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EDUCATION

1989, Ph.D. in computer science from the University of Wisconsin-Madison. Advisor: Udi Manber.

1984, B.S. in computer science and mathematics from Iowa State University

APPOINTMENTS

2001 –   : Professor of computer science, University of Pittsburgh

1995 – 2001: Associate professor of computer science, University of Pittsburgh

1989 – 1995: Assistant professor of computer science, University of Pittsburgh

JOURNAL PUBLICATIONS

- M. Leichter, B. Moseley, and K. Pruhs, "On the impossibility of decomposing binary matroids", Operations Research Letters, **50**(5), 623-625, 2022.

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- S. Im, B. Moseley, K. Munagala, and K. Pruhs, "Dynamic Weighted Fairness with Minimal Disruptions", Proceedings of the ACM on Measurement and Analysis of Computing Systems, **4**(1), 18 pages, 2020.

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- N. Bansal, H. Chan and K. Pruhs, "Speed Scaling with an Arbitrary Power Function", *ACM Transactions on Algorithms*, **9**(2), 18, 2013.

- L. Al Moakar, P.. Chrysanthis, C. Chung, S. Guirguis, A. Labrinidis, P. Neophytou and K. Pruhs, "Auction-based Admission Control for Continuous Queries in a Multi-Tenant Data-Stream Management System", *International Journal of Next-Generation Computing*, **3**(3), 2012.

- D. Cole, S. Im, B. Moseley and K. Pruhs, "Speed scaling for stretch plus energy", *Operations Research Letters*, **40**(3), 180-184, 2012.

- J. Edmonds and K. Pruhs, "Scalably scheduling processes with arbitrary speedup curves", *ACM Transactions on Algorithms*, **8**(3), 28, 2012.

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- K. Pruhs, "Average case scalable on-line algorithms for fault replacement", *Information Processing Letters*, **52**(3), 131 − 136, 1995.

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- M. Leichter, B. Moseley, and K. Pruhs, "An Efficient Reduction of a Gammoid to a Partition Matroid", European Symposium on Algorithms (ESA), 62:1-62:13, 2021.

- M. Bender, J. Gilbert, and K. Pruhs, "A Poly-log Competitive Posted-Price Algorithm for Online Metrical Matching on a Spider", International Symposium on Fundamentals of Computation Theory (FCT), 67-84, 2021.

- B. Moseley, K. Pruhs, A. Samadian, and Y. Wang, "Relational Algorithms for k-Means Clustering", International Colloquium on Automata, Languages, and Programming (ICALP), 97:1-97:21, 2021.

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- M. Bender, J. Gilbert, A. Krishnan, and Kirk Pruhs, "Competitively Pricing Parking in a Tree", International Conference on Web and Internet Economics (WINE), 220-233, 2020.

- A. Samadian, K. Pruhs, B. Moseley, S. Im, and R. Curtin, "Unconditional Coresets for Regularized Loss Minimization", International Conference on Artificial Intelligence and Statistics (AISTATS), 482-492, 2020.

- S. Im, B. Moseley, K. Munagala, and K. Pruhs, "Dynamic Weighted Fairness with Minimal Disruptions", SIGMETRICS/Performance Joint International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS), 5-6, 2020.

- S. Im, B. Moseley, K. Pruhs, and M. Purohit, "Matroid Coflow Scheduling", International Conference on Automata, Languages and Programming (ICALP), 145:1-145:14, 2019.

- N. Olver, K. Pruhs, K. Schewior, R. Sitters, and L. Stougie: "The Itinerant List Update Problem", Workshop on Approximation and Online Algorithms (WAOA), 310-326, 2018.

- R. Carrasco, K. Pruhs, C. Stein, and J. Verschae, "The Online Set Aggregation Problem", Latin American Symposium on Theoretical Informatics (LATIN), 245-259, 2018

- S. Im, B. Moseley, K. Pruhs, and C. Stein, "Minimizing Maximum Flow Time on Related Machines via Dynamic Posted Pricing", European Symposium on Algorithms (ESA), 51:1-51:10, 2017.

