Ümit V. Çatalyürek

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Research Interests

Broad topics: high performance computing, combinatorial scientific computing, and biomedical informatics.
In particular: graph analytics, parallel algorithms for scientific applications, scheduling, graph and hypergraph partitioning, workload and data decomposition for irregular applications, programing models and runtime systems for high performance computing, data-intensive computing, and large scale genomic and biomedical applications.

Education

Ph.D. Computer Engineering and Information Science, 2000, Bilkent University, Turkey
Thesis: Hypergraph Models for Sparse Matrix Partitioning and Reordering
M.S. Computer Engineering and Information Science, 1994, Bilkent University, Turkey
B.S. Computer Engineering and Information Science, 1992, Bilkent University, Turkey

Professional Experience

Jan 2017 –	**Associate Chair**	School of Computational Science and Engineering Georgia Institute of Technology
Jan 2017 – Dec 2020	**Director**	CSE Graduate Programs Georgia Institute of Technology
Aug 2016 –	**Professor**	School of Computational Science and Engineering Georgia Institute of Technology
Aug 2016 –	**Adjunct Professor**	Dept. of Biomedical Informatics, The Ohio State University
Sep 2014 – Aug 2016	**Vice Chair for Academic Affairs**	Dept. of Biomedical Informatics, The Ohio State University
Sep 2014 – Aug 2016	**Director, Division of Data Sciences**	Dept. of Biomedical Informatics, The Ohio State University
Aug 2015 – Aug 2016	**Affiliated Faculty**	Translational Data Analytics @ Ohio State
Mar 2015 – Aug 2016	**Professor**	Division of Biostatistics (courtesy), College of Public Health The Ohio State University
Sep 2012 – Aug 2016	**Professor**	Dept. of Biomedical Informatics, Dept. of Electrical and Computer Engineering, Dept. of Computer Science and Engineering (courtesy), The Ohio State University
Feb 2011 – Aug 2016	**Graduate Faculty Member**	Dept. of Computer Science and Engineering, The Ohio State University
Oct 2007 – Aug 2012	**Associate Professor**	Dept. of Biomedical Informatics, Dept. of Electrical and Computer Engineering, The Ohio State University
Jan 2006 – Sep 2007	**Assistant Professor**	Dept. of Electrical and Computer Engineering, The Ohio State University
Oct 2001 – Sep 2007	**Assistant Professor**	Dept. of Biomedical Informatics, The Ohio State University
Dec 1999 – Sep 2001	**Research Associate**	Dept. of Pathology, Division of Informatics, Johns Hopkins Medical Institutions
Dec 1999 – Sep 2001	**Visiting Research Scientist**	UMIACS, University of Maryland, College Park
Sep 1992 – Nov 1999	**Teaching and Research Assistant**	Department of Computer Engineering and Information Science, Bilkent University, Turkey

AWARDS, HONORS AND RECOGNITION

- SIAM Fellow with citation "for contributions to high-performance and parallel algorithms and to combinatorial scientific computing", 2020.
- Board Member, Bilkent University, Board of Trustees, 2019 –
- IEEE Fellow with citation "for contributions to combinatorial scientific computing and parallel computing", 2016.
- Elected, Chair, IEEE CS's Technical Committee on Parallel Processing (TCPP), 2016-2017, and 2018-2019.
- Lumley Interdisciplinary Research Award, The Ohio State University, College of Engineering, 2015.
- Elected, Vice Chair, ACM Special Interest Group on Bioinformatics, Computational Biology, and Biomedical Informatics (SIGBio), 7/1/2015-6/30/2018.
- Best Student Paper Award, The 19th ACM International Symposium on High Performance Distributed Computing (HPDC) 2010.
- SBS Excellence in Research and Teaching Award, The Ohio State University, College of Medicine, 2008.
- NSF CAREER Award, 2007.
- Best Paper Award in Algorithms Track, The 2007 International Parallel and Distributed Processing Symposium (IPDPS 2007).
- Bilkent University Scholarship, 1992 to cover full tuition and a stipend for the duration of graduate study.
- Bilkent University Scholarship, 1987 to cover full tuition and a stipend for the duration of undergraduate study.
- TUBITAK (The Scientific and Technical Research Council of Turkey) Second Prize in High School Math Contest in Marmara Region, 1987
- TUBITAK (The Scientific and Technical Research Council of Turkey) Third Prize in High School Chemistry Contest in Marmara Region, 1987

GRANTS/CONTRACTS

A. CURRENT:

1. "High-Performance Portable Graph Analytics", *Sandia National Laboratories/Sandia Corp*, #2115504, Principal Investigator, 11/23/2020 – 9/30/2021, $86,332.
2. "Portable Tensor Kernels for Dense Tensor Computations", *Sandia National Laboratories/Sandia Corp*, #214694, Principal Investigator, 11/9/2020 – 9/30/2021, $64,894.
3. "SPX: Collaborative Research: Parallel Algorithm by Blocks - A Data-centric Compiler/runtime System for Productive Programming of Scalable Parallel Systems", *National Science Foundation,* CCF-1919021, GT Principal Investigator, jointly with P. Sadayappan (Lead PI, U.Utah), A.S. Rajam (WSU), A. Kalyanaraman (WSU, PI), S. Krishnamoorthy (WSU), 10/1/2019 – 9/30/2022, $400,000 (Total $1.2M).
4. "Scalable Dynamic Network Generation", *Sandia National Laboratories/Sandia Corp*, #2006806 & #2051479, Principal Investigator, 2/28/2019 – 9/17/2021, $150,994.

B. COMPLETED:

1. "Multi-constraint Partitioning for Multi-Physics Simulations", *Sandia National Laboratories/Sandia Corp*, #2118474, Principal Investigator, 12/17/2019 – 12/16/20, $85,321.
2. "Portable Tensor Kernels for Dense Tensor Computations", *Sandia National Laboratories/Sandia Corp*, #2110038, Principal Investigator, 11/18/2019 – 9/30/2020, $64,894.
3. "High-Performance Portable Graph Analytics", *Sandia National Laboratories/Sandia Corp*, #2115504, Principal Investigator, 12/6/2019 – 9/30/2020, $87,688.
4. "Mapping Sparse Algorithms to the Emu Chick Architecture", *Sandia National Laboratories/Sandia Corp*, #1960773, Principal Investigator, 10/1/19 – 9/15/19, $84,000.
5. "II-New: Infrastructure for Energy-Aware High Performance Computing (HPC) and Data Analytics on Heterogeneous Systems", *National Science Foundation,* CNS-1513120, Co-Principal Investigator, jointly with G. Agrawal (PI), X. Zhang, D.K. Panda, P. Sadayappan, 7/1/15 – 6/30/19, $898,685.

6. "Center of Excellence Partner, Predictive Analysis of Massive Streaming Graphs", DHS, Co-Principal Investigator, jointly with D. Bader (PI), 8/17/2017 – 5/30/2019, $459,958.
7. "Visual analytics on the spread of pathogens", Defense Threat Reduction Agency, HDTRA1-16-C-0010, Principal Investigator, jointly with D. Janies (UNCC), 12/9/15 – 3/31/19, $1,757,942.
8. "Innovative ab initio symmetry-adapted no-core shell model for advancing fundamental physics and astrophysics", *National Science Foundation*, ACI-1516244, OSU Principal Investigator, jointly with J.P. Draayer (Lead PI, Louisiana State), J.P. Vary (Iowa State) and M. Sosonkina (Old Dominion), 8/1/15 – 7/31/17, 6M node-hours in Blue Waters and $39,936 (OSU $8,008).
9. "High performance analytics and unified visual platform for integrating genome, proteome and histology images in cancer subtyping", *Leidos Biomedical Research, Inc.* 15X040, Co-Principal Investigator, jointly with K. Huang (PI), R. Machiraju, P. Mallick (Stanford), 1/28/15 – 6/30/17, $574,844.
10. "MIDAs: Multi-modeling and Integrative Data Analytics Training Program", *National Library of Medicine of the National Institutes of Health*, T15LM011270, multi-PI, jointly with P. Payne, 9/15/15 – 2/28/17, $485,583.
11. "BioCloud – Algorithms, Tools and Infrastructure for High-Performance Next-Generation Bioinformatics on the Cloud", *Qatar National Research Fund*, NPRP 4-1454-1-233, Lead Principal Investigator, jointly with Q. Malluhi (Qatar University, Qatar), M. Abouelhoda (Nile University, Egypt), 4/1/12 – 9/30/15, $934,822.
12. "CC-NIE Integration: Innovations to Transition a Campus Core Cyberinfrastructure to Serve Diverse and Emerging Researcher Needs", *National Science Foundation* OCI-1246001, Co-Principal Investigator, jointly with C. Whitacre (PI), D.K. Panda, P. Calyam, D. Gaitonde, 10/1/12 – 9/30/15, $987,019.
13. "Informatics methods for identifying breast cancer control genes and proteins", *National Institutes of Health / National Cancer Institute* R01CA141090, multi-PI, jointly with K. Huang, J. D. Parvin, 6/1/2009 - 4/30/2015, $2,387,430.
14. "Data, algorithm and analytic capability development for threat surveillance", Defense Threat Reduction Agency, HDTRA1-14-C-0007, Principal Investigator, jointly with K. Kaya, D. Janies (UNCC) and X. Wang (UNCC), 1/2/14 – 1/2/15, $432,480.
15. "Genetic interactions in colorectal cancer susceptibility", *National Institutes of Health* 1R01CA134461-01A2, Investigator, A. Toland (PI), 2/5/10 – 12/31/14, $1.5M.
16. "Pathway Aggregation in the Risk Assessment of Proliferation Resistance and Physical Protection (PR&PP) of Nuclear Energy Systems", Department of Energy, NEUP, Co-Principal Investigator, jointly with T. Aldemir (PI), A. Yilmaz, 10/01/11 - 9/30/14, $534,471.
17. "Methodology Development for Passive Component Reliability Modeling in a Multi-Physics Simulation Environment", Department of Energy, NEUP, Co-Principal Investigator, jointly with T. Aldemir (PI), R. Denning, 10/01/11 - 9/30/14, $533,457.
18. "Taming the scale explosion in nuclear structure calculations", National Science Foundation OCI- 0904809, OSU Principal Investigator, jointly with J.P. Draayer (PI, Louisiana State), J.P. Vary (PI, Iowa State) and M. Sosonkina, 9/1/09 – 8/31/14, $1,398,413 (OSU total $330,402).
19. "Enabling Breakthrough Kinetic Simulations of the Magnetosphere via Multi-zone Petascale Computing", National Science Foundation OCI-0904802, OSU Principal Investigator, jointly with H. Karimabadi (PI, UC San Diego), A. Majumdar, Y.A. Omelchenko, K.B. Quest, 8/1/09 – 7/31/13, $1,457,694 (OSU total $310,240).
20. "CAREER: Scalable Combinatorial Scientific Computing", National Science Foundation CNS-0643969, Principal Investigator, 3/1/07-2/28/13, $400,000.
21. "SciDAC Institute: Combinatorial Scientific Computing and Petascale Simulations (CSCAPES)", *US Department of Energy DE-FC02-06ER25775,* OSU Principal Investigator, (Alex Pothen, SciDAC Institute PI, Purdue University), 9/15/06-9/30/12, $7 million (OSU total $717,900).
22. "Method and tool development to support systematic quantification of uncertainties", *Idaho National Labs/ Battelle Energy Alliance, LLC* Cont 42898 Task Rel 21, Co-Principal Investigator, jointly with T. Aldemir (PI), R. Denning, C. Smidts, X. Sun, A. Yilmaz, 03/05/10 - 9/30/11, $369,986.

