majumdar, Arnaud Delorme, UCSD; $750,000 (approx. SDSC portion); $2,600,000 (approx. total); 09/01/17 – 08/31/22

20. NSF OAC: Promoting International Collaboration on Developing Scalable, Portable & Efficient HPC Software for Modern HPC Platforms, PI: Amit Majumdar, $27,750; 10/01/18 – 09/30/21

21. NSF OAC: Gateways to Discovery: Cyberinfrastructure for the Long Tail of Science; PI: Mike Norman; Co-PIs: Shawn Strande, Robert Sinkovits, Mahidhar Tatineni; Amit Majumdar (all UCSD); $27,313,477; 10/01/13 – 03/31/21

22. NSF CyberTraining: DSE: Self-Service Training Modules for Data-Intensive Neuroscience Learning and Research; NSF Division: OCI; PI Satish Nair University of Missouri ; Co-PI Amit Majumdar, other Co-PIs Prasad Calyam, David Bergin, University of Missouri. $90,000 (SDSC portion); 09/01/17 – 08/31/20

23. NSF Collaborative SHF: Large: Collaborative Research: Next Generation Communication Mechanisms exploiting Heterogeneity, Hierarchy and Concurrency for Emerging HPC Systems; PI Amit Majumdar, Co-PI Mahidhar Tatineni (UCSD); other PIs and Co-PIs DK Panda (Lead PI), Hari Subramoni, Ohio State; Karen Tomko, Ohio Supercomputer Center; Bill Barth, University of Texas. $405,000 (SDSC portion); 8/15/16-7/31/20

24. NSF Collaborative Research: Bilateral BBSRC-NSF/BIO: Collaborative Research: ABI Development: Seamless Integration of Neuroscience Models and Tools with HPC - Easy Path to Supercomputing for Neuroscience; NSF Division – DBI; PI Amit Majumdar (lead PI), Co-PI Subhashini Sivagnanam (UCSD); other PI Ted Carnevale, Yale University; $774,000 (SDSC portion); 08/15 - 07/20

25. NSF Collaborative Research: SI2-SSI: Open Gateway Computing Environments Science Gateways Platform as a Service (OGCE SciGaP); NSF Division – ACI; PI Mark Miller, Co-PI Amit Majumdar (UCSD); other PIs Marlon Pierce (lead PI), Suresh Marru (Indiana University), Borries Demeler (University of Texas San Antonio Health Center); $1,742,099 (SDSC portion), 10/13-09/19.

26. Department of Defense (DOD) Subcontract : Design and Implementation of High Performance and Portable Parallel I/O and I/O Technologies for Naval Computational Science Library; PI Amit Majumdar; $449,934; 09/01/17-08/31/19

27. NSF Collaborative Research: BIGDATA: F: DKM: Collaborative Research: Scalable Middleware for Managing and Processing Big Data on Next Generation HPC Systems; NSF Division – IIS. PI Amit

Majumdar, Co-PI Mahidhar Tatineni (UCSD); other PIs DK Panda (Lead PI), Ohio State University; $359,999 (SDSC portion); 09/14-08/17.

28. Department of Defense (DOD) Subcontract : Strategies for Large Scale I/O for Application Performance Improvement; PI Amit Majumdar; $199,502; 06/01/16-08/31/17

29. NSF CC*IIE Integration: RADII: Resource Aware DatacentrIc CollaboratIon Infrastructure; NSF OAC; PI: Ilya Baldin, Co-PIs: Claris Castillo, Charles Schmitt, Arcot Rajasekar, U. North Carolina, $853,658 ($18,876 SDSC portion; subcontract Amit Majumdar, SDSC); 10/14 – 09/17.

30. Engility Co. grant for student summer internship: Analyzing I/O Usage Patterns of User Jobs to Improve Overall HPC System Efficiency, PI: Amit Majumdar, students: Syed Sadat Nazrul, Cherie Huang (UCSD); $25,000; 06/16-08/16.

31. NSF Collaborative Research: SHF: Large: Unified Runtime for Supporting Hybrid Programming Models on Heterogeneous Architecture; NSF Division – CCF. PI Amit Majumdar, Co-PI Yifeng Cui; other PIs: DK Panda (lead PI), Ohio State University, Karl Schulz and Bill Barth, TACC, U. Texas; $382,204 (SDSC portion); 07/12-06/16

32. NSF Collaborative Research: ABI Development: Building A Community Resource for Neuroscientists; NSF Division – DBI. PI Amit Majumdar (lead PI), Co-PI Maryann Martone (UCSD); other PI Ted Carnevale, Yale University; $706,608 (SDSC portion); 05/12-04/16

33. NSF Collaborative Research: SI2-SSI: A Comprehensive Performance Tuning Framework for the MPI Stack; NSF Division – OCI. PI Amit Majumdar; other PIs DK Panda (lead PI), Ohio State University; Bill Barth and Tommy Minyard, TACC, U. Texas; $450,772 (SDSC portion); 06/12-05/15

34. Air Force Office of Scientific Research (AFOSR): Dynamic Data Driven Application System (DDDAS) - Computational steering of large-scale structural systems through advanced simulation, optimization and structural health monitoring; PI: Yuri Bazilevs, UCSD, Co-PIs Amit Majumdar; Mahidhar Tatineni, Alison Marsden; $695,905; 11/11 – 10/15.