- S. Im, B. Moseley, K. Pruhs, and C. Stein, "An O(log log m)-competitive Algorithm for Online Machine Minimization, IEEE Real-Time Systems Symposium (RTSS), 2017.

- N. Barcelono, P. Kling, M. Nugent, and K. Pruhs, "Optimal Speed Scaling with a Solar Cell", International Conference on Combinatorial Optimization and Applications (COCOA), 521-535, 2016.

- A. Antoniadis, N. Barcelo, M. Nugent, K. Pruhs, K. Schewior, and M. Scquizzato, "Chasing Convex Bodies and Functions", Latin American Symposium on Theoretical Informatics (LATIN), 68-81, 2016.

- N. Barcelo, M. Nugent, K. Pruhs, and M. Scquizzato, "The power of heterogeneity in Near-Threshold Computing", International Green and Sustainable Computing Conference (IGSC), 2015.

- N. Barcelo, P. Kling, M. Nugent, K. Pruhs, and M. Scquizzato, "On the Complexity of Speed Scaling", International Symposium on Mathematical Foundations of Computer Science (MFCS), 75-89, 2015.

- N. Barcelo, M. Nugent, K. Pruhs, and M. Scquizzato, "Almost All Functions Require Exponential Energy", International Symposium on Mathematical Foundations of Computer Science (MFCS), 90-101, 2015.

- S. Im, B. Moseley, and K. Pruhs, "Stochastic Scheduling of Heavy-tailed Jobs", nternational Symposium on Theoretical Aspects of Computer Science (STACS), 474-486, 2015.

- Nikhil Bansal, Marek Elias, Lukasz Jez, Grigorios Koumoutsos, Kirk Pruhs: Tight Bounds for Double Coverage Against Weak Adversaries. WAOA 2015: 47-58

- S. Im, J. Kulkarni, K. Munagala, and K. Pruhs, "SelfishMigrate: A Scalable Algorithm for Non-clairvoyantly Scheduling Heterogeneous Processors", Symposium on Foundations of Computer Science (FOCS), 531-540, 2014.

- A. Antoniadis, N. Barcelo, M. Nugent, K. Pruhs, and M. Scquizzato, "Complexity-theoretic obstacles to achieving energy savings with near-threshold computing", International Green Computing Conference (IGCC), 1-8, 2014.

- A. Antoniadis, N. Barcelo, M. Nugent, K. Pruhs, and M. Scquizzato, "A o(n) -Competitive Deterministic Algorithm for Online Matching on a Line", International Workshop on Approximation and Online Algorithms (WAOA), 11-22, 2014.

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- B. Moseley, K. Pruhs and C. Stein, "The Complexity of Scheduling for p-Norms of Flow and Stretch", International Conference on Integer Programming and Combinatorial Optimization (IPCO), 278-289, 2013.

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  N. Barcelo, S. Im, B. Moseley and K. Pruhs, "Shortest-Elapsed-Time-First on a Multiprocessor", Mediterranean Conference on Algorithms (MedAlg), 82-92, 2012.

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- A. Gupta, R. Krishnaswamy and K. Pruhs, Nonclairvoyantly Scheduling Power-Heterogeneous Processors, International Green Computing Conference (IGCC), 165-173, 2010.

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- J. Edmonds, K. Pruhs, and J. Solanki, "Confidently Cutting a Cake into Approximately Fair Pieces", Conference on Algorithmic Aspects in Information and Management (AAIM), 2008.

- C. Chung, K. Ligett, K. Pruhs, and A. Roth, "The Price of Stochastic Anarchy", Symposium on Algorithmic Game Theory (SAGT), 303-314, 2008.

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- J. Edmonds and K. Pruhs "Cake cutting isn't a piece of cake", ACM/SIAM Symposium on Discrete Algorithms (SODA), 2006.

- N. Bansal, and K. Pruhs, "Speed scaling to manage temperature", Symposium on Theoretical Aspects of Computer Science (STACS), 460-471, 2005.