23. "High-Performance Radar Signal Processing on Emerging Architectures", AFRL/DAGSI Ohio Student-Faculty Fellowship program, Faculty PI, jointly with T. Hartley, F. Ozguner, 7/1/08-6/30/11, $190,160.
24. "High-End Computing and Networking Research Testbed for Next Generation Data Driven, Interactive Applications", *National Science Foundation CNS-0403342*, Investigator, jointly with D.K. Panda (PI), G. Agrawal, P. Sadayappan, J.H. Saltz, H.-W. Shen, S. Ahalt, H. Ferhatosmanoglu, H.-W. Jin, T.M. Kurç, M. Lauria, D. Lee, R. Machiraju, S. Parthasarathy, P. Sinha, D. Stredney, A. E. Stutz, and P. Wyckoff, 9/1/04-8/30/10, $3,014,063 ($1,529,997 from NSF + $1,484,066 from Ohio Board of Regents and OSU).
25. "Advanced modeling techniques for Level 2/3 PRA", *Sandia National Laboratories* PO 976279, Co-Principal Investigator, T. Aldemir (PI), R. Denning, C. Smidts, 12/01/09 - 8/31/10, $18,868.
26. "SOFTWARE: Job Scheduling for Data Centers with Multi-level Storage Systems", *National Science Foundation CCF-0342615*, Co-Principal Investigator, P. Sadayappan (PI), J.H. Saltz, T.M. Kurç, 9/15/04-8/31/08, $548,924.
27. "Massive-Scale Semantic Graphs" *US Department of Energy-Lawrence Livermore National Laboratories (subcontract from University of California #B541059)*, Principal Investigator, 9/1/06-10/31/07, $158,417.
28. "CSR-AES: Collaborative Research: Intelligent Optimization of Parallel and Distributed Applications (WP2)", *National Science Foundation CNS-0615155,* Investigator, 8/15/06-8/31/08, $252,999.
29. "Clustering Streaming Graph Data" *US Department of Energy-Lawrence Livermore National Laboratories (subcontract from University of California #B555676)*, Principal Investigator, 10/1/05-8/31/06, $88,668.
30. "ITR: Collaborative Research (ASE+EVS)-(dmc+sim): Data Driven Simulation of the Subsurface: Optimization and Uncertainty Estimation", *National Science Foundation CNS-0426241*, Co-Principal Investigator, 10/01/04-9/30/08, $200,000.
31. "Multi-constraint and multi-objective partitioning-complex networks", *Department of Energy-Lawrence Livermore National Laboratories (subcontract from University of California)*, Principal Investigator, 7/1/04-9/30/04, $39,903.
32. "Parallel Hypergraph Partitioning", *Department of Energy-Sandia National Laboratories Document No: 283793*, Principal Investigator, 5/1/04-9/30/06, $329,195.
33. "Center for Grid-Enabled Medical Analysis", *National Institutes of Health - National Institute for Biomedical Imaging and Bioengineering 1P20EB000591*, Co-Principal Investigator, 07/01/03-07/31/07, $2,109,730.
34. "GridDB-Lite: Database Support for Data-Driven Scientific Applications in the Grid", *National Science Foundation ANI 0330612*, Co-Principal Investigator, J. Saltz (PI), T. Kurc, 10/1/03-9/30/06, $403,000.
35. "Risk-based On-line Accident Management", *US Department of Energy-Sandia National Laboratories,* Investigator, T. Aldemir (PI), 11/03/04-9/30/06, $240,375.
36. "Biomedical Informatics Synthesis Platform", State of Ohio – BRTT Program, Co-Principal Investigator, J. Saltz (PI), R. Davuluri, C. Eng, T. Kurc, W. Sadee, D. Stredney, H.M. Wu, P. Wyckoff, 2/1/03-7/31/06, $6 million.
37. "NGS: An Integrated Middleware and Language/Compiler Framework for Data Intensive Applications in a Grid Environment", *National Science Foundation ACI 0203846*, Co-Principal Investigator, G. Agrawal (PI), T. Kurc, J.H. Saltz, 9/1/02-8/31/06, $468,068.
38. "Collaborative telemicroscopy project", Co-Investigator, J.H. Saltz (PI), DARPA/ SAIC/HUBS, 4/2/02-12/28/02, $249,975.
39. "A Data Intense Challenge: The Instrumented Oilfield of the Future", *National Science Foundation EIA0121177*, Senior Personnel, J. Saltz, 10/1/01-9/30/04, $225,000.
40. "NPACI – Programming Tools and Environment Thrust Area, NPACI – Data Intensive Computing Thrust Area", *National Science Foundation – PACI Program ACI 9619020*, Co-Principal Investigator, J.Saltz (PI), T. Kurc, 10/01/01-09/30/04, $877,000.
41. "DataCutter: Software support for generating data products from very large datasets", *Department of Energy-Lawrence Livermore National Laboratories (subcontract from University of California)*, Co-Principal Investigator, J. Saltz (PI), T. Kurc, 06/01/01-05/31/04, $750,000.

C. EQUIPMENT/COMPUTING ALLOCATIONS:

1. Microsoft Azure Educator Grant Award, Jan 2016, $12K.
2. "High Performance Biomedical Informatics using GPUs", NVIDIA Hardware Donation Program, two Tesla C2050 and two Tesla C2070 boards, Jul-Nov, 2010, MSRP ~$13K.
3. "Sparse Data Processing on GPUs", NVIDIA Hardware Donation Program, two Tesla K20 cards, Dec 2012, MSRP ~$7K.

SCHOLARLY PUBLICATIONS

A. BOOK CHAPTERS

1. M. Deveci, O. Küçüktunç, K. Eren, D. Bozdağ, K. Kaya, Ü.V. Çatalyürek, "Querying Co-regulated Genes on Diverse Gene Expression Datasets Via Biclustering", Methods in Molecular Biology, Springer, Editor P.H. Guzzi, 2015.
2. K. Kaya, A. Hatem, H. G. Özer, K. Huang, Ü.V. Çatalyürek, "High-Performance Computing in High-Throughput Sequencing", Biological Knowledge Discovery Handbook, John Wiley & Sons, Editors M. Elloumi, A. Y. Zomaya, 2014.
3. R.H. Bisseling, B.O. Fagginger Auer, A.J. N. Yzelman, T. van Leeuwen and Ü.V. Çatalyürek, "Two-dimensional approaches to sparse matrix partitioning", Combinatorial Scientific Computing, Chapman & Hall / CRC Press, Editors U. Naumann, O. Schenk, 2012.
4. E.G. Boman, Ü.V. Çatalyürek, C. Chevalier, and K.D. Devine, "Parallel Partitioning, Coloring, and Ordering for Scientific Computing", Combinatorial Scientific Computing, Chapman & Hall / CRC Press, Editors U. Naumann, O. Schenk, 2012.
5. Ü.V. Çatalyürek, B. Uçar, and C. Aykanat, "Hypergraph Partitioning", Encyclopedia of Parallel Computing, Springer, Editor-in-chief D. Padua, pp. 871-881, 2011.
6. Ü.V. Çatalyürek and C. Aykanat, "PaToH (Partitioning Tool for Hypegraphs)", Encyclopedia of Parallel Computing, Springer, Editor-in-chief D. Padua, pp. 1479-1487, 2011.
7. Ü.V. Çatalyürek, R. Ferreira, T. D. R. Hartley, R. Sachetto, and G. Teodoro, "Dataflow Frameworks for Emerging Heterogeneous Architectures and Their Applications to Biomedicine", Scientific Computing with Multicore and Accelerators, Chapman & Hall / CRC Press, Editors J. Dongarra, D. A. Bader, and J. Kurzak, 2010.
8. Ü.V. Çatalyürek, T. Hartley, O. Sertel, M. Ujaldón. A. Ruiz, J.H. Saltz, and M.N. Gurcan, "Processing of Large-Scale Biomedical Images on a Cluster of Multi-Core CPUs and GPUs", High Performance and Large Scale Computing, Vol. 18, IOS Press, Editors W. Gentzsch, L. Grandinetti, G. Joubert, 2009.
9. Ü.V. Çatalyürek, D. Bozdağ, E.G. Boman, K.D. Devine, R. Heaphy and L.A. Riesen, "Hypergraph-based Dynamic Partitioning and Load Balancing", Advanced Computational Infrastructures for Parallel/Distributed Adaptive Applications, Wiley Press, Editors M. Parashar, X. Li, S. Chandra, Dec 2009.
10. Ü.V. Çatalyürek, S. Narayanan, O. Sertel, J. Kong, B.B. Cambazoglu, T. Pan, A. Sharma, S. Hastings, S. Langella, S. Oster, T.M. Kurç, M.N. Gurcan and J.H. Saltz, "Service-based Access to and Processing of Large Scientific Datasets", "High Performance Computing (HPC) and Grids in Action", Vol. 16 Advances in Parallel Computing, IOS Press, Editor L. Grandinetti, Mar 2008.
11. M. Ribeiro, T.M. Kurç, T. Pan, K. Huang, Ü.V. Çatalyürek, X. Zhang, S. Langella, S. Hastings, S. Oster, R. Ferreira and J.H. Saltz, "Tools for Efficient Subsetting and Pipelined Processing of Large Scale, Distributed Biomedical Image Data", Grid Computing: The New Frontier Of High Performance Computing, 14, Elseiver, Editor L. Grandinetti, 2005.
12. T.C. Pan, D. Cowden, Ü.V. Çatalyürek, S. Jewell, S. Hastings, S. Oster, S. Langella, T.M. Kurç, J.H. Saltz, "Virtual Microscopy: Distributed Image Storage, Retrieval, Analysis, and Visualization", Parallel Computing in Bioinformatics, John Wiley & Sons, Editor A. Zomaya, 2005.

B. EDITED PROCEEDINGS

1. S. Aluru, S. Bandyopadhyay, Ü.V. Çatalyürek, D.P. Dubhashi, P.H. Jones, M. Parashar, B. Schmidt, Editors, "Contemporary Computing, Proceedings of 4th International Conference, IC3 2011", Springer, Aug 2011.
2. T. C. Veinot, Ü.V. Çatalyürek, G. Luo, H. Andrade, N.R. Smalheiser, Editors, "Proceedings of ACM International Health Informatics Symposium, IHI 2010", ACM, Nov 2010.

C. REFEREED JOURNAL ARTICLES

1. E.R. Hein, S. Eswar, A. Yaşar, J. Li, J.S. Young, T.M. Conte, Ü.V. Çatalyürek, R. Vuduc, J. Riedy, and B. Uçar, "Programming Strategies for Irregular Algorithmson the Emu Chick", ACM Transactions on Parallel Computing. Vol. 7, No. 4, 2020.
2. L. Wang, A. Abu-Doleh, J. Plank, Ü.V. Çatalyürek, J. Firkins, Z. Yu, "The transcriptome of the rumen ciliate Entodinium caudatum reveals some of its metabolic features", BMC Genomics, Vol 20, 2019.
3. A. de Bernardi Schneider, C.T. Ford, R. Hostager, J. Williams, M. Cioce, Ü.V. Çatalyürek, J.O. Wertheim, D. Janies, "StrainHub: A phylogenetic tool to construct pathogen transmission networks", Bioinformatics, Aug 2019.
4. M. Deveci, K.D. Devine, S. Rajamanickam, K. Pedretti, M. A. Taylor, and Ü.V. Çatalyürek, "Geometric Mapping of Tasks to Processors on Parallel Computers with Mesh or Torus Networks", IEEE Transaction on Parallel and Distributed Systems, Vol. 30, No. 9, pp. 2018-2032, Sep 2019.
5. J. Herrmann, M.Y. Özkaya, B. Uçar, K. Kaya, and Ü.V. Çatalyürek, "Multilevel Algorithms for Acyclic Partitioning of Directed Acyclic Graphs", SIAM Journal on Scientific Computing, Vol. 41, No. 4, pp. A2117-A2145, 2019.
6. I. F. Senturk, P. Balakrishnan, A. Abu-Doleh, K. Kaya, Q. Malluhi, and Ü.V. Çatalyürek, "A Resource Provisioning Framework for Bioinformatics Applications in Multi-Cloud Environments", Future Generation Computer Systems, Vol. 78, Par 1, pp. 379-391, Jan 2018.
7. A.E. Sarıyüce, C. Seshadhri, A. Pınar, and Ü.V. Çatalyürek, "Nucleus Decompositions for Identifying Hierarchy of Dense Subgraphs", ACM Transactions on the Web (TWEB), Vol. 11, No. 3, Jul 2017.
8. A.E. Sarıyüce, K. Kaya, E. Saule, and Ü.V. Çatalyürek, "Graph Manipulations for Fast Centrality Computation", ACM Transactions on Knowledge Discovery from Data, Vol. 11, No. 3, Apr 2017.
9. T. Dytrych, P. Maris, K. D. Launey, J. P. Draayer, J. P. Vary, D. Langr, E. Saule, M. A. Caprio, Ü.V. Çatalyürek, and M. Sosonkina "Efficacy of the SU(3) scheme for ab initio large-scale calculations beyond the lightest nuclei", Computer Physics Communications, Vol. 297, pp. 202-210, 2016.
10. A.E. Sarıyüce, G. Gedik, G. Jacques-Silva, K.-L. Wu, and Ü.V. Çatalyürek, "Incremental k-core Decomposition: Algorithms and Evaluation", The VLDB Journal, Vol. 25, No. 3, pp. 425-447, 2016.
11. A.E. Sarıyüce, G. Gedik, G. Jacques-Silva, K.-L. Wu, and Ü.V. Çatalyürek, "SONIC: Streaming Overlapping Community Detection", Data Mining and Knowledge Discovery, Vol. 30, No. 4, pp. 819-847, 2016.
12. M. Hoffmann, Y. Luo, S. R. Monday, N. Gonzales-Escalona, A. R. Ottesen, T. Muruvanda, C. Wang, G. Kastanis, C. Keys, D. Janies, I. F. Senturk, U. V. Catalyurek, H. Wang, T. S. Hammack, W. J. Wolfgang, D. Schoonmaker-Bopp, A. Chu, R. Myers, J. Haendiges, P. S. Evans, J. Meng, E. A. Strain, M. W. Allard, E. W. Brown, "Tracing Origins of the Salmonella Bareilly strain causing a Foodborne Outbreak in the United States", Journal of Infectious Diseases, Vol. 213, No. 4, pp. 502-508, Apr 2016.
13. M. Deveci, S. Rajamanickam, K.D. Devine, and Ü.V. Çatalyürek, "Multi-jagged: A Scalable Parallel Spatial Partitioning Algorithm", IEEE Transaction on Parallel and Distributed Systems, Vol. 27, No. 3, pp. 803-817, Mar 2016.
14. M. M. Gerber, H. Hampel, X. Zhou, N. P. Schulz, A. Suhy, M. Deveci, Ü.V. Çatalyürek, A. E. Toland, "Allele-specific imbalance mapping at human orthologs of mouse susceptibility to colon cancer (Scc) loci", International Journal of Cancer, Vol. 137, No. 10, pp. 2323-2331, 2015.
15. D.A. Janies, L.W. Pomeroy, C. Krueger, Y. Zhang, I. Senturk, K. Kaya, Ü.V. Çatalyürek, "Phylogenetic visualization of the spread of H7 influenza A viruses", Cladistics, Vol. 31, No. 6, pp. 679-691, Dec 2015.