35. Intel Parallel Computing Center; PIs: Ross Walker, Amit Majumdar, Andreas Goetz, UCSD; $100,000 (approx.); 2014.

36. PI of a SDSC internal grant (2012 - 2013) titled, "In-site Visualization, Data Mining and Computational Steering on the Gordon Machine". Co-PI is Mahidhar Tatineni from SDSC; $20,000.

37. NSF PRAC: Petascale Computations for Complex Turbulent Flows at High Reynolds Number. PI: P.K Yeung, Georgia Tech, Co-PIs: Amit Majumdar (SDSC), Dmitry Pekurovsky (SDSC), Robert Moser, U. Texas; Jim Riley, U. Washington; Co-PI. $26,448 (travel funding); 09/11 – 08/16.

38. NSF PRAC: Enabling Breakthrough Kinetic Simulations of the Magnetosphere via Petascale Computing. PI Homa Karimabadi, UCSD, Co-PIs – Amit Majumdar (SDSC), Kevin Quest (UCSD). $39,900 (travel funding); 11/2010 – 10/2013.

39. NSF Collaborative Research PetaApps: Enabling Breakthrough Kinetic Simulations of the Magnetosphere via Multi-zone Petascale Computing; NSF Division – OCI. PI: Homa Karimabadi, UCSD, Co-PI Amit Majumdar, UCSD, Yuri Omelchenko, Kevin Quest, UCSD; Umit Catalyurek, Ohio State Univ.; NSF Division – OCI; $1,182,755.00 (total among all the institutions for three years); 08/09-07/13.

40. University of California Lab Program: Adaptive Radiotherapy Based on High Performance

Computing. PI – Steve Jiang, UCSD, Co-PIs – Amit Majumdar, Mike Holst, UCSD, Marie-Anne Descalle, LLNL; $1,500,000 total; 01/09-12/12.

41. NSF Collaborative Research: Topology-Aware MPI Communication and Scheduling for PetaScale Systems. NSF Division – OCI. PI – Amit Majumdar; other PIs: D.K. Panda (lead PI), Ohio State University; Karl Schulz and Bill Barth, TACC, U. Texas; NSF Division – OCI; $460,000 (SDSC portion); 10/09-09/13
42. NSF PetaApps: Collaborative Research: Discovery in High Reynolds Number Turbulence via Advanced Tools for Petascale Simulation and Analysis. PI – Amit Majumdar; other PIs: P.K. Yeung (lead PI), Georgia Tech; Robert Moser, U. Texas; Jim Riley, U. Washington; Co-PI: Dmitry Pekurovsky, UCSD; NSF Division – OCI; $384,000 (SDSC portion); 10/07 – 09/13.
43. PI, Microsoft gift grant, $35,000. (2008 - 2011). Project was to port and benchmark scientific applications on a Windows HPC Server 2008 cluster.
44. NSF SGER: P3DFFT+ A Highly Scalable Framework for Fourier like Transforms in Three Dimensions. PI – Dmitry Pekurovksy, Co-PI –Amit Majumdar (SDSC). $151,650, 10/09 – 09/11.
45. PI of a SDSC internal funded project (2010 - 2011) on computational framework for cardiovascular surgical procedures. Other Co-PIs are Alison Marsden (Dept. of Mechanical and Aerospace Engr, UCSD), Yuri Bazilevs (Dept. of Structural Engr, UCSD), Mahidhar Tatineni (SDSC). Postdoc Sethuraman Sankaran and graduate student Kenneth Benner (Dept. of Structural Engr, UCSD) were involved in this project. $20,000
46. NSF PRAC: Petascale Computations for Complex Turbulent Flows. PI: P.K Yeung, Georgia Tech, Co-PIs: Amit Majumdar (SDSC), Robert Moser, U. Texas; Jim Riley, U. Washington; Co-PI. $13,224 (travel funding); 09/09 – 08/12.
47. NSF HECURA: Collaborative Research – Extending One-sided Communication in MPI Programming Model for Next-Generation Ultra-Scale HEC. PI – Amit Majumdar; other PIs: D.K. Panda (lead PI), Ohio State University, and Karl Schulz, TACC, University of Texas; NSF Division – CISE; $200,000 (SDSC portion); 09/08 – 08/10.
48. NSF (Engr) funded educational project for Cyberinfrastructure Experiences for Graduate Students (CIEG-2007, CIEG-2008). Provided funding for about 10 graduate students from various universities who were research interns at SDSC for summer months in 2007 and 2008.
49. NSF ITR: Collaborative Research - (ASE) - (DMC): DDDAS: A Novel Grid Architecture Integrating Real-Time Data and Intervention During Image Guided Therapy. PI – Kim Baldridge, Co-PIs – Amit Majumdar, UCSD, Maryann Martone, UCSD, Simon K Warfield, Brigham and Women's Hospital, Harvard Medical School; NSF Division – CNS; $325,000.00 (SDSC portion); 10/04 – 09/07.
50. NSF SGER: Collaborative Research: Profiling and Analysis of Southern California Earthquake Center (SCEC) HPC Code for Petascale Simulations. PI – Amit Majumdar other PI: Tom Jordan, U. Southern California; Senior Personnel: Yifeng Cui, UCSD; NSF Division – ATM; $20,000.00 (SDSC portion); 09/06 - 08/07.