- M. Sharaf, A. Labrinidis, P. Chrysanthis, K.Pruhs, "Freshness-aware scheduling of continuous queries in the dynamic web", Workshop on the Web and Databases (WebDB), 73-78, 2005.

- K. Pruhs, R. van Stee, P. Uthaisombut, "Speed Scaling of Tasks with Precedence Constraints", Workshop on Approximation and Online Algorithms (WAOA), 307-319, 2005. Invited to special issue of *Theory of Computing Systems* of selected papers from the conference.

- M. Aly, Kirk Pruhs, T. Znati, B. Hunsaker, "On the Coverage Problem for Myopic Sensors" IEEE International Conference on Wireless Networks, Communications, and Mobile Computing (WIRELESSCOM), 2005.

- M. Aly, N. Morsillo, P. Chrysanthis, and K. Pruhs, "Zone Sharing: A Hot-Spots Decomposition Scheme for Data-Centric Storage in Sensor Networks", International VLDB Workshop on Data Management for Sensor Networks (DMSN), 2005.

- N. Bansal, T. Kimbrel, and K. Pruhs, "Dynamic speed scaling to manage energy and temperature", IEEE Symposium on Foundations of Computer Science (FOCS), 520-529, 2004.

- J. Beaver, K. Pruhs, P. Chrysanthis, and V. Liberatore, "The multicast pull advantage in dissemination-based data delivery", Hellenic Symposium on Data Management, 2004.

- K. Pruhs, P. Uthaisombut, G. Woeginger, "Getting the best response for your erg", Scandinavian Workshop on Algorithm Theory (SWAT), 14-25, 2004.

- J. Kohrt, and K. Pruhs, "A constant approximation algorithm for sorting buffers", Latin American Theoretical Informatics (LATIN), 2004.

- K. Pruhs, and G. Woeginger, "Approximation schemes for a class of subset selection problems", Latin American Theoretical Informatics (LATIN), 2004. Invited to a special issue of *Theoretical Computer Science* of selected papers from the conference.

- N. Bansal, and K. Pruhs, "Server scheduling in the weighted l_p norm", Latin American Theoretical Informatics (LATIN), 2004.

- J. Edmonds, and K. Pruhs, "A maiden analysis of Longest Wait First", ACM/SIAM Symposium on Discrete Algorithms (SODA), 2004.

- J. Beaver, N. Morsillo, K. Pruhs, P. Chrysanthis, and V. Liberatore, "Scalable dissemination: What's hot and what's not", Workshop on the Web and Databases (WebDB), 2004.

- N. Bansal and K. Pruhs, "Server scheduling in the L_p norm: A rising tide lifts all boats", ACM Symposium on Theory of Computing (STOC), 2003.

- J. Beaver, W. Li, V. Penkrot, S. Roychowdhury, M. Sharaf, W. Zhang, P. Chrysanthis, K. Pruhs, and V. Liberatore, "An optimized multicast based data dissemination middleware: a demonstration", IEEE International Conference on Data Engineering (ICDE) 2003.

- P. Chrysanthis, K. Pruhs, and V. Liberatore, "Middleware support for multicast-based data dissemination: a working reality", IEEE Workshop on Reliable Dependable Systems (WORDS), 2003.

- L. Becchetti, S. Leonardi, A. Marchetti-Spaccamella, and K. Pruhs, "Semi-Clairvoyant Scheduling", European Symposium on Algorithms (ESA), 2003.

- K. Pruhs and P. Uthaisombut "A comparison of multicast pull models", European Symposium on Algorithms (ESA), 2002.

- E. Wiewiora and K. Pruhs "Evaluating the Local Ratio Algorithm for Dynamic Storage Allocation", Workshop on Algorithms Engineering and Experiments (ALENEX), 2002.

- J. Edmonds, and K. Pruhs "Broadcast scheduling: when fairness is fine", *ACM/SIAM Symposium on Discrete Algorithms* (SODA), 2002.

- A. Berfield, B. Simmons, P. Chrysanthis, and K. Pruhs "Better client OFF time predictions using machine learning techniques", International Workshop on Web and Data Management (WIDM), 2001.