16. A.E. Sarıyüce, E. Saule, K. Kaya, and Ü.V. Çatalyürek, "Incremental Closeness Centrality in Distributed Memory", Parallel Computing, Vol. 47, pp. 3-18, Aug 2015.
17. M. Deveci, K. Kaya, B. Uçar, and Ü.V. Çatalyürek, "Hypergraph partitioning for multiple communication cost metrics: Model and methods", Journal of Parallel and Distributed Computing, Vol. 77, pp. 69-83, Mar 2015.
18. A.E. Sarıyüce, E. Saule, K. Kaya, and Ü.V. Çatalyürek, "Regularizing Graph Centrality Computations", Journal of Parallel and Distributed Computing, Vol. 76, pp. 106-119, Feb 2015.
19. N. Ferhatosmanoğlu, T.T. Allen, and Ü.V. Çatalyürek, "Mitigating Bias in Planning Two-Color Microarray Experiments", International Journal of Data Mining and Bioinformatics, Vol. 13, No. 1, pp. 31-49, 2015.
20. O. Küçüktunç, E. Saule, K. Kaya, and Ü.V. Çatalyürek, "Diversifying Citation Recommendations", ACM Transactions on Intelligent Systems and Technology, Vol. 5, No. 4, pp. 55:1-55:21, Dec 2014.
21. M. Jung, E.H. Wilson III, W. Choi. J. Shalf. H.M. Aktulga, C. Yang, E. Saule, Ü. V. Çatalyürek, and M. Kandemir, "Exploring the Future of Out-Of-Core Computing with Compute-Local Non-Volatile Memory", Scientific Programming, Vol. 22, No. 2, pp. 125-139, 2014.
22. M. Deveci, Ü.V. Çatalyürek, and A.E. Toland, "mrSNP: Software to detect SNP effects on microRNA binding", BMC Bioinformatics, Vol. 15, pp. 73, Mar 2014.
23. S. Kotian, T. Banerjee, A. Lockhart, K. Huang, Ü.V. Çatalyürek, and J.D. Parvin, "NUSAP1 influences the DNA damage response by controlling BRCA1 protein levels", Cancer Biology & Therapy, Vol. 15, No. 5, pp. 533-543, Feb 2014.
24. S.H. Bokhari, Ü.V. Çatalyürek, and M.N. Gurcan, "Massively Multithreaded Maxflow for Image Segmentation on the Cray XMT-2", Concurrency and Computation: Practice and Experience, Vol. 26, No. 18, pp. 2836-2855, Dec 2014.
25. T. Dytrych, K.D. Launey, J.P. Draayer, P. Maris, J.P. Vary, E. Saule, Ü.V. Çatalyürek, M. Sosonkina, D. Langr, M. A. Caprio, "Collective Modes in Light Nuclei from First Principles", Physical Review Letters, Vol. 111, No. 25, pp. 252501, Dec 2013.
26. L. Wang, A. Hatem, Ü.V. Çatalyürek, M. Morrison, Z. Yu, "Metagenomic Insights into the Carbohydrate-Active Enzymes Carried by the Microorganisms Adhering to Solid Digesta in the Rumen of Cows", PLoS ONE, Public Library of Science, Vol. 8, No. 11, pp. e78507, Nov 2013.
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D. REFEREED CONFERENCE/WORKSHOP PAPERS

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135. T.M. Kurç, S. Hastings, Ü.V. Çatalyürek, J.H. Saltz, J. D. Fleig, B. D. Clymer, H. von Tengg-Kobligk, K. T. Baudendistel, R. Machiraju, and M. V. Knopp. "A Distributed Execution Environment for Analysis of DCE-MR Image Datasets", The Society for Computer Applications in Radiology (SCAR 2003). 2003.

136. Ü.V. Çatalyürek, M. Gray, T.M. Kurç, J.H. Saltz, E. Stahlberg, and R. Ferreira. "A Component-based Implementation of Multiple Sequence Alignment", 18th ACM Symposium on Applied Computing (SAC2003) Bioinformatics Track, Melbourne, FL, Mar 2003.

137. M. Spencer, R. Ferreira, M. D. Beynon, T.M. Kurç, Ü.V. Çatalyürek, A. Sussman, and J.H. Saltz. "Executing Multiple Pipelined Data Analysis Operations in the Grid", ACM Press. Proceedings of the 2002 ACM/IEEE SC2002 Conference, Baltimore, MD, Nov 2002.

138. M. D. Beynon, T.M. Kurç, Ü.V. Çatalyürek, A. Sussman, and J.H. Saltz. "Efficient manipulation of large datasets on heterogeneous storage systems", Proceedings of 16th International Parallel and Distributed Processing Symposium (IPDPS), The 11th Heterogeneous Computing Workshop (HCW 2002), Fort Lauderdale, Florida, Apr 2002.

139. Ü.V. Çatalyürek, E. Stahlberg, R. Ferreira, T.M. Kurç, and J.H. Saltz. "Improving performance of multiple sequence alignment analysis in multi-client environments", Proceedings of 16th International Parallel and Distributed Processing Symposium (IPDPS), First Workshop on High Performance Computational Biology, Fort Lauderdale, Florida, Apr 2002.

140. H. Andrade, T.M. Kurç, Ü.V. Çatalyürek, A. Sussman, and J.H. Saltz. "Persistent Caching in a Multiple Query Optimization Framework", Proceedings of the Sixth Workshop on Languages, Compilers and Run-time Systems for Scalable Computers, Mar 2002. Springer-Verlag.

141. Ü.V. Çatalyürek and C. Aykanat. "A Hypergraph-Partitioning Approach for Coarse-Grain Decomposition", Proceedings of the 2001 ACM/IEEE SC2001, Denver, CO, Nov 2001.

142. M. D. Beynon, A. Sussman, Ü.V. Çatalyürek, T.M. Kurç, and J.H. Saltz, "Performance Optimization for Data Intensive Grid Applications", The Third Annual International Workshop on Active Middleware Services (AMS2001), Aug 2001.

143. Ü.V. Çatalyürek and C. Aykanat, "A Fine-Grain Hypergraph Model for 2D Decomposition of Sparse Matrices", Proceedings of International Parallel and Distributed Processing Symposium (IPDPS), 8th International Workshop on Solving Irregularly Structured Problems in Parallel (Irregular 2001), San Francisco, Apr 2001.

144. C. Chang, T.M. Kurç, A. Sussman, Ü.V. Çatalyürek, and J.H. Saltz. "A Hypergraph-Based Workload Partitioning Strategy for Parallel Data Aggregation", in Tenth SIAM Conference on Parallel Processing for Scientific Computing, Portsmouth, Virginia, Mar 2001.

145. Ü.V. Çatalyürek and C. Aykanat. "Decomposing irregularly sparse matrices for parallel matrix-vector multiplications", Proceedings of the Third International Workshop on Parallel Algorithms for Irregularly Structured Problems, Lecture Notes in Computer Science, vol. 1117, pp. 75-86, 1996.

146. A. Pınar, Ü.V. Çatalyürek, C. Aykanat, and M. Pınar, "Decomposing linear programs for parallel solution", Proceedings of the Second International Workshop on Applied Parallel Computing, Computations in Physics, Chemistry and Engineering Science, Lecture Notes in Computer Science, vol. 1041, pp. 473-482, 1995.

147. Ü.V. Çatalyürek and C. Aykanat, "A hypergraph model for mapping repeated sparse matrix-vector product computations onto multicomputers", Proceedings of International Conference on High Performance Computing, HiPC '95, Goa, India, Dec 1995.

E. Invited Articles

1. P. Calyam, A. Berryman, E. Saule, H. Subramoni, P. Schopis, G. Springer, Ü.V. Çatalyürek, D.K. Panda, "Wide-area overlay networking to manage science DMZ accelerated flows", International Conference Computing, Networking and Communications (ICNC), Feb 2014.
2. T. Aldemir, Ü.V. Çatalyürek, R. Denning, C. Smidts, X. Sun, and A. Yilmaz, "Method and Tool Development to Support Systematic Quantification of Uncertainties," Transactions of the American Nuclear Society, Jun 2011.
3. K.D. Devine, E.G. Boman, L.A Riesen, Ü.V. Çatalyürek, and C. Chevalier, "Getting Started with Zoltan: A Short Tutorial", Dagstuhl Seminar Proceedings - Combinatorial Scientific Computing, Editors U. Naumann, O. Schenk, H.D. Simon and S. Toledo, 2009.
4. D. Bozdağ, C.C. Barbacioru, and Ü.V. Çatalyürek, "Parallelization of Mapping Algorithms for Next Generation Sequencing Applications", Dagstuhl Seminar Proceedings - Combinatorial Scientific Computing, Editors U. Naumann, O. Schenk, H.D. Simon and S. Toledo, 2009.
5. R. Bisseling, T. van Leeuwen and Ü.V. Çatalyürek, "Combinatorial Problems in High-Performance Computing: Partitioning – Extended Abstract", Dagstuhl Seminar Proceedings - Combinatorial Scientific Computing, Editors U. Naumann, O. Schenk, H.D. Simon and S. Toledo, 2009.
6. J.H. Saltz, S. Oster, S. Hastings, S. Langella, R. Ferreira, J. Permar, A. Sharma, D. Ervin, T. Pan, Ü.V. Çatalyürek, and T.M. Kurç, "Translational research design templates, Grid computing, and HPC," IEEE International Symposium on Parallel and Distributed Processing 2008 (IPDPS 2008), 14-18 Apr 2008.
7. E.G. Boman, D. Bozdağ, Ü.V. Çatalyürek, K.D. Devine, A.H. Gebremedhin, P. Hovland and A. Pothen, "Combinatorial Algorithms for Computational Science and Engineering", Journal of Physics: Conference Series 125 (2008) 012071, SciDAC, 2008.
8. B. Bansal, Ü.V. Çatalyürek, J. Chame, C. Chen, E. Deelman, Y. Gil, M. W. Hall, V. Kumar, T.M. Kurç, K. Lerman, A. Nakano, Yoon-Ju Lee Nelson, J.H. Saltz, A. Sharma, and P. Vashishta, "Intelligent Optimization of Parallel and Distributed Applications", Proceedings of 21st IEEE International Parallel & Distributed Processing Symposium (IPDPS'07), The Next Generation Software (NGS) Workshop, Apr 2007.
9. S. Krishnamoorthy, Ü.V. Çatalyürek, J. Nieplocha, A. Rountev, and P. Sadayappan, "A global address space framework for locality aware scheduling of block-sparse computations", Proceedings of 21st IEEE International Parallel & Distributed Processing Symposium (IPDPS'07), The Next Generation Software (NGS) Workshop, Apr 2007.
10. A. Pothen, A.H. Gebremedhin, F. Dobrian, E.G. Boman, K.D. Devine, P.D. Hovland, B. Norris, J. Utke, Ü.V. Çatalyürek, and M.M. Strout, "Combinatorial Algorithms for Petascale Science", SciDAC Review, No. 5, pp. 26-35, Fall 2007.
11. E.G. Boman, D. Bozdağ, Ü.V. Çatalyürek, K.D. Devine, A.H. Gebremedhin, P. D. Hovland, A. Pothen, and M.M. Strout, "Enabling high performance computational science through combinatorial algorithms", Journal of Physics: Conference Series, Vol. 78, pp. 12058, 2007.
12. S. Krishnamoorthy, Ü.V. Çatalyürek, J. Nieplocha, A. Rountev, and P. Sadayappan, "An Extensible Global Address Space Framework with Decoupled Task and Data Abstractions", Proceedings of 20th International Parallel and Distributed Processing Symposium (IPDPS), Workshop on Next Generation Software (NGS), 2006.