## TEACHING EXPERIENCE AND ACTIVITIES

- I teach at workshops and give tutorials on topics of cyberinfrastructure related to modeling and data processing for neuroscience research.

- I have co-developed a senior/graduate level parallel computing class for the program in computational science at the San Diego State University and has taught the course, titled Introduction to Parallel Computing, for four years (1999-2002). In each of these years, about 25 seniors and graduate students attended the class. He has mentored summer undergraduate and graduate students at SDSC.

- I teach parallel computing and parallel programming workshops at SDSC, University of California Los Angeles, University of California Davis, University of California Irvine, University of California Irvine, and has taught parallel computing workshops at the New Mexico State University, Cal State San Bernardino, University of Michigan, Stanford University, University of California San Francisco, Naval Oceanographic Office (J.C. Stennis Space Center, Mississippi), and at national workshops/conferences.

- In the summers of 2007 and 2008 I directed, with funding from the NSF Division of Design and Manufacturing Innovation (DMI) and Engineering directorates a national graduate student internship program (CIEG – Cyberinfrastructure Experiences for Graduate Students) to introduce HPC methods in graduate students' Ph.D research work (http://www.nsf.gov/pubs/2006/nsf06044/nsf06044.jsp). (http://www.nsf.gov/pubs/2008/nsf08009/nsf08009.pdf).

- Student mentored (during summer and school year):
  2013 – present: mentoring 2 to 6 high school students every summer as a part of SDSC's Research Experience for High School (REHS) students program; recent research topics included supercomputing, neuronal modeling, and analysis of EEG data
  2018 – 2019 Brian Rojas, undergraduate student, UCSD Computer Science.
  2017 – David Paz-ruiz, undergraduate student, UCSD Computer Science and Engineering; Emily Le, undergraduate student, UCSD Mathematics
  2016 – Syed Sadat Nazrul graduate student Data Science Program; Cherie Huang, undergraduate student, computer science UCSD
  2012 – Kenny Benner, grad student Structural Engr, UCSD, Debleena Sengupta, high school student, West View High, San Diego
  2011 - Prithvi Sundararaman, undergraduate student, Mechanical Engineering, UCSD
  2008 – Qiaoyan Wu, Electrical Engr, Rutgers Univ.
  Haifeng Ge, Electrical Engr., University of Nebraska-Lincoln.
  2007 - Enlu Zhou, Elec Engr grad student, U. Maryland
  Haolin Feng, Industrial Engr. grad student, Purdue
  2005 - Tharaka Devadithya, CS grad student, Indiana Univ.
  June Andrews, Elec. Engr. undergraduate student, UC Berkeley
  2004 - Abhishek Trivedi, Mech Eng. grad student, UCSD

## PROFESSIONAL ACTIVITIES

- Technical service to organizations

  - Program Committee Member, HiPC 2024, December 18-21, 2024, Bengaluru, India
  - Program Committee Member, eScience 2023, October 9-13, 2023, Limassol, Cyprus
  - Program Committee Member, eScience 2022, October 11-14, 2022, Salt Lake City, Utah, USA
  - Program Committee Member, HiPC 2021, 17-18 February 2021, Virtual, India
  - Program Committee Member, International Conference on Mathematics and Computational Methods Applied to Nuclear Science and Engineering, M&C 2021, October 3-7, 2021, Raleigh, North Carolina

- Program Committee Member, 17th IEEE International eScience Conference (eScience 2021), September 20-23, 2021 Innsbruck, Austria
- Program Committee Member, HiPC 2020, 16-18 December 2020, Virtual, India
- Program Committee Member, Gateways2020, October 19-21, 2020, Bethesda, MD
- Program Committee Member, Supercomputing Asia 2020 (SCA), February 24-27, 2020, Singapore
- Program Committee Member, HiPC 2019, 17-20 December 2019, Hyderabad, India
- Program Committee Member, eScience2019, 15th eScience International Conference, September 24-27, 2019, San Diego, CA
- Program Committee Member, Gateways2019, September 23-25, 2019, San Diego, CA
- Co-editor of Springer Communications in Computer and Information Science published workshop proceedings (Software Challenges to Exascale Computing - SCEC 2018), CCIS 964.
- General Chair, 2nd Workshop on Software Challenges for Exascale Computing (SCEC), December 13-14, 2018, Delhi, India
- Program Committee Member, 18th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP-2018), November 2018, Guangzhou, China
- Program Committee Member, Gateways 2018, September 2018, Austin, TX
- Reviewer - Computational Neuroscience Annual Conference (CNS), July 2018, Seattle, USA
- Program Committee Member, First Workshop on Software Challenges to Exascale Computing, December 2017, Jaipur, India
- Program Committee Member, Gateways 2017, October 2017, Ann Arbor, MI
- Program Committee Member, 17th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP-2017), August 2017, Helsinki, Finland
- Program Committee Member, Practice & Experience in Advanced Research Computing PEARC17, July 2017, New Orleans, LA
- Program Committee Member, Gateways 2016, November 2016, San Diego, CA
- Program Committee Member, XSEDE 16 (Extreme Science and Engineering Discovery Environment), 2016, July 2016, Miami, FL
- Program Committee Member, International Conference on Computational Science, June, 2016, San Diego, CA
- Program Committee Member, The 16th International Conference on Algorithms and Architectures for Parallel Processing, December 2016, Granada, Spain
- Program Committee Member, XSEDE 15 (Extreme Science and Engineering Discovery Environment), 2015, July 2015, St. Louis, MO
- Program Committee Member, The 15th International Conference on Algorithms and Architectures for Parallel Processing, November 2015, Zhangjiajie, China
- Program Committee, The 9th International Conference on Frontier of Computer Science and Technology, August 2015, Dalian, China
- HPC Technical Computing Advisory Panel, Hyperion Research (2015-present)
- Co-editor, XSEDE13 Special Journal Issue, Concurrency and Computation: Practice & Experience, 2014
- Program Committee Member, XSEDE 14 (Extreme Science and Engineering Discovery Environment), 2014, July 2014, Atlanta, GA
- Co-Editor XSEDE13 Special Issue Journal of Concurrency and Computation – Practice and Experience, John Wiley and Sons, 2014
- Program Committee member, International Conference on Algorithms and Architectures for Parallel Processing, 2014, Dalian, China
- Program Committee member, IEEE International Symposium on Parallel and Distributed Processing with Applications, 2014, Milan, Italy
- Program Committee member, IEEE International Conference on High Performance Computing and Communications, 2013, Zhangjiajie, China