- Luca Becchetti, Stefano Leonardi, Alberto Marchetti–Spaccamela, Kirk Pruhs, "Online weighted flow time and deadline scheduling", Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX), 2001.

- B. Kalyanasundaram, K. Pruhs, and M. Velauthapillai, "Scheduling broadcasts in wireless networks", *European Symposium on Algorithms* (ESA), 2000. Invited to submit to a special issue of *Journal of Scheduling* devoted to selected papers from ESA 2000.

- B. Kalyanasundaram, J. Noga, K. Pruhs and G. Woeginger, "Caching for web searching", *Scandinavian Workshop on Algorithms and Theory* (SWAT), 2000. Invited to submit to a special issue of *Nordic Journal of Computing* devoted to selected papers from SWAT 2000.

- B. Kalyanasundaram, and K. Pruhs, "Dynamic spectrum allocation: the impotency of duration notification", *Conference on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS), 2000.

- B. Kalyanasundaram, and K. Pruhs, "Eliminating migration in multi-processor scheduling", *ACM/SIAM Symposium on Discrete Algorithms* (SODA), 1999. Invited to appear in a special issue of *Journal of Algorithms* devoted to selected papers from the 1999 SODA.

- B. Kalyanasundaram, and K. Pruhs, "Maximizing job completions online", *European Symposium on Algorithms* (ESA), 1998. Invited to appear in a special issue of *Journal of Algorithms* devoted to selected papers from the 1998 ESA.

- B. Kalyanasundaram, and K. Pruhs, "Minimizing flow time nonclairvoyantly", *IEEE Symposium on Foundations of Computer Science* (FOCS), 1997.

- B. Kalyanasundaram, and K. Pruhs, "Fault-tolerant real-time scheduling", *European Symposium on Algorithms* (ESA), 1997. Invited to appear in a special issue of *Algorithmica* devoted to selected papers from the 1997 ESA.

- B. Kalyanasundaram, and K. Pruhs, "An optimal deterministic algorithm for online b-matching", *Conference on Foundations of Software Technology and Theoretical Computer Science* (FSTTCS), 1996.

- B. Kalyanasundaram, and K. Pruhs, "Speed is as powerful as clairvoyance", *IEEE Symposium on Foundations of Computer Science* (FOCS), 1995.

- B. Kalyanasundaram, and K. Pruhs, "The online transportation problem", *European Symposium on Algorithms* (ESA), 1995.

- B. Kalyanasundaram, and K. Pruhs, "Fault-tolerant scheduling", *ACM Symposium on Theory of Computing* (STOC), 1994.

- Y. Azar, B. Kalyanasundaram, S. Plotkin, K. Pruhs, and O. Waarts, "Online load balancing of temporary tasks", *Workshop on Algorithms and Data Structures* (WADS), 1993.

- B. Kalyanasundaram, and K. Pruhs, "Constructing competitive tours from local information", *EATCS International Colloquium on Automata, Languages, and Programming* (ICALP), 1993. Invited to submit to a special issue of the *Nordic Journal of Computing* devoted to selected papers from ICALP 1993.

- B. Kalyanasundaram, and K. Pruhs, "A competitive analysis of algorithms for searching unknown scenes", *Symposium on Theoretical Aspects of Computer Science* (STACS), 1992.

- B. Kalyanasundaram, and K. Pruhs, "Online weighted matching", *ACM/SIAM Symposium on Discrete Algorithms* (SODA), 1991.

- K. Pruhs, and U. Manber, "The complexity of controlled selection," *EATCS International Colloquium on Automata Languages and Programming* (ICALP), 1989.

- K. Pruhs, "The computational complexity of some rounding and survey overlap problems," *Meeting of the Survey Research Methods Section of the American Statistical Association*, 1989.

SELECTED OTHER PUBLICATIONS

- Kirk Pruhs, "Green Computing Algorithmics", *Computing and Software Science*, 161-183, 2019.

- Sungjin Im, Benjamin Moseley, Kirk Pruhs, " A tutorial on amortized local competitiveness in online scheduling", *SIGACT News*, **42**(2), 83-97, 2011.