F. Refereed Abstracts

1. T. Johnson, J. Kho, Ü.V. Çatalyürek, K. Huang, and Y. Zhang, "Identification of key mutation signatures from conservation analysis of gene-pseudogene families in human", ISMB'16.
2. A.E. Sarıyüce, C. Seshadhri, A. Pinar, and Ü.V. Çatalyürek, "Finding the Hierarchy of Dense Subgraphs using Nucleus Decompositions", SIAM Workshop on Network Science (NS15), May 2015.
3. M. Deveci, K. Kaya, B. Uçar, and Ü.V. Çatalyürek, "Partitioning Hypergraphs for Multiple Communication Metrics", Sixtth SIAM Workshop on Combinatorial Scientific Computing (CSC14), Lyon, France, Jul 2014.

4. A.E. Sarıyüce, E. Saule, K. Kaya, and Ü.V. Çatalyürek, “Computing the Closeness Centrality of Evolving Networks on Clusters”, SIAM Workshop on Network Science (NS14), Jul 2014.
5. A. Gebremedhin, Ü.V. Çatalyürek, J. Feo, M. Halappanavar and A. Pothen, “Multithreaded Algorithms for Graph Coloring”, Fifth SIAM Workshop on Combinatorial Scientific Computing (CSC11), Darmstadt, Germany, May 2011.
6. D. Bozdag, Ü.V. Çatalyürek, F. Dobrian, A. Gebremedhin, M. Halappanavar and A. Pothen. “Combinatorial Algorithms Enabling Scientific Computing: Petascale Algorithms for Graph Coloring and Matching”, Supercomputing 2009, Portland, Oregon, Nov 2009.
7. M. Ujaldon and Ü.V. Çatalyürek. “High-Performance Signal Processing on Emerging Many-Core Architectures Using CUDA”, 2009 IEEE International Conference on Multimedia and Expo (ECME2009), Multimedia Signal Processing and Novel Parallel Computing Workshop, Cancun Mexico, Jul 2009.
8. R. Winningham, K. Metzroth, Ü.V. Çatalyürek, R. Denning, and T. Aldemir, “Passive Heat Removal System Recovery Following an Aircraft Crash Using Dynamic Event Tree Analysis,” Transactions of the American Nuclear Society, Jun 2009.
9. K. Metzroth, R. Winningham, Ü.V. Çatalyürek, R. Denning, and T. Aldemir, “Linking of the RELAP5-3D Thermal Hydraulic Simulator with the ADAPT PRA Tool,” Transactions of the American Nuclear Society, Jun 2009.
10. G. Khanna, Ü.V. Çatalyürek, T.M. Kurç, P. Sadayappan, J.H. Saltz, R. Kettimuthu, I. T. Foster. “Multi-hop path splitting and multi-pathing optimizations for data transfers over shared wide-area networks using gridFTP”, Proceedings of the 17th International Symposium on High-Performance Distributed Computing (HPDC-17 2008), 23-27 Jun 2008.
11. O. Sertel, J. Kong, G. Lozanski, Ü.V. Çatalyürek, J.H. Saltz, M.N. Gurcan, "Computer aided grading of follicular lymphoma: high grade differentiation", United States and Canadian Academy of Pathology (USCAP), Denver, CO, Mar 2008.
12. M.N. Gurcan, O. Sertel, J. Kong, A. Ruiz, M. Ujaldon, Ü.V. Çatalyürek, G. Lozanski, H. Shimada, and J.H. Saltz, “Computer-assisted histopathology: Experience with neuroblastoma and follicular lymphoma”, Workshop on Bio-image Informatics: Biological Imaging, Computer Vision and Data Mining 2008. Santa Barbara, CA, Jan 2008
13. J. Kong, O. Sertel, K. L. Boyer, Ü.V. Çatalyürek, M.N. Gurcan, G. Lozanski, "Development of computer based system to aid pathologists in histological grading of follicular lymphoma", The American Society of Hematology, Atlanta, GA, Dec 2007.
14. T.D.R. Hartley, O. Sertel, M. Khan, Ü.V. Çatalyürek, J.H. Saltz, M.N. Gurcan, "Neuroblastoma Stroma Classification on the Sony Playstation 3", Proceedings 12th Anatomic Pathology Informatics and Imaging Support for Translational Medicine (APIII 2007), Pittsburg, PA, 2007.
15. O. Sertel, A. Ruiz, Ü.V. Çatalyürek, M. Ujaldon, J.H. Saltz, M.N. Gurcan, "Computationally Efficient Pathologic Image Analysis: Use of GPUs for Classification of Stromal Density", Proceedings 12th Anatomic Pathology Informatics and Imaging Support for Translational Medicine (APIII 2007), Pittsburg, PA, 2007.
16. O. Sertel, J. Kong, G. Lozanski, H. Shimada, Ü.V. Çatalyürek, J.H. Saltz, and M.N. Gurcan, “Texture characterization for whole-slide histopathological image analysis: Applications to neuroblastoma and follicular lymphoma”, Proceedings 12th Anatomic Pathology Informatics and Imaging Support for Translational Medicine (APIII 2007), Pittsburg, PA, 2007.
17. B.B. Cambazoglu,T. Pan, A. Sharma, V. Kumar, J. Kong, O. Sertel, M.N. Gurcan, Ü.V. Çatalyürek, and J.H. Saltz, “A grid-enabled image processing infrastructure for large pathology images”, Proceedings 12th Anatomic Pathology Informatics and Imaging Support for Translational Medicine (APIII 2007), Pittsburg, PA, 2007.
18. E.G. Boman and Ü.V. Çatalyürek, “Constrained Fine-Grain Parallel Sparse Matrix Distribution”, Third International Workshop on Combinatorial Scientific Computing (CSC07), Costa Mesa, CA, Feb 2007.
19. B. Rutt, A. Hakobyan, K. Metzroth, Ü.V. Çatalyürek, T. Aldemir, D. Kunsman, S. Dunagan, “A SoftwareTool for the Creation and Analysis of Dynamic Event Trees”, Trans. Am. Nucl. Soc., 95, 935 – 936, Nov 2006.

20. K. Metzroth, Ü.V. Çatalyürek, T. Aldemir, S. Dunagan, D. Kunsman, “A Graphical Tool for the Analysis of Event Trees”, Trans. Am. Nucl. Soc., 94, 183-185, Jun 2006.
21. B. Rutt, T.M. Kurç, Ü.V. Çatalyürek, J.H. Saltz, “Use of the Teragrid for Sub-surface Modeling and Oil Reservoir Management Studies”, Teragrid 2006, Indianapolis, IN, (6/12/06-6/15/06).
22. Ü.V. Çatalyürek and C. Aykanat, “Hypergraph-Partitioning-Based Sparse Matrix Ordering”, Second International Workshop on Combinatorial Scientific Computing (CSC05) CERFACS, Toulouse, France, Jun 2005.
23. E.G. Boman, R. Bisseling, Ü.V. Çatalyürek, K.D. Devine, R. Heaphy, and B. Hendrickson, “Parallel Hypergraph Partitioning for Scientific Computing” Second International Workshop on Combinatorial Scientific Computing (CSC05) CERFACS, Toulouse, France, Jun 2005.
24. T.M. Kurç, W. Bangerth, H. Klie, M. Sen, P.L. Stoffa, M.F. Wheeler, Ü.V. Çatalyürek, B. Rutt, J.H. Saltz, M. Parashar, “"Where is my oil, dude?" Supporting Dynamic, Data-Driven Oil Reservoir Simulation Studies on the Grid”, Supercomputing 2004 (SC2004) (Nov, 6-Nov, 12), Pittsburgh, PA, 2004
25. T.C. Pan, S.L. Hastings, S. Langella, T.M. Kurç, Ü.V. Çatalyürek, J.H. Saltz, "Utilizing Advances in Grid Computation to Enhance Clinical and Scientific Research", RSNA '03 (Radiological Society of North America) Scientific Assembly and Annual Meeting (Dec, 2-Dec, 5), Chicago, IL, 2003.
26. X. Zhang, T.C. Pan, S. Oster, S. L Hastings, T.M. Kurç, Ü.V. Çatalyürek, J.H. Saltz, "Grid-Based Image Analysis and Visualization", Vis 2003 (Oct, 19-Oct, 24), Seattle, WA, 2003.
27. T. Pan, Ü.V. Çatalyürek, R. Machiraju, S. Qualmann, and J.H. Saltz. “Integrated Framework for Digital Pathology Image Analysis”, APIII 2003 Scientific Session, Oct 2003.
28. S. Hastings, M. Gray, T.M. Kurç, Ü.V. Çatalyürek, T. Gingrich, D. Young, and J.H. Saltz, “Grid Support for Collaborative Clinical and Biomedical Research Studies”, in The Seventh Annual Conference Advancing Pathology Informatics, Imaging and the Internet, Oct 2002.
29. R.E. Bodenheimer, M.E. Edgerton, M.S. Ross, S. L. Hastings, D. Romer, Ü.V. Çatalyürek, T.M. Kurç, J.H. Saltz, B. Dawant, “Registration and Alignment of Histopathological Images”, Seventh Annual Conference for Advancing Pathology Informatics, Imaging and the Internet (APIII) (Oct, 2-Oct, 4), Pittsburgh, PA, In Archives of Pathology and Laboratory Medicine, Vol. 127, Num. 7, 2002, pp. 789-813.
30. Ü.V. Çatalyürek, T.M. Kurç, A. Sussman, and J.H. Saltz. “Improving the performance and functionality of the virtual microscope”, in The Fifth Annual Conference Advancing Pathology Informatics, Imaging and the Internet, Oct 2000. Also appears in Archives of Pathology and Laboratory Medicine, 125(8), Aug 2001.

G. CONFERENCE PRESENTATIONS WITHOUT PROCEEDINGS

1. *A. Yaşar* and Ü.V. Çatalyürek, “Heuristics for Symmetric Rectilinear Matrix Partitioning”, SIAM Workshop on Combinatorial Scientific Computing, Seattle, WA, Feb, 2020.
2. *S. Acer*, A. Yaşar, S. Rajamanickam, M.M. Wolf, and Ü.V. Çatalyürek, “Scalable Triangle Counting on Distributed-Memory Systems”, SIAM Conference on Parallel Processing for Scientific Computing, Seattle, WA, Feb, 2020.
3. *D. Janies*, J. Williams, S. Najar, Z. Witter, J. Kho, J. Herrmann, D. Shvets, and Ü.V. Çatalyürek, “Visual and Graph Analytic Applications of the Biosurveillance Environment to Combat the Spread of Multi-Drug Resistant Bacteria”, 2017 Chemical and Biological Defense Science & Technology Conference, Long Beach, CA, Nov 2017.
4. *D. Janies*, I. Sentur, Z. Witter, C. Gibson, and Ü.V. Çatalyürek, “Visualization and Analysis of the Emergence, Evolution, and Spread of Pathogens”, 2015 Chemical and Biological Defense Science & Technology Conference, St. Luis, MO, May 2015.
5. *M. Deveci*, S. Rajamanickam, Ü.V. Çatalyürek, K.D. Devine, “A Geometric Load-Balancing Algorithm for Multicore Parallel Computer”, Mini-symposium on Frameworks, Algorithms and Scalable Technologies for Mathematics on Next-generation Computers, SIAM Conference on Computational Science and Engineering, Boston, MA, Feb 2013.