- Technical Program Chair, XSEDE 13 (Extreme Science and Engineering Discovery Environment), 2013, San Diego, USA
- Program Committee member, IEEE International Conference on eScience, 2012, Chicago, USA
- Technical Program Deputy Chair, XSEDE 12 (Extreme Science and Engineering Discovery Environment), 2012, Chicago, USA
- Science Track Chair, Teragrid Extreme Digital Discovery 11, 2011, Salt Lake City, USA
- Science Track Co-Chair, Teragrid Extreme Digital Discovery 10, 2010, Pittsburgh, USA

- Scientific Advisory Committee member – Canadian Open Neuroscience Platform (CONP) Project

- Reviewer of journals
  - Review Board Member, Machine Learning and Knowledge Extraction (MAKE) Journal, MDPI
  - ACM Transactions on the Web
  - Applied Sciences, MDPI Publishing
  - Future Generation Computer Systems
  - IEEE Transactions on Parallel and Distributed Computing
  - International Parallel and Distributed Processing Symposium (IPDPS)
  - Journal of Concurrency and Computation: Practice and Experience
  - Neuroinformatics
  - Transactions on Parallel and Distributed Systems (TPDS)

- Reviewer of proposals for funding agencies
  - National Science Foundation
  - Air Force Office of Scientific Research
  - DOE
  - India-US Science and Technology Forum

## 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”, 7th 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

9. A. Majumdar, “Supercomputing Enabling Science - SDSC Expanse, Voyager, PNRP”, PEARC2025, Student Program, Columbus, OH, July 2025

10. Intel Booth SC25: Moderated panel: Harnessing Heterogeneity to Span the Spectrum from HPC to AI; Panelists: Lisa Perez, PhD - Director for Advanced Computing Enablement, Texas A&M University; Amit Majumdar, PhD - Division Director: Data Enabled Scientific Computing, San Diego Supercomputing Center / Associate Professor - Department of Radiation Medicine and Applied Sciences, UCSD; Clay Hughes - Principal Member of Technical Staff, Scalable Computer Architectures, Sandia National Laboratories; Aaron Jezghani, PhD - Associate Director for Platforms & Architecture, Georgia Institute of Technology, Supercomputing2025 St. Louis, MS

**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 Implementation 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 Implementation 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 Baldrideg, 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, "HPCC 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 Polite'cnico 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 3rd, 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. Troung, 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

79. The NSF Computing Ecosystem: Category 1 and 2 Resources for Accelerating Research for the Community. Speakers: Shawn Strande, Paola A. Buitrago, Amit Majumdar, Sergiu Sanielevici, Shawn Brown, David Hancock, X. Carol Song, Robert Harrison, William Gropp Pearc2021, July 2021, Virtual conference

80. S. Sivagnanam, K. Yoshimoto, M. Kandes, S. Yeu, D. Choi, T. Carnevale, A. Majumdar, ,"The Neuroscience Gateway Enabling Large Scale Modeling, Data Processing and Dissemination of Software and Tools," Poster, The 8th Annual BRAIN Initiative Meeting, Virtual, June 21-22, 2022

81. Amit Majumdar, William Gropp, David Hancock, Honggao Liu, Dan Stanzione, Robert Harrison and Eva Siegmann: NSF innovative computing technology testbed community exchange, PEARC 2022, Boston, July 2022

82. S. SIVAGNANAM, K. YOSHIMOTO, M. KANDES, S. H. YEU, D. CHOI, N. T. CARNEVALE, A MAJUMDAR, "Neuroscience Gateway - modeling, data processing and software dissemination," Poster, Society for Neuroscience Annual Conferences, Nov 12- 16,

2022, San Diego, CA, USA.

83. Arnaud Delorme, Dung Truong, Choonhan Youn, Subha Sivagnanam, Claire Stirm, Kenneth Yoshimoto, Russell A. Poldrack, Amit Majumdar, Scott Makeig, "NEMAR - A BRAIN Initiative resource for neuroelectromagnetic data, tools and computation," Poster, Society for Neuroscience Annual Meeting, Nov 12-16, 2022, San Diego, CA, USA.

84. A. MAJUMDAR, S. SIVAGNANAM, K. YOSHIMOTO, N. CARNEVALE, M. KANDES, S. YEU, D. CHOI, "Neuroscience Gateway enabling software dissemination and large scale modeling and data processing", Society for Neuroscience Annual Meeting, Washington D.C., Nov 10-15, 2023

85. A. DELORME, D. TRUONG, C. YOUN, S. SIVAGNANAM, C. STIRM, K. YOSHIMOTO, R. A. POLDRACK, A. MAJUMDAR, S. MAKEIG, "Nemar: an open access data, tools and compute resource operating on neuroelectromagnetic data," Society for Neuroscience Annual Meeting, Washington D.C., Nov 10-15, 2023

86. A. Majumdar, S. Sivagnanam, K. Yoshimoto, S. Yen, M. Kandes, DJ Choi, and T. Carnevale, ""Neuroscience Gateway - Software Dissemination and Large-Scale Modeling and Data Processing on Supercomputing Resources", PRACTICE & EXPERIENCE IN ADVANCED RESEARCH COMPUTING2023 (PEARC2023), Portland, OR, July 23-27, 2023, ACM, Poster publication.

87. Workshop: Providing cutting-edge computing testbeds to the science and engineering community, Amitava Majumdar, San Diego Supercomputer Center, Mahidhar Tatineni, San Diego Supercomputer Center, Frank Wuerthwein, San Diego Supercomputer Center, Paola Buitrago, Pittsburgh Supercomputing Center, Sergiu Sanielevici, Pittsburgh Supercomputing Center, Honggao Liu, Texas A&M University, Dhruva Chakravorty, Texas A&M University, Eva Siegmann, Stony Brook University PEARC 2024, Providence, RI, July 2024

88. Workshop How Computational Infrastructures can Support Scalable, AI-Readiness of Data to Power Collaboration, Sergiu Sanielevici, Pittsburgh Supercomputing Center, Erik Schultes, Leiden University, Amitava Majundar, San Diego Supercomputing Center, Raghu Mahiraju, The Ohio State University, Laurette Dubé, McGill University, PEARC 2025, Columbus, OH, July 2025

89. Conference: 67th Annual Meeting of the APS Division of Plasma Physics. Long Beach, CA Nov 17-21 2025, - Title: "Femtosecond-level laser pulse shaping via machine learning modeling" - Authors: Javier H. Nicolau , G.W. Collins IV , A. Keller , S. Buczek , B. Sammuli , N. Alexander, R. Nazikian , A. Majumdar , F. Würthwein and M.J.-E. Manuel. 2025

90. Workshop: The Continuum of Computing: Right-Sizing AI Infrastructure, Aaron Jezghani, Georgia Tech, Jeff Young, Georgia Tech, Amit Majumdar San Diego Supercomputer Center, Madhusudan Gujral, San Diego Supercomputer Center, and Everton Paulino, Intel, PEARC 2026, Minneapolis, MN, July 2026

**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. Snavely, 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. Baldridge, 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. Baldridge, N. Archip, and S. K. Warfield, "On-demand High Performance Computing: Image Guided neuro-Surgery Feasibilty 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 Neurosurg ery 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 Magnetoshpere 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 Applicaiton, " 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 couplped 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)

25. Y. Bazilevs, A.L. Marsden, F. Lanza di Scalea, A. Majumdar, and M. Tatineni, "Toward a Computational Steering Framework for Large-Scale Composite Structures Based on Continually and Dynamically Injected Sensor Data," International Conference on Computational Science, Omaha, Nebraska, June 4-6, 2012, Procedia Computer Science, Volume 9, 2012, pages 1149-1158. (journal publication)

26. K.K. Yoshimoto, D.J. Choi, R.L. Moore, A. Majumdar, E. Hocks, "Implementations of Urgent Computing on Production HPC Systems," International Conference on Computational Science, Omaha, Nebraska, June 4-6, 2012, Procedia Computer Science, Volume 9, 2012, pages 1687-1693. (journal publication)

27. S. Sivagnanam, A. Majumdar, K. Yoshimoto, N. T. Carnevale, V. Astakhov, A. Bandrowski, M. Martone, "Introducing The Neuroscience Gateway," Proceedings International Workshop on Science Gateways , Zurich, Switzerland, 3-5 June, 2013. CEUR Workshop Proceedings, ISSN 1613-0073, Vol-993, 2013.(peer reviewed conference proceeding)

28. Subhashini Sivagnanam, Vadim Astakhov, Kenneth Yoshimoto, Ted Carnevale, Maryann Martone, Amit Majumdar, and Anita Bandrowski. 2013. A neuroscience gateway: software and implementation. In *Proceedings of the Conference on Extreme Science and Engineering Discovery Environment: Gateway to Discovery* (XSEDE '13). ACM, New York, NY, USA, Article 31, 3 pages. DOI=10.1145/2484762.2484816 http://doi.acm.org/10.1145/2484762.2484816 (peer reviewed conference proceeding)