6. *A.E. Sarıyüce*, E. Saule and Ü.V. Çatalyürek, "Considerations on Parallel Graph Coloring Algorithms", SIAM Conference on Parallel Processing for Scientific Computing, Savannah, GA, Feb, 2012.
7. *Karen D. Devine*, N. Aase, E.G. Boman, Ü.V. Çatalyürek, C. Chevalier, "Exploiting Geometry and Adjacencies in Mesh Partitioning", SIAM Conference on Parallel Processing for Scientific Computing, Savannah, GA, Feb, 2012.
8. A. Azad, *M. Halappanavar*, Ü.V. Çatalyürek, A. Pothen, "Parallel Algorithms for Matching and Coloring", SIAM Conference on Parallel Processing for Scientific Computing, Savannah, GA, Feb, 2012.
9. *E. Saule*, D. Bozdağ, and Ü.V. Çatalyürek, "Optimizing the maximum stretch of online tasks on a parallel system without preemption", 3rd 'Scheduling in Aussois' Workshop, Aussois, France, 2010.
10. *E. Saule*, E. Baş, and Ü.V. Çatalyürek, "Partitioning Spatially Located Load with Rectangles: Algorithms and Simulations", New Challenges on Scheduling Theory Workshop, France, 2010.

H. Technical Reports, Manuals

1. B. Uçar, Ü.V. Çatalyürek, and C. Aykanat, "PaToH Matlab Interface", available at http://cc.gatech.edu/~umit/software.html, Jun 2009.
2. E.G. Boman, K.D. Devine, L. Ann Fisk, R.T. Heaphy, B.A. Hendrickson, C.T. Vaughan, Ü.V. Çatalyürek, D. Bozdağ, W. Mitchell, J. Teresco, "Zoltan 3.0: Parallel Partitioning, Load-balancing, and Data Management Services; Developer's Guide", Sandia National Labs report SAND2007-4749W, 2007.
3. E.G. Boman, K.D. Devine, L. Ann Fisk, R.T. Heaphy, B.A. Hendrickson, C.T. Vaughan, Ü.V. Çatalyürek, D. Bozdağ, W. Mitchell, J. Teresco, "Zoltan 3.0: Parallel Partitioning, Load-balancing, and Data Management Services; User's Guide", Sandia National Labs report SAND2007-4748W, 2007.
4. Ü.V. Çatalyürek and C. Aykanat, "PaToH: Partitioning Tools for Hypergraphs, Version 3.0", Department of Computer Engineering, Bilkent University, available at http://cc.gatech.edu/~umit/software.html, Nov 1999.

I. Thesis

1. Ü.V. Çatalyürek, "Hypergraph Models for Sparse Matrix Partitioning and Reordering", Ph.D. thesis, Advisor: Cevdet Aykanat, Computer Engineering and Information Science Bilkent University, Nov 1999.
2. Ü.V. Çatalyürek, "A Constructive Multi-way Circuit Partitioning Algorithm Based on Minimum Degree Ordering", M.S. thesis, Advisor: Cevdet Aykanat, Computer Engineering and Information Science Bilkent University, Sep 1994.

Teaching

A. Curriculum Development

Since the inception of the Department of Biomedical Informatics at the Ohio State University, I have been heavily involved with the curriculum development in the BMI department. First, as the Chair of BMI Curriculum Committee and later as the Vice-Chair of Academic Affairs, I spearheaded the development of a comprehensive doctoral and masters-level training program in Biomedical Informatics in collaboration with College of Medicine and College of Public Health.

In ECE, I revised ECE 864 Advanced Computer Design and developed and taught a new course ECE 694J Scientific Computing on Emerging Architectures.

B. Courses Taught

Georgia Institute of Technology

Graduate/Undergraduate Courses

1. CSE 6220/CX 4220 Introduction to High Performance Computing, Sp'17, Sp'18 (with S. Aluru) , Sp'19 (with S. Aluru).
2. CSE 6140/CX 4140 Computational Science & Engineering Algorithms, Fa'18.

The Ohio State University

Graduate/Undergraduate Courses

1. BMI 731 Advanced Topics in Biomedical Data Management, Wi'04, Wi'05, Wi'06, Wi'07.
2. ECE 864 Advanced Computer Design, Wi'06, Wi'07.
3. ECE 694J Scientific Computing on Emerging Architectures, Wi'09, Wi'10.
4. ECE 662 - Theory and Design of Digital Computers, Sp'11. Au'11.
5. ECE 7861 - Scientific Computing on Emerging Architectures, Au'12, Au'14.
6. ECE 5362 - Computer Architecture and Design, Au'13.
7. BMI 7840 - Advanced Topics in Biomedical Data Management, Au'13.

Others

1. Combinatorial Scientific Computing Summer School for High School Students, Aug 2008.
2. Lectures in BMI 5710 – Introduction to Biomedical Informatics Au'12, Au'13, Au'14, Au'15, Au'16.

C. STUDENT SUPERVISION

Georgia Institute of Technology

Postdoctoral Fellows

1. Julien Herrmann, Aug 2016 – Aug 2018.

Ph.D. Students

1. Abdurrahman Yasar, Jan 2017 – present.
2. Yusuf Ozkaya, Jan 2017 – present.
3. Kasimir Gabert, Jul 2019 – present.
4. Xiaojing An, Aug 2019 – present.
5. James Fox, Aug 2019 – present.
6. M. Fatih Balin (co-advised with L. Song), Aug 2019 – present.
7. M. Mucahid Benlioglu, Aug 2019 – present.
8. Ben Cobb, Aug 2019 – present.
9. Kaan Sancak, Aug 2019 – present.
10. Paul Burke (co-advised, Advisor: Farzad Rahnema), Aug 2019 – present.

MS Students non-Thesis

1. Jonathan Kho, Aug 2016 – Dec 2017.

The Ohio State University

Postdoctoral Fellows

1. Doruk Bozdağ, Jan 2009-Sep 2010, currently at Google.
2. Erik Saule, Jan 2009-Aug 2013, currently faculty at University North Carolina at Charlotte.
3. Kamer Kaya, Sep 2011-Nov 2012, currently faculty at the Ohio State University.
4. Izzet Fatih Senturk, Jan 2014-May 2015.
5. Julien Herrmann, Feb 2016-Aug 2016.

Ph.D. Students

1. Doruk Bozdağ, "Graph Coloring and Clustering Algorithms for Science and Engineering Applications", Jan 2005 - Dec 2008.
2. Olcay Sertel (co-advised with Metin Gurcan), "Image Analysis for Computer-Aided Histopathology", Sep 2006 - Jun 2010.
3. Timothy D.R. Hartley, "Accelerating Component-Based Dataflow Middleware with Adaptivity and Heterogeneity", Jan 2007-Jun 2011.
4. Onur Kücüktunç, "Result Diversification on Spatial, Multidimensional, Opinion, and Bibliographic Data", Sep 2011-Aug 2013.
5. Ayat Hatem, "Active Module Discovery: an Integrated Approaches of Gene Co-Expression and PPI Networks and MicroRNA Data", Sep 2009-May 2014.
6. Ahmet Erdem Sarıyüce, "Fast Algorithms for Large-Scale Network Analytics", Sep 2010-May 2015.
7. Mehmet Deveci, "Load-Balancing and Task Mapping for Exascale Systems", Sep 2010-May 2015.
8. Anas Abu Doleh, "High Performance and Scalable Matching and Assembly of Biological Sequences", Sep 2012-Aug 2016.
9. Xusheng Wang, OSU-ECE, Aug 2015-Aug 2016.

MS Students with Thesis

1. Doruk Bozdağ, ECE (co-advised with Füsun Özgüner), "A Task Duplication Based Scheduling Algorithm Using Partial Schedules", Dec 2004.
2. Elif Sarıarslan, ECE (co-advised with Füsun Özgüner), "Matching Algorithms in Multilevel Hypergraph Partitioning", May 2005.
3. Timothy Hartley, ECE (co-advised with Füsun Özgüner), "MSSG: A Framework for Massive-Scale Semantic Graphs", Nov 2006.
4. Erdeniz Ozgun Bas, CSE, "Load-Balancing Spatially Located Computations Using Rectangular Partitions", Sep 2009 – Jun 2011.
5. Kemal Eren, CSE, "Applications of Biclustering Algorithms to Biological Data", Sep 2009 – Mar 2012.
6. Jonathan Kho, Aug 2015 – Aug 2016 (transferred to Georgia Institute of Technology)

MS Students non-Thesis

1. Ashwin Shiv Kumar, CSE, Sep 2008-Jun 2010. Graduated.
2. Arun Cecil, ECE, Graduated Mar 2009.
3. Lakshmi Prabha Kumarasamy, ECE, Sep 2009-Dec 2009.
4. Arun C. Sundaram, CSE, Sep 2009-Dec 2009.
5. Lingchen Xiong, ECE, Sep 2011 – Dec 2012. Graduated.
6. Guangjun Xu, ECE, Jan 2014 – May 2015. Graduated.

Others

1. Zheng Zhou, Visiting PhD Student from Wuhan University, Sep 2010-Aug 2012.
2. Muge Kural, Summer Intern, Faculty of Engineering at Koc University, Turkey, Jun-Aug 2015.
3. Mustafa Kemal Tas, Faculty of Engineering and Natural Science at Sabanci University, Turkey, Jun-Aug 2015.

D. EXAMINATION COMMITTEES

Georgia Institute of Technology

Habilitation Exam

1. Loris Marchal, ENS Lyon, France, Mar 2018.

PhD Candidacy & Dissertation

2. Anita Zakrzewska (advisor David Bader), CSE, Nov 2016, Dissertation, Mar 2018.
3. Tony Pan (advisor Srinivas Aluru), CSE, Jan 2017, Dissertation, Mar 2018.
4. Kaeser M Sabrin (advisor Constantine Dovrolis), CS, Mar 2017, Dissertation, Oct 2018.
5. Eisha Nathan (advisor David Bader), CSE, Mar 2017, Dissertation, Mar 2018.
6. Jiajia Li (advisor Rich Vuduc), CSE, Jan 2018, Dissertation, Jul 2018.
7. Vipin Sachdeva (advisor David Bader), CSE, Dissertation, Mar 2018.
8. Piyush K. Sao (advisor Rich Vuduc), CSE, Dissertation, Apr 2018.
9. Patrick Flick (advisor Srinivas Aluru), CSE, Apr 2018, Dissertation, Mar 2019.
10. Chirag Jain (advisor Srinivas Aluru), CSE, May 2018, Dissertation, Mar 2019.
11. Rahul Nihalani (advisor Srinivas Aluru), CSE, Dissertation, Mar 2019.
12. Aradya Biswas (advisor Richard Fujimoto), CSE, Mar 2019, Dissertation, Jul 2019.
13. Rakshit Trivedi (advisor Hongyuan Zha), CSE, Oct 2019, Dissertation, Jun 2020.
14. Yuzhi Guo (advisr David Frost), CSE-CEE, Nov 2019, Dissertation, May 2020.
15. Karl Gemayel (advisor Mark Borodovsky), CSE, Nov 2019.
16. Mathias Louboutin (advisor Felix Herrmann), CSE, Dissertation, Feb 2020.
17. Paul Burke (advisor Farzad Rahnema), ME, Apr 2020.
18. Flip Pawlowski (advisors Bora Uçar and Albert-Jan N. Yzelman), ENS Lyon, France, Dissertation, Dec 2020.

PhD Qualifying Exam

1. Ankit Srivastava (advisor Srinivas Aluru), CSE, Oct 2016.
2. Amrita Gupta (advisor Bistra Dilkina), CSE, Nov 2016.
3. James Fox (advisor David Bader), CSE, Dec 2017.
4. Mark Jakson (advisor Richard Fujimoto), CSE, Jan 2018.
5. Patrick Lavin (advisor Rich Vuduc), CSE, Jan 2018.
6. Srinivas Eswar (advisor Haesun Park), CSE, Jan 2018.
7. Anirban Chatterjee (advisor Yi-Chang (James) Tsai), CSE-CEE, Mar 2018.
8. Kasimir Gabert (advisor David Bader), CS, Apr 2018.
9. Chunxing Yin (advisor David Bader), CS, Apr 2018.
10. Xiaojing An (advisor David Bader), CS, Oct 2018.
11. Ardava Afshar (advisor Jimeng Sun), CSE, Mar 2019.
12. Shahrokh Shahi (advisor Rafi Muhanna), CSE-CEE, Nov 2019.
13. Hua Huang (advisor Edmond Chow), CSE, Nov 2019.
14. Grant Bruer (advisor Tobin Isaac), CSE, Nov 2019.
15. Neda Tavakoli (advisor Srinivas Aluru), CSE, Apr 2020.
16. Nimisha Roy (advisor David Frost), CSE-CEE, Oct 2020.