29. H. Karimabadi, B. Loring, P. O'Leary, A. Majumdar, M. Tatineni, and B. Geveci. 2013. In-situ visualization for global hybrid simulations. In *Proceedings of the Conference on Extreme Science and Engineering Discovery Environment: Gateway to Discovery* (XSEDE '13). ACM, New York, NY, USA, Article 57, 8 pages. DOI=10.1145/2484762.2484822 http://doi.acm.org/10.1145/2484762.2484822 (peer reviewed conference proceeding)

30. C. Garcia-Blanquel, A. Majumdar, R. Luna-Garcia, "Parallel Adaptive Method for Selecting Points of Interest in Structures; Cranial Deformation," Computacion y Sistemas Special Issue: Supercomputing: Applications and Technologies, Vol. 17 No. 3, ISSN 1405-5546, pp 317-327, 2013. (Journal publication)

31. H. Karimabadi, V. Roytershteyn, H. X. Vu, Y. A. Omelchenko, J. Scudder, W. Daughton, A. Dimmock, K. Nykyri, M. Wan, D. Sibeck, M. Tatineni, A. Majumdar, B. Lorinng and B. Geveci, “The link between shocks, turbulence, and magnetic reconnection in collisionless plasmas”, Physics of Plasmas 21, 062308 (2014); https://doi.org/10.1063/1.4882875

32. S. Sivagnanam, A. Majumdar, K. Yoshimoto, V. Astakhov, A. Bandrowski, M. Martone, and N. T. Carnevale, "Early experiences in developing and managing the neuroscience gateway," Journal

of Concurrency and Computation: Practice and Experience, 2015, Vol 27, Issue 2, pages 473-488, doi: http://dx.doi.org/10.1002/cpe.3283. (Journal publication)

33. H. Karimabadi, V. Roytershteyn, H. X. Vu, Y. Omelchenko, J. Scudder, W. Daughton, A. Dimmock, K. Nykyri, M. Wan, D. Sibeck, M. Tatineni, A. Majumdar, B. Loring, and B. Geveci, "The link between shocks, turbulence and magnetic reconnection in collisionless plasmas," Physics of Plasmas, Vol. 21, Issue 6, 2014. (Journal publication)

34. R.L. Moore, C. Baru, D. Baxter, G. C. Fox, A. Majumdar, P. Papadopoulus, W. Pfeiffer, R. S. Sinkovits, S. Strande, M. Tatineni, R. P. Wagner, N. Wilkins-Diehr, M. L. Norman, "Gateway to Discovery: Cyberinfrastructure for the Long Tail of Science," Proceedings of the 2014 Annual Conference on Extreme Science and Engineering Discovery Environment, ACM, New York, NY, USA, 2014. (peer reviewed conference proceeding)

35. M. Miller, T. Schwartz, P. Hoover, K. Yoshimoto, S. Sivagnanam, A. Majumdar, "The CIPRES Workbench: A Flexible Framework for Creating Science Gateways", Proceedings XSEDE15, St. Louis, MO, July 26-30, 2015. (peer reviewed conference proceeding)

36. M. Tatineni, X. Lu, DJ. Choi, A. Majumdar, DK Panda, "Experiences and Benefits of Running RDMA Hadoop and Spark on SDSC Comet," Proceedings XSEDE16, July 17-21, 2016, Miami, FL. (peer reviewed conference proceeding)

37. A. Majumdar, S. Sivagnanam, K. Yoshimoto, T. Carnevale, "Understanding the Evolving Cyberinfrastructure Needs of the Neuroscience Community," Proceedings XSEDE16, July 17-21, 2016, Miami, FL. (peer reviewed conference proceeding)

38. Dura-Bernal S, Neymotin S.A., Kerr C.C., Sivagnanam S., Majumdar A., Francis J.T., Lytton W.W., "Evolutionary algorithm optimization of biological parameters in a biomimetic neuroprosthesis," IBM Journal of Research and Development, Vol. 61; Issue 2/3, March-May, 2017. (Journal publication)

39. Supun Nakandala, Suresh Marru, Marlon Pierce, Sudhakar Pamidighantam, Kenneth Yoshimoto, Terri Schwartz, Subhashini Sivagnanam, Amit Majumdar and Mark Miller, "Apache Airavata Sharing Service: A Tool for Enabling User Collaboration in Science Gateways," PEARC17, July 09-13, 2017, New Orleans, LA, USA. ACM ISBN 978-1-4503-5272-7/17/07. (peer reviewed conference proceeding)

40. S. Strande, H. Cai, T. Cooper, K. Flammer, C. Irving, G. Laszewski, A. Majumdar, D. Mishin, P. Papadopoulos, W. Pfeiffer, R. Sinkovits, M. Tatineni, R. Wagner, F. Wang, N. Wilkins-Diehr, N. Wolter, and M. Norman, "Comet - Tales from the Long Tail - Two Years In and 10,000 Users Later," PEARC17, July 09-13, 2017, New Orleans, LA, USA. ACM ISBN 978-1-4503-5272-7/17/07. http://dx.doi.org/10.1145/3093338.3093383 (peer reviewed conference proceeding).

41. S. Sivagnanam, K. Yoshimoto, T. Carnevale, A. Majumdar, “The Neuroscience Gateway – Enabling Large Scale Modeling and Data Processing in Neuroscience,” Practice & Experience in Advanced Research Computing – PEARC18, Pittsburgh, PA, July 22-26, 2018 (peer reviewed conference proceeding).

42. M. Shantharam, M. Tatineni, D. Choi, A. Majumdar, “Understanding I/O Bottlenecks and Tuning for High Performance I/O on Large HPC Systems: A Case Study,” Practice & Experience in

Advanced Research Computing – PEARC18, Pittsburgh, PA, July 22-26, 2018 (peer reviewed conference proceeding).

43. P. S. Kumbhar, S. Sivagnanam, K. Yoshimoto, M. Hines, T. Carnevale and A. Majumdar, "Performance Analysis of Computational Neuroscience Software NEURON on Knights Corner Many Core Processors", Software Challenges to Exascale Computing, Dec 13-14, 2018, Delhi, India, Springer Communications in Computer and Information Science (CCIS) (peer reviewed conference proceeding).

44. S. S. Nazrul, C. Huang, M. Tatineni, N. Wolter, D. Mishin, T. Cooper and A. Majumdar, "Analyzing IO Usage Patterns of User Jobs to Improve Overall HPC System Efficiency," Software Challenges to Exascale Computing, Dec 13-14, 2018, Delhi, India, Springer Communications in Computer and Information Science (CCIS) (peer reviewed conference proceeding).

45. A. Delorme, A. Majumdar, S. Sivagnanam, R. Martinez-Cancino, K. Yoshimoto, S. Makeig, "The Open EEGLAB Portal," 9th International IEEE EMBS Conference on Neural Engineering, San Francisco, CA, March 20-23, 2019 (peer reviewed conference proceeding).

46. Padraig Gleeson, Matteo Cantarelli, Boris Marin, Adrian Quintana, Matt Earnshaw, Sadra Sadeh, Eugenio Piasini, Justas Birgiolas, Robert C. Cannon, N. Alex Cayco-Gajic, Sharon Crook, Andrew P. Davison, Salvador Dura-Bernal, Andra´s Ecker, Michael L. Hines, Giovanni Idili, Frederic Lanore, Stephen D. Larson, William W. Lytton, Amitava Majumdar, Robert A. McDougal, Subhashini Sivagnanam, Sergio Solinas, Rokas Stanislovas, Sacha J. van Albada, Werner van Geit, and R. Angus Silver1, "Open Source Brain: A Collaborative Resource for Visualizing, Analyzing, Simulating, and Developing Standardized Models of Neurons and Circuits", 2019 (June), Neuron 103, 1-17; https://doi.org/10.1016/j.neuron.2019.05.019. (Journal publication).

47. K. K. Yoshimoto, N. T. Carnevale, S. Sivagnanam, A. Majumdar, M. A. Miller, "Web of Trust Tool for Gateway User Vetting," PEARC19 Proceedings, PEARC19 Chicago, IL, July 28 – August 1, 2019 (peer reviewed conference proceeding).

48. Ramon Martinez-Cancino, Arnaud Delorme, Dung Truong, Fiorenzo Artoni, Kenneth Kreutz-Delgado, Subhashini Sivagnanam, Kenneth Yoshimoto, Amitava Majumdar, Scott Makeig, "The Open EEGLAB Portal Interface: High-Performance Computing with EEGLAB," NeuroImage, 2020, 116778, ISSN 1053-8119, https://doi.org/10.1016/j.neuroimage.2020.116778. (http://www.sciencedirect.com/science/article/pii/S1053811920302652) (Journal publication).

49. Arnaud Delorme, Dung Truong, Ramon Martinez-Cancino, Cyril Pernet, Subha Sivagnanam, Kenneth Yoshimoto, Russ Poldrack, Amit Majumdar, Scott Makeig, "Tools for Importing and Evaluating BIDS-EEG Formatted Data", 10th International IEEE EMBS Conference On Neural Engineering (NER'21), May 4-6, 2021

50. Strande, Shawn and Cai, Haisong and Tatineni, Mahidhar and Pfeiffer, Wayne and Irving, Christopher and Majumdar, Amit and Mishin, Dmitry and Sinkovits, Robert and Norman, Mike and Wolter, Nicole and Cooper, Trevor and Altintas, Ilkay and Kandes, Marty and "Expanse: Computing without Boundaries: Architecture, Deployment, and Early Operations Experiences of a Supercomputer Designed for the Rapid Evolution in Science and Engineering" PEARC '21, 2021 https://doi.org/10.1145/3437359.3465588

51. Arnaud Delorme, Dung Truong, Choonhan Youn, Subhashini Sivagnanam, Claire Stirm, Kenneth Yoshimoto, Russell A Poldrack, Amitava Majumdar, Scott Makeig, NEMAR: an open access data, tools and compute resource operating on neuroelectromagnetic data, Database, Volume 2022, 2022, baac096, https://doi.org/10.1093/database/baac096

52. Amaro R, Chen J, Duarte J, Hutton T, Irving C, Kandes M, Majumdar A, Mishin D, NguyenM, Rodriguez P, Silva F, Sinkovits R, Strande S, Tatineni M, Tran L, Wolter N. Voyager – An Innovative Computational Resource for Artificial Intelligence & Machine Learning Applications in Science and Engineering. ACM Proceeding PRACTICE & EXPERIENCE IN ADVANCED RESEARCH COMPUTING 2023 (PEARC2023). PEARC2023; 2023 July; Portland, OR, USA. ACM; c2023.