MS

1. Anirban Chatterjee (advisor Yi-Chang (James) Tsai), CSE-CEE, Oct 2017.

The Ohio State University

PhD Candidacy & Dissertation

1. Nilgun Ferhatosmanoglu (advisor Theodore T. Allen), ISWE, Jun 2006.
2. Gokhan Korkmaz (advisor Eylem Ekici), ECE, Dissertation, Sep 2006.
3. Li Weng (advisor Gagan Agrawal), CSE, May 2005, Dissertation Oct 2006.
4. Aram Hakobyan (advisor Tunc Aldemir), Nuclear Eng., Mar 2006, Dissertation, Aug 2006.
5. Justin Teller (advisor Füsun Özgüner), ECE, Sep 2007, Dissertation, May 2008.
6. Nagavijayalakshmi Vydyanathan (advisor P. Sadayappan), CSE, May 2007, Dissertation, May 2008.
7. Gaurav Khanna (advisor P. Sadayappan), CSE, Jun 2007, Dissertation, Jun 2008,
8. Sivaramakrishnan Narayanan (advisor Joel H. Saltz), CSE, Dec 2006, Dissertation, Aug 2008.
9. Marianne Lee (advisor Ralf Bundschuh), Biophysics, Aug 2006, Dissertation, Mar 2009.
10. Duygu Uçar, CSE (advisor Srinivasan Parthasarathy), Dissertation, Aug 2009.
11. Veronika Rehn-Sonigo, ENS Lyon and Universitat Passau (advisors: Herald Kosch and Yves Robert), Dissertation, Jul 2009.
12. Vijay Kumar (advisor P. Sadayappan), CSE, Apr 2009, Dissertation, Sep 2010.
13. Boangoat Jarupan (advisor Eylem Ekici), ECE, Jun 2009, Dissertation, May 2011.
14. Selnur Erdal (advisor Bradley Clymer), ECE, Aug 2009, Dissertation, Dec 2012.
15. Douglas Osborn (advisor Tunc Aldemir), Nuclear Eng, Oct 2009.
16. Diego Mandelli (advisor Tunc Aldemir), Nuclear Eng, Apr 2010, Dissertation, May 2011.
17. Kyle Metzroth (advisor Tunc Aldemir), Nuclear Eng, May 2010, Dissertation, May 2011.
18. Robert Murawski (advisor Eylem Ekici), ECE, Mar 2011, Dissertation, Aug 2011.
19. Carl William Rossler (advisors Randolph L. Moses & Emre Ertin), May 2012.
20. Tekin Bicer (advisor Gagan Agrawal), CSE, Jun 2012.
21. Kai Ma (advisor Xiaorui Wang), ECE, Oct 2012, Dissertation Jul 2013.
22. Chao Wang (advisors Kun Huang and Raghu Machiraju), ECE, Oct 2013.
23. Engin Özatay (advisor Ümit Özgüner), ECE, Nov 2013.
24. Woon-Gi Yeo (advisor Kubilay Sertel), ECE, Feb 2014, Dissertation May 2015.
25. Mucahid Kutlu (advisor Gagan Agrawal), CSE, Aug 2014.
26. Ashley DeFlumere, UCD Dublin, Ireland (advisor: Alexey Lastovetsky), Dissertation, Nov 2014.
27. Zichen Xu (advisor Xiaorui Wang), ECE, Jun 2015.
28. Sarah Yasseen Al-Shareeda (advisor Füsun Özgüner), ECE, Mar 2016.

MS

1. Yaoyao Gu, ECE, May 2006.
2. Kyle Metzroth, Nuclear Eng, Dec 2007,
3. Mansoor Khan, ECE, non-Thesis, Feb 2009.
4. Heng-Yi Wu, ECE, non-Thesis, Nov 2010.
5. Peng Cong (advisor Füsun Özgüner), ECE, May 2012.
6. Yogesh Chidambarnathan (advisor P. Sadayappan), CSE, Jan 2013.
7. Justin Mathews (advisor Eylem Ekici), non-Thesis, ECE, Mar 2013.
8. Kaiqi Tang, non-Thesis, ECE, Apr 2013.
9. Chang Ye, non-Theisis, ECE, Apr 2015.
10. Penghui Zhang (advisor Xiaorui Wang), ECE, Mar 2016.

RESEARCH SOFTWARE DISTRIBUTIONS

1. *PaToH:* PaToH (Partitioning Tools for Hypergraph) is a fast multilevel hypergraph-partitioning tool. Binary distribution also includes open source *PaToH Matlab Interface* that provides sparse matrix partitioning routines in Matlab. http://cc.gatech.edu/~umit/software.html
2. *Zoltan*: Parallel Partitioning, Load Balancing and Data-Management Services. Contributed to the design and development of parallel hypergraph partitioner and distributed memory distance-1 and distance-2 graph coloring algorithms. Zoltan is an open source project: http://www.cs.sandia.gov/Zoltan/
3. *DataCutter*: A component-based framework that allows users to execute their applications in distributed and heterogeneous environments.
4. *STORM* (a.k.a. GridDB-Lite): STORM is a services-oriented middleware that is designed to provide basic database support for data selection queries on flat-file distributed datasets. STORM is an open source project and part of NSF Middleware Initiative, since Release 5.
5. *ADAPT:* Analysis of dynamic accident progression trees (ADAPT) is a software system for the generation of accident progression event trees on distributed memory environments.
6. For many others, like dagP (Directed Acyclic Graph Partitioning), gsaNA (Graph/Network Aligner), and BiBench (Bicluster Benchmarking), visit: http://tda.gatech.edu/software.html

PROFESSIONAL SERVICE & ACTIVITIES

A. *ADVISORY AND STEERING COMMITTEES*

- *Board Member*, Bilkent University, Board of Trustees, 2019 –
- *Steering Committee Member*, The International Conference for High Performance Computing, Networking, Storage and Analysis (SC), 2020 –
- *Steering Committee Member*, IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2017 –
- *Steering Committee Member*, ACM International Health Informatics Symposium, 2012.

B. *EDITORIAL*

- **Editor-in-Chief**, Parallel Computing, Elsevier, 2017 – *present*, Associate Editor (1 out of 4), 2014 – 2017, Subject Area Editor, 2008 – 2014.
- Associate Editor, IEEE Transactions on Parallel and Distributed Systems, 2014 – 2018.
- Guest Associate Editor, IEEE/ACM Transactions on Computational Biology and Bioinformatics, Special Issue of ACM-BCB 2014, 2014 – 2015.
- Associate Editor, Journal of Parallel and Distributed Computing, Elsevier, 2012 – 2017.
- Associate Editor, SIAM Journal on Scientific Computing, 2011 – 2013.
- Associate Editor, Network Modeling and Analysis in Health Informatics and Bioinformatics, Springer, 2011 – 2016.

C. *MEMBERSHIPS AND ACTIVITIES IN PROFESSIONAL SOCIETIES*

- Member-at- Large, IEEE CS Technical and Conference Activities Board (T&C) Executive Committee, 2019 – 2021.
- **Chair**, IEEE CS's Technical Committee on Parallel Processing (TCPP), 2016 – 2017 and 2018 – 2019.
- Chair, Editor-in-Chief Reappointment Evaluation Committee for *Computing in Science and Engineering*, 2018-2019.
- Member, Editor-in-Chief Search Committee for IEEE Transactions on Emerging Topics in Computing (TETC), 2016 - 2017.
- Member, IEEE CS Digital Library Operating Committee, 2016-2018.
- Member, SIAM SIAG/Supercomputing Best Paper Prize Committee, 2015-2016.

- **Vice Chair**, ACM Special Interest Group on Bioinformatics, Computational Biology, and Biomedical Informatics (SIGBio), 2015 –2018, and 2018 – 2021.
- Executive Committee Member, Conference Sponsorships, IEEE Technical Committee on Parallel Processing (TCPP), 2014 – 2015.
- Awards Committee Co-Chair, ACM Special Interest Group on Bioinformatics, Computational Biology and Biomedicine (SIGBio), 2012 – 2015.
- Information Director, ACM SIGHIT Special Interest Group on Health Informatics, 2011 – 2012.
- Member, Association for Computing Machinery (ACM), 2009 –
    - Special Interest Groups on High Performance Computing (SIGHPC), 2011 –
    - Bioinformatics, Computational Biology, and Biomedical Informatics (SIGBio), 2011 –
    - Health Informatics (SIGHIT), 2011 – 2012
- Member, Institute for Electrical and Electronics Engineers (IEEE), 2009 –
    - Institute for Electrical and Electronics Engineers Computer Society (IEEE-CS), 2006 –
- Member, Society for Industrial and Applied Mathematics (SIAM), 2007 –
    - SIAM Activity Group on Supercomputing,
    - SIAM Activity Group on Computational Science and Engineering.

D. ORGANIZING COMMITTEES

- Algorithms Area Co-Chair, The International Conference for High Performance Computing, Networking, Storage and Analysis (SC20), Nov 2020.
- Papers Program Co-Chair, The Platform for Advanced Scientific Computing (PASC) Conference, Geneva, Switzerland, Jun-Jul 2020.
- Co-Organizer, Minisymposium on Exploiting Task Parallelism in Exascale Computing Era, SIAM Conference on Parallel Processing for Scientific Computing (PP20), Seattle, WA, Feb 12, 2020.
- Papers Program Co-Chair, The Platform for Advanced Scientific Computing (PASC) Conference, Zurich, Switzerland, Jun 2019.
- Program Vice-Chair, 32nd IEEE International Parallel & Distributed Processing Symposium (IPDPS), Vancouver, Canada, May 2018.
- Program Chair, 24th IEEE International Conference on High Performance Computing, Data and Analytics (HiPC), Jaipur, India, Dec 2017.
- General Chair, 7th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB), Seattle, WA, Oct 2016.
- General Chair, 16th IEEE International Conference on Scalable Computing and Communications (ScalCom), Jul 2016.
- Algorithms Track Chair, 30th IEEE International Parallel & Distributed Processing Symposium (IPDPS), Chicago, IL, May 2016.
- Workshops Vice-Chair, 30th IEEE International Parallel & Distributed Processing Symposium (IPDPS), Chicago, IL, May 2016.
- Algorithms Area Co-Chair, The International Conference for High Performance Computing, Networking, Storage and Analysis (SC15), Nov 2015.
- Workshops Chair, 29th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 2015.
- Program Co-Chair, 5th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM BCB), Newport Beach, CA, Sep 2014.
- Organizing Committee Member, The Sixth SIAM Workshop on Combinatorial Scientific Computing (CSC), Jul 2014.
- Workshops Chair, 28th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 2014.

- Workshops Chair, ACM International Conference on Bioinformatics, Computational Biology and Biomedical Informatics (ACM-BCB), Sep 2013.
- Workshops Chair, 27th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 2013.
- Publicity Co-Chair, 5th International Conference on Bioinformatics and Computational Biology (BICoB), 2013.
- Co-Organizer, Workshop on Parallel Algorithms and Software for Analysis of Massive Graphs (ParGraph), in conjunction with the 19th annual IEEE International Conference on High Performance Computing (HiPC 2012).
- Poster Chair, ACM International Conference on Bioinformatics, Computational Biology and Biomedicine (ACM-BCB), Oct 2012.
- Workshops Chair, 26th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 2012.
- Publicity Co-Chair, IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2012).
- Co-Organizer, Minisymposium on Parallel Algorithms and Software for Massive Graphs, SIAM Conference on Parallel Processing for Scientific Computing (PP12), Savannah, GA, Feb 16, 2012.
- Co-Organizer, Workshop on Parallel Algorithms and Software for Analysis of Massive Graphs (ParGraph), in conjunction with the 18th annual IEEE International Conference on High Performance Computing (HiPC 2011).
- Program Vice Chair, Biological/Molecular Computing Track, 13th IEEE International Conference on High Performance Computing and Communications (HPCC 2011).
- Co-Chair, Algorithms Track, 4th International Conference on Contemporary Computing (IC3 2011).
- Workshops Chair, 25th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 2011.
- General Chair, 1st ACM International Health Informatics Symposium (IHI 2010).
- Workshops Chair, 24th IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 2010.
- Co-Organizer, Minisymposium on Parallel Algorithms and Software for Massive Graphs, SIAM Conference on Parallel Processing & Scientific Computing (PP10), Seattle, WA, Feb 25, 2010.
- Workshops Vice-Chair, 23rd IEEE International Parallel & Distributed Processing Symposium (IPDPS 2009).
- Co-Chair, Networks, Parallel and Distributed Computing track of the 24th International Symposium on Computer and Information Sciences (ISCIS 2009).
- Organizing Committee Member, Minisymposium on Combinatorial Scientific Computing and CS&E, SIAM Conference on Computational Science & Engineering (CSE09), Miami, FL, Mar 2, 2009.
- Organizing Committee Member, Minisymposium on Parallel Sparse Matrix Computations and Enabling Algorithms, SIAM Conference on Computational Science & Engineering (CSE09), Miami, FL, Mar 2, 2009.
- Organizing Committee Member, Workshop on Combinatorial Scientific Computing & Petascale Simulations, Santa Fe, NM, Jun 10-13, 2008.

E. Program Committee Member

- The First SIAM Conference on Applied and Computational Discrete Algorithms (ACDA21), July 2021.
- ISC High Performance, Frankfurt, Germany, Jun 2020.
- The SIAM Workshop on Combinatorial Scientific Computing, Feb 2020.
- The International Conference for High Performance Computing, Networking, Storage and Analysis (SC19), Nov 2019.
- International Conference on Parallel Computing (ParCo2019), Prague, Czech Republic, Sep 2019.
- 48th International Conference on Parallel Processing (ICPP 2019), Kyoto, Japan, Aug 2019.
- 33rd ACM International Conference on Supercomputing (ICS 2019), Jun 2019.
- 33rd IEEE International Parallel & Distributed Processing Symposium (IPDPS'19), Rio de Janeiro, Brazil, May 2019.
- 25th IEEE International Conference on High Performance Computing, Data and Analytics (HiPC), Bangalore, India, Dec 2018.

- International Conference for High Performance Computing, Networking, Storage and Analysis (SC17), Nov 2017.
- 31st IEEE International Parallel & Distributed Processing Symposium (IPDPS 2017), May-Jun 2017.
- The 7th International Workshop on Data-intensive Distributed Computing (DIDC 2016), Kyoto, Japan, Jun 2016.
- The 45th Annual Conference International Conference on Parallel Processing (ICPP), Philadelphia, PA, Aug 2016.
- 21st IEEE International Conference on Parallel and Distributed Systems (ICPADS 2015), Melbourne, Australia, Dec 2015.
- SC15 Workshops Committee, Nov 2015.
- 27th International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD 2015), Florianopolis, Santa Catarina, Brazil, Oct 2015.
- The 8th International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI), Munich, Germany, Oct 5-9, 2015.
- 4th ACM-BCB Workshop on Parallel and Cloud-based Bioinformatics and Biomedicine (ParBio), Sep 2015.
- Workshop on Parallel Computational Biology (PBC), Krakow, Poland, Sep 2015.
- First International Workshop on Data Management and Analytics for Medicine and Healthcare (DMAH), Waikoloa, Hawaii, Sep 2015.
- The Second International Workshop on Software-Defined Ecosystems (BigSystem 2015), Jun 2015.
- 14th IEEE International Workshop on High Performance Computational Biology (HiCOMB), May 2015.
- SC14 Workshops Committee, Nov 2014.
- International Conference on Parallel Processing (ICPP), Oct 2014.
- The 6th International Workshop on Data Intensive Distributed Computing (DIDC), Jun 2014.
- International Workshop on Software-Defined Ecosystems (BigSystem), Jun 2014.
- International Conference on Nuclear Theory in the Supercomputing Era (NTSE-2014), Khabarovsk, Russia, Jun 2014.
- 13th IEEE International Workshop on High Performance Computational Biology (HiCOMB), May 2014.
- IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Dec 2013.
- 2013 IEEE International Conference on Big Data and Distributed Systems (BDDS), Dec 2013.
- 2013 IEEE International Conference on Big Data (IEEE Big Data 2013), Silicon Valley, CA, Oct 2013.
- ACM-BCB Workshop on Parallel and Cloud-based Bioinformatics and Biomedicine (ParBio), Oct 2013.
- Workshop on Parallel Computational Biology (PBC), Warsaw, Poland, Sep 2013.
- International Conference on Parallel Processing (ICPP), Oct 2013.
- 12th IEEE International Workshop on High Performance Computational Biology (HiCOMB), May 2013.
- International Conference on Nuclear Theory in the Supercomputing Era, Ames, Iowa, May 2013.
- Workshop on Computational Scientometrics: Theory and Applications, collocated with iConference, Feb 2013.
- 19th IEEE International Conference on High Performance Computing (HiPC), Dec 2012.
- 4th IEEE International Conference on Cloud Computing Technology and Science, Dec 2012.
- Ninth Biotechnology and Bioinformatics Symposium (BIOT 2012), Oct 2012.
- IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Oct 2012.
- Workshop on Data- and Compute-Intensive Clinical and Translational Imaging Applications (DCICTIA-MICCAI), Oct 2012.
- International Conference for High Performance Computing, Networking, Storage and Analysis (SC12), Nov 2012.

- Second IEEE International Conference on Healthcare Informatics, Imaging and Systems Biology (HISB), Sep 2012.
- International Conference on Parallel Processing (ICPP), Sep 2012.
- International Symposium on Network Enabled Health Informatics, Bio-Medicine and Bioinformatics, (HI-BI-BI), Aug 2012.
- The Fifth International Conference on Contemporary Computing (IC3-2012), Aug 2012.
- The Fifth International Workshop on Data Intensive Distributed Computing (DIDC 2012), Jun 2012.
- The 10th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA), Jul 2012.
- 26th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2012), May 2012.
- First International Workshop on Advances in High-Performance Algorithms and Applications, Jun 2012.
- Eleventh IEEE International Workshop on High Performance Computational Biology (HiCOMB), May 2012.
- Workshop on Parallel Computing and Optimization (PCO'12), May 2012.
- Workshop on Dynamic Network Analysis (DNA-SDM), Apr 2012.
- Joint Workshop on High Performance and Distributed Computing for Medical Imaging HP-MICCAI/MICCAI-DCI, Sep 22, 2011.
- ACM Conference on Bioinformatics, Computational Biology and Biomedicine (ACM-BCB), Aug 2011.
- First IEEE International Conference on Healthcare Informatics, Imaging and Systems Biology (HISB), Jul 2011.
- The Fourth International Workshop on Data Intensive Distributed Computing (DIDC 2011), Jun 2011.
- 25th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2011), May 2011.
- The First International Workshop on Data Intensive Computing in the Clouds (DataCloud 2011), May 2011.
- Workshop on New Trends in Parallel Computing and Optimization (PCO'11), May 2011.
- Tenth IEEE International Workshop on High Performance Computational Biology (HiCOMB), May 2011.
- IEEE BIBM Workshop on Computational Issues in Next Generation Sequencing, Dec 2010.
- 12th IEEE International Conference on High Performance Computing and Communications (HPCC'10), Sep 2010.
- IPDPS 2010 PhD Forum, Apr 2010.
- 39th International Conference on Parallel Processing (ICPP-2010), 2010.
- PAPP 2010, Seventh International Workshop on Practical Aspects of High-level Parallel Programming, May 2010.
- 15th IEEE International Conference on Parallel and Distributed Systems (ICPADS'09), Dec 2009.
- SC Doctoral Research Showcase Committee, 2009.
- 16th IEEE International Conference on High Performance Computing (HiPC 2009), Dec 2009.
- The Forth SIAM Workshop on Combinatorial Scientific Computing (CSC'09), Oct 2009.
- PAPP 2009, Sixth International Workshop on aPpplications of declArative and object-oriented Parallel Programming, May 2009.
- IPDPS 2009 TCPP PhD Forum, May 2009.
- Ohio Collaborative Conference on Bioinformatics (OCCBIO'09), Jun 2009.
- 11th IEEE International Conference on High Performance Computing and Communications (HPCC'09), Jun 2009.
- High Performance Computing Symposium (HPC 2008), Mar 2009.
- 15th IEEE International Conference on High Performance Computing (HiPC 2008), Dec 2008.
- 14th IEEE International Conference on Parallel and Distributed Systems (ICPADS'08), Dec 2008.

- 22nd IEEE International Parallel & Distributed Processing Symposium (IPDPS'08), Apr 2008.
- 10th IEEE International Conference on High Performance Computing and Communications (HPCC'08), Sep 2008.
- Ohio Collaborative Conference on Bioinformatics (OCCBIO'08), Jun 2008.
- Challenges of Large Applications in Distributed Environments (CLADE'08), Jun 2008.
- High Performance Computing Symposium (HPC 2008), Apr 2008.
- PAPP 2008, Fifth International Workshop on aPpplications of declArative and object-oriented Parallel Programming, Jun 2008.
- High Performance Computation Conference (HPCC'07), Sep 2007.
- Challenges of Large Applications in Distributed Environments (CLADE'07), Jun 2007.
- High Performance Computing Symposium (HPC 2007), Mar 2007.
- 21st IEEE International Parallel & Distributed Processing Symposium (IPDPS'07), Apr 2007.
- Challenges of Large Applications in Distributed Environments (CLADE'06), Jun 2006.
- High Performance Computing Symposium (HPC 2006), Apr 2006.
- The 6th IEEE/ACM International Workshop on Grid Computing (Grid 2005), Nov 2005.
- Challenges of Large Applications in Distributed Environments (CLADE'05), Jun 2005.
- High Performance Computing Symposium (HPC 2005), Apr 2005.
- The 19th International Symposium on Computer and Information Sciences (ISCIS'04), Oct 2004.
- Challenges of Large Applications in Distributed Environments (CLADE'04), Jun 2004.

F. REFEREE

Proposals:

- INRIA, Ad-hoc Project-Team review, 2017.
- DOE ASCR Early Career, 2017.
- Marsden Fund, the Royal Society of New Zealand, 2014.
- NIH NIGMS P41 Biomedical Technology Research Center (BTRC), 2013.
- NSF Computing Research Infrastructure Panel, 2013.
- The Army Research Office (ARO), Ad-hoc review, 2013.
- NSF Computing and Communications Foundations Panel, 2012.
- NIH Biodata Management and Analysis Study Section, 2011.
- NSF Cyber-Enabled Discovery and Innovation (CDI) Panel, 2010.
- NIH National Centers for Biomedical Computing (NCBC), 2010.
- French National Research Agency ARPEGE, 2010.
- NSF-OCI Strategic Technologies for CI (STCI), 2009.
- NIH Go Grants, ARRA Special Emphasis Panel, 2009.
- NSF-OCI Strategic Technologies for CI (STCI) Panel, 2007.

Journals:

- Bioinformatics
- ACM Transactions on Mathematical Software
- ACM Transactions on Knowledge Discovery in Data
- SIAM Journal on Scientific Computing
- IEEE Transactions on Parallel and Distributed Systems
- IEEE Transactions on Computational Biology and Bioinformatics

- Journal of Parallel and Distributed Computing, Elsevier
- Parallel Computing, Elsevier
- Cluster Computing
- Scientific Computing, IOS Press
- Future Generation Computer Systems, Elsevier

Publishers:

- Cambridge University Press
- John Wiley & Sons, Inc.

Conferences:

- IPDPS: International Parallel & Distributed Processing Symposium
- HPDC: High Performance Distributed Computing
- SC: International Conference for High Performance Computing, Networking, Storage and Analysis
- Grid: International Workshop on Grid Computing
- Cluster: Cluster Computing
- CLADE: Challenges of Large Applications in Distributed Environments
- High Performance Computing Symposium

Others:

- ACM SIGHPC/Intel Computational & Data Science Fellowships, 2017

G. SESSION CHAIR

- 32nd IEEE International Parallel & Distributed Processing Symposium (IPDPS'18), May 2018.
- SIAM Conference on Parallel Processing for Scientific Computing, Tokyo, Japan, March 2018.
- 31st IEEE International Parallel & Distributed Processing Symposium (IPDPS'17), May-Jun 2017.
- 30th IEEE International Parallel & Distributed Processing Symposium (IPDPS'16), May 2016.
- IEEE International Conference on BigData, Oct 2015.
- 6th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM BCB), Sep 2015.
- 5th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM BCB), Sep 2014.
- Sixth SIAM Workshop on Combinatorial Scientific Computing (CSC14), Lyon, France, Jul 2014.
- ACM International Conference On Bioinformatics, Computational Biology and Biomedical Informatics (ACM-BCB), Sep 2013.
- International Conference for High Performance Computing, Networking, Storage and Analysis (SC12), Nov 2012.
- ACM International Conference On Bioinformatics, Computational Biology and Biomedicine (ACM-BCB), Oct 2012.
- 26th IEEE International Parallel & Distributed Processing Symposium (IPDPS'12), May 2012.
- 10th DIMACS Implementation Challenge - Graph Partitioning and Graph Clustering, Atlanta, GA, February 13-14, 2012.
- 25th IEEE International Parallel & Distributed Processing Symposium (IPDPS'11), May 2011.
- ACM International Conference On Bioinformatics and Computational Biology (ACM-BCB), Aug 2010.
- The Forth SIAM Workshop on Combinatorial Scientific Computing (CSC'09), Oct 29-31, 2009.
- Workshop on Combinatorial Scientific Computing & Petascale Simulations, Santa Fe, NM, Jun 2008.
- 21st IEEE International Parallel & Distributed Processing Symposium (IPDPS'07), Apr 2007.