53. Marru S, Pierce M, Plale B, Pamidighantam S, Wannipurage D, Christie M, Ranawaka I, Abeysinghe E, Quick R, Tajkhorshid E, Koric S, Basney J, Spivak M, Isralewitz B, Bernardi R, Gomes D, Krishnan G, Bazhenov M, Smallen S, Majumdar A, Arkhipov A, Dai K, Liu XP. Cybershuttle: An End-to-end Cyberinfrastructure Continuum to Accelerate Discovery in Science and Engineering. ACM Proceeding PRACTICE & EXPERIENCE IN ADVANCED RESEARCH COMPUTING 2023 (PEARC2023). PEARC2023; 2023 July; Portland, OR, USA. ACM; c2023. PRACTICE & EXPERIENCE IN ADVANCED RESEARCH COMPUTING 2023 (PEARC2023); 2023 July 23; Portland, OR, USA. ACM.

54. Upadhyaya DP, Prantzalos K, Thyagaraj S, Shafiabadi N, Fernandez-BacaVaca G, Sivagnanam S, Majumdar A, Sahoo SS. Machine Learning Interpretability Methods to Characterize Brain Network Dynamics in Epilepsy. medRxiv. 2023 Oct 19;. doi: 10.1101/2023.06.25.23291874. PubMed PMID: 37425941; PubMed Central PMCID: PMC10327223.

55. Upadhyaya DP, Prantzalos K, Golnari P, Shaikh AG, Sivagnanam S, Majumdar A, Ghasia FF, Sahoo SS. Explainable Artificial Intelligence (XAI) in the Era of Large Language Models: Applying an XAI Framework in Pediatric Ophthalmology Diagnosis using the Gemini Model. AMIA Jt Summits Transl Sci Proc. 2025;2025:566-575. eCollection 2025. PubMed PMID: 40502262; PubMed Central PMCID: PMC12150742.

56. Prantzalos K, Upadhyaya D, Shafiabadi N, Fernandez-BacaVaca G, Gurski N, Yoshimoto K, Sivagnanam S, Majumdar A, Sahoo SS. MaTiLDA: An Integrated Machine Learning and Topological Data Analysis Platform for Brain Network Dynamics. Pacific Symposium on Biocomputing (PSB) 2024. Pacific Symposium on Biocomputing (PSB) 2024; 2024 January 3; Hawaii, USA. World Scientific Publishing Company.

57. Upadhyaya DP, Tarabichi Y, Prantzalos K, Ayub S, Kaelber DC, Sahoo SS. Machine learning interpretability methods to characterize the importance of hematologic biomarkers in prognosticating patients with suspected infection. Comput Biol Med. 2024 Dec;183:109251. doi: 10.1016/j.compbiomed.2024.109251. Epub 2024 Oct 12. PubMed PMID: 39393128; PubMed Central PMCID: PMC11576231.

58. S Sivagnanam, S Yeu, K Lin, S Sakai, F Garzon, K Yoshimoto, K Prantzalos, D P Upadhyaya, A Majumdar, S S Sahoo, W W Lytton, Towards building a trustworthy pipeline integrating Neuroscience Gateway and Open Science Chain, Database, Volume 2024, 2024, baae023, https://doi.org/10.1093/database/baae023

59. Prantzalos K, Upadhyaya D, Golnari P, Fernandez-BacaVaca G, Aispuro GP, Salehizadeh S, Thyagaraj S, Gurski N, Yoshimoto K, Sivagnanam S, Majumdar A, Sahoo SS. Neural Mosaics: Detecting Aberrant Brain Interactions using Algebraic Topology and Generative Artificial Intelligence. AMIA Annu Symp Proc. 2024;2024:920-929. eCollection 2024. PubMed PMID: 40417558; PubMed Central PMCID: PMC12099319.

60. Nakano H, Majumdar A, Omori T. Data-driven Estimation of Spatial Electrical Property of Multi-Compartment Models with Neuronal Morphology by Replica Exchange Monte Carlo Method. Nonlinear Theory and Its Applications, IEICE. 2024 April; E15-N(2).

61. Kudithipudi D, Schuman C, Vineyard C, Pandit T, Merkel C, Kubendran R, Aimone J, Orchard G, Mayr C, Benosman R, Hays J, Young C, Bartolozzi C, Majumdar A, Cardwell S, Payvand M, Buckley S, Kulkarni S, Gonzalez H, Cauwenberghs G, Thakur C, Subramoney A, Furber S. Neuromorphic computing at scale. Nature. 2025/01; 637(8047):801-812. doi: 10.1038/s41586-024-08253-8.