- The 6th IEEE/ACM International Workshop on Grid Computing (Grid 2005), Nov 2005.

H. UNIVERSITY SERVICE

Georgia Institute of Technology

University

- GT Coda Space Management Committee, 2019-present, Member.
- Graduate Curriculum Committee, 2018-present, Member.
- Faculty Senate, 2018-present, Member.

College of Computing

- TSO Advisory Committee, 2019-present, Member.
- Graduate Curriculum Committee, 2017-present, Member.
- RPT Committee, 2017-2018, ad-hoc substitute for CSE.

Computational Science and Engineering

- CSE Strategic Vision, 2020-present, Member.
- Curriculum Committee, 2017-present, Chair.
- CSE School Chair Advisory Committee, 2016-2017, Member.
- Reappointment, Promotion, and Tenure Committee, 2016-present, Member.
- Faculty Recruiting Committee, 2016-2019, Member.
- Graduate Admissions Committee, 2016-2017, Member.
- Seminar Committee, 2016-2018, Chair.

Ohio State University

Biomedical Informatics Department

- Executive Committee, 2007-2010, Chair, 2011-2016, Member.
- P&T Committee, 2007-2009, Member, 2009-2016, Chair.
- Data Analytics and Biomedical Informatics Faculty Search Committee, 2014-2015, Co-Chair.
- Scientific Review Committee, 2014-2016, Chair.
- Graduate Studies Coordinating Committee, 2014-2016, Member.
- Curriculum Committee, 2001-2006, Member, 2007-2010, Chair.
- Systems Committee, 2004-2006, Chair.
- Operations Committee, 2004-2007, Member.
- Faculty Recruiting Committee, 2001-2013, Member.

Electrical and Computer Engineering

- Graduate Admission Committee, 2012-2015, Member.
- Personnel Committee, 2011, Member.
- Graduate Recruiting & Financial Aid Committee, 2008-2012, Member.
- Computer Engineering Advisory Committee (ECE & CSE), Member.

College

- College of Medicine P&T Committee, 2012-2016, Member.
- OSUMC Council of Faculty Development, 2010-2016, Member.
- OSUMC Research Committee, 2007-2010, Member.
- IBGP Graduate Studies Committee, College of Medicine, 2007-2008, Member.
- Graduate Education Committee, College of Medicine and Public Health, 2003-2006, Member.

University

- Undergraduate Data Analytics Major Steering Committee, 2014-2016, Member.

INVITED PRESENTATIONS

A. PLENARY/PANELIST

1. Keynote, "Seeking Performance Portability on HPC Graph Analytics", The 20th International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT), Gold Coast, Australia, Dec 5th, 2019.
2. Panelist, "Parallel Processing: Challenges for the Next Quarter Century", 33rd IEEE International Parallel & Distributed Processing Symposium (IPDPS), May 22, 2019.
3. Panelist, "The Future of HPC", The 20th IEEE International Workshop on Parallel and Distributed Scientific and Engineering Computing (PDSEC), IPDPS, May 24, 2019.
4. Panelist, "Heterogeneity in Computing: Now and in the Future", The Twenty Eight International Heterogeneity in Computing Workshop (HCW), IPDPS, May 20, 2019.
5. Keynote, "Challenges and Opportunities in Heterogenous Computing – Applications Perspective', The Twenty Seventh International Heterogeneity in Computing Workshop (HCW), IPDPS, May 21, 2018.
6. Keynote, "HPC Graph Analytics: Trends and Fallacies", Workshop on Graph Algorithms Building Blocks (GABB'2017), IPDPS, May 29, 2017.
7. Keynote, "Runtime System Support for Large Image Processing on Heterogeneous Platforms", The 7th International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI), Boston, Sep 14, 2014.
8. Panelist, "Next-Generation Systems for Irregular Application: Directions, Challenges and Opportunities", IA^3: the SC'12 Workshop on Irregular Applications: Architectures & Algorithms, Salt Lake City, UT, Nov 11, 2012.
9. Panelist, "Bigdata in Biosciences: Challenges and Opportunities", ACM International Conference on Bioinformatics, Computational Biology and Biomedicine (ACM-BCB), Oct 10, 2012.
10. Plenary Speaker, "Challenges and Lessons Learned in Data-Intensive Computing", SIAM Conference on Parallel Processing for Scientific Computing, Savannah, GA, Feb 15, 2012.

B. OTHERS

1. "Fast graph analytics on heterogenous and deep-memory architectures", MIT Fast Code Seminar, June 29, 2020.
2. "Is Acyclic Directed Graph Partitioning Effective for Locality-Aware Scheduling?", 14th Scheduling for Large Scale Systems Workshop, Bordeaux, France, June 27, 2019.
3. "Scalable Graph Alignment on Modern Architectures", SIAM Conference on Parallel Processing for Scientific Computing, Tokyo, Japan, March 2018.
4. "A DAG partitioning-assisted list-based scheduler for homogeneous processors", 13th Scheduling for Large Scale Systems Workshop, Berkeley, CA, June 20, 2018.
5. "HPC Graph Analytics", Equifax Inc., June 11, 2018.
6. "HPC Graph Analytics", 3 x 2-hour lectures, International Spring School on High Performance Computing, San Sebastián, Spain, April 23-27, 2018.
7. "Convex Partitioning of Large Scale Directed Graphs", SIAM Workshop on Combinatorial Scientific Computing, Albuquerque, NM, Oct 11, 2016
8. "Directed Graph Partitioning", The 11th Scheduling for Large Scale Systems Workshop, Nashville, TN, May 18, 2016.
9. "Directed Graph Partitioning", SIAM Conference on Parallel Processing for Scientific Computing, Paris, France, Apr 13, 2016.
10. "High Performance Graph Analytics and Translational Data Analytics", School of Computational Science and Engineering, Georgia Institute of Technology, Oct 27, 2015.
11. "Challenges of Supporting Big Data in the Life Sciences", Dept. of Bioinformatics and Genomics, UNC Charlotte, Oct 10, 2014.

12. “Task Mapping in Today's Supercomputers: Geometric vs Connectivity-based Methods”, 9th Scheduling for Large Scale Systems Workshop, ENS Lyon, France, Jul 3, 2014.
13. “theadvisor: A Graph-based Citation Recommendation Service”, Electrical Engineering and Computer Science Case Western Reserve University, Sep 10, 2013.
14. “Challenges and Lessons Learned in Data-Intensive Computing”, Abdullah Gul University Seminar Series, Jun 17, 2013.
15. “Exploring Intel Xeon Phi and NVIDIA GPUs for Nuclear Physics Simulations”, International Conference on Nuclear Theory in the Supercomputing Era, Ames, Iowa, May 16, 2013.
16. “Faster Centrality Computations on GPUs”, GPU Technology Conference, San Jose, CA, Mar 19, 2013.
17. “Sparse Matrix Operations on Intel Xeon Phi”, Intel Xeon Phi launch, SC12 Supercomputing Conference, Salt Lake City, UT, Nov 15, 2012.
18. “An Early Evaluation of the Scalability of Graph Algorithms on the Intel MIC Architecture”, Computer Science Research Institute (CSRI), Sandia National Laboratories, Albuquerque, NM, Jun 13, 2012.
19. “Disruptive Computational Technologies for Nuclear Physics Simulations”, Horizons of Innovative Theories, Experiments, and Supercomputing in Nuclear Physics (HITES 2012), New Orleans, LA, Jun 6, 2012.
20. “Load-Balancing Spatially Located Computations using Rectangular Partitions”, SIAM Conference on Parallel Processing for Scientific Computing, Savannah, GA, Feb 16, 2012.
21. “Bioinformatics on GPUs with CUDA”, Bielefeld University, Germany, Guest Lecture in M. Abouelhoda’s course “Engineering Sequence Analysis Algorithms and Workflows for Parallel Computing” via Video-Conference, Jan 10, 2012.
22. “Dataflow Frameworks for Heterogeneous systems”, IBM Watson Research Center, SC PIC Seminar, Dec 1, 2010.
23. “Partitioning Spatially Located Load with Rectangles”, Computer Science Research Institute (CSRI), Sandia National Laboratories, Albuquerque, NM, Oct 21, 2010.
24. “Partitioning Sparse Matrices”, Minisymposium on Combinatorial Scientific Computing and CS&E, SIAM Conference on Computational Science & Engineering (CSE09), Miami, FL, Mar 2, 2009.
25. “Parallel Short Sequence Mapping for High Throughput Genome Sequencing”, Dagstuhl Combinatorial Scientific Computing Seminar, Wadern, Germany, Feb 5, 2009.
26. “Service Oriented access to HPC Resources: A case study – OSC Bioscience Cluster”, SC’08 Workshop on Supercomputing, Multicore Architectures, and Biomedical Informatics, in conjunction with Supercomputing 2008 Austin, TX, Nov 17, 2008.
27. “Processing of Large-Scale Biomedical Images on a Cluster of Multi-Core CPUs and GPUs”, International Advanced Research Workshop on High Performance Computing and Grids, Cetraro, Italy, Jul 4, 2008.
28. “Dynamic Load Balancing & Matrix Partitioning”, Workshop on Combinatorial Scientific Computing & Petascale Simulations, Santa Fe, NM, Jun 10, 2008.
29. “Tutorial: The Zoltan Toolkit”, with Karen Devine and Cedric Chevalier, Workshop on Combinatorial Scientific Computing & Petascale Simulations, Santa Fe, NM, Jun 12, 2008.
30. “Multi-Objective Scheduling of Streaming Workflows”, 2nd “Scheduling in Aussois” Workshop, Aussois, French Alps. May 21, 2008.
31. “Hypergraph-based Dynamic Load Balancing for Adaptive Scientific Computations”, Minisymposium on Combinatorial Scientific Computing, 6th International Congress on Industrial and Applied Mathematics (ICIAM’07), Zurich, Switzerland, Jul 16th 2007.
32. “Combinatorial Scientific Computing on Petascale Machines”, Petascale Applications Symposium, Pittsburgh Supercomputing Center, Jun 22-23, 2007.
33. “How Scalable is Your Load Balancer?”, Minisymposium on Combinatorial Scientific Computing and Petascale Simulations, SIAM Conference on Computational Science and Engineering (SIAM CSE'07), Costa Mesa, California, Feb 19-23, 2007.
34. “Application of Grid Technology in Cancer Research: Middleware and Tools”, International Advance Research Workshop on High Performance Computing and Grids, Cetraro, Italy, Jul 6th, 2006.

35. "STORM", Second DIALOGUE Workshop: Applications-Driven Issues in Data Grids, Edinburgh, UK, Feb 10th, 2006.
36. “Parallel Hypergraph Partitioning for Scientific Computing”, Mathematics Institute, Utrecht University, the Netherlands, Aug 16, 2005.
37. "STORM - Overview", First DIALOGUE Workshop: Applications-Driven Issues in Data Grids, Columbus OH, Aug 2nd, 2005.
38. “Supporting Large Scale Data Driven Science in Distributed Environments”, Minisymposium on Distributed Data Management Infrastructures for Scalable Computational Science and Engineering Applications, SIAM Conference on Computational Science and Engineering (SIAM CSE'05), Feb 12-15, 2005.
39. “Runtime and Compiler Support for Large Scale Data Driven Science”, Lawrence Livermore National Laboratory, Institute for Scientific Computing Research, Nov 17, 2004.
40. “Middleware Infrastructure for Large-Scale Data Management”, ASC VIEWS Alliance Forum, Salt Lake City, Utah, Jul 2004.
41. “Hypergraph Models for Load Balancing Irregular Applications, " mini-symposium on Load Balancing for Emerging Applications, in SIAM Conference on Parallel Processing for Scientific Computing, Feb 2004.
42. “Hypergraph-Partitioning Approaches for Workload Decomposition”, Discrete Algorithms and Mathematics Department, Sandia National Laboratories, Jul 2002.