- Kirk Pruhs, " Review of Algorithmic Game Theory (Editors: Noam Nisan, Tim Roughgarden, Eva Tardos and Vijay Vazirani)", *Operations Research Letters*, **36**(5), page 656, 2008.

- Luca Becchetti, Stefano Leonardi, Alberto Marchetti-Spaccamela, Kirk Pruhs: Flow Time Minimization. *Encyclopedia of Algorithms*, 2008.

- Kirk Pruhs: Speed Scaling. *Encyclopedia of Algorithms*, 2008.

- K. Pruhs, "Competitive online scheduling for server systems", *SIGMETRICS Performance Evaluation Review*, **34**(4), 52-58, 2007.

- Sandy Irani, Kirk Pruhs, "Algorithmic problems in power management", *SIGACT News* **36**(2), 63-76, 2005.

- K. Pruhs, J. Sgall, and E. Torng, "Online Scheduling", *Handbook of Scheduling: Algorithms, Models and Performance Analysis*, editor J. Leung, 2004.

- P. Chrysanthis, V. Liberatore, and K. Pruhs, "Middleware for scalable data dissemination", *Middleware for Communications*, editor Q. H. Mahmoud, 2004.

- K. Pruhs and B. Kalyanasundaram, "Online network optimization problems", *Online Algorithms: The State of the Art*, Editors: Amos Fiat and Gerhard Woeginger, Springer-Verlag, 1998.

- K. Pruhs, "How to design dynamic programming algorithms sans recursion", *SIGACT News*, **29**(1), 32 - 35, March 1998.

- K. Pruhs, T. Znati, and R. Melhem, "Dynamic mapping of adaptive computations onto linear arrays", *Unstructured Scientific Computations on Scalable Multiprocessors*, Editors: P. Mehrotra, J. Saltz, and R. Voigt, MIT Press, 1991.

- B. Kalyanasundaram, and K. Pruhs, "On-line weighted matching", *On-Line Algorithms*, Editors: L. McGeoch, and D. Sleator, ACM/AMS, 1991.

- B. Kalyanasundaram and K. Pruhs, "Visual searching and mapping", *On-Line Algorithms*, Editors: L. McGeoch, and D. Sleator, ACM/AMS, 1991.

- K. Pruhs, "The SPIN-OUT Puzzle", *Bulletin of the ACM Special Interest Group on Computer Science Education*, **25**(3), 36 − 38, 1993.

FUNDING

- "EAGER: AF:Small: Algorithms for Relational Machine Learning", National Science Foundation award number CCF-2036077 from the Algorithmic Foundations program, October 2020 to October 2021, $148,828.00. Solo grant.

- "AF:Small: Algorithmic Management of Heterogeneous Resources", National Science Foundation award number CCF-1907673 from the Algorithmic Foundations program, October 2018 to October 2021, $239,000. Solo grant.

- "AitF: EXPL: Data Management in Domain Wall Memory-based Scratchpad for High Performance Mobile Devices" National Science Foundation award number CCF-1535755 from the Algorithmic Foundations program, August 2015 to August 2018, $400,000. Joint with Youtao Zhang.

- "AF: Small: Algorithmic Energy Management in New Information Technologies", NSF award number CCF1421508 from the Algorithmic Foundations program, June 2014 to June 2017, $400,000. Solo grant.

- "EAGER: A Framework for joint optimization of power management and performance in virtualized, heterogeneous cloud computing environments", National Science Foundation award number CNS-1253218, August 2012 to August 2014, $188,000. Joint with Taieb Znati.

- "AF: Small: Green Computing Algorithmics", National Science Foundation Award Number CCF-1115575 from Algorithmic Foundations Program, September 2011 to September 2014, $350,000. Solo grant.

- "Science of Power Management", National Science Foundation award CNS-0936386 from Computer and Network Systems division, April 2009 to March 2011, $70,000. To support an NSF visioning workshop.

- "Algorithmic Support for Power Management" National Science Foundation award CCF-0830558 from Algorithmic Foundations Program, August 2008 to August 2011, $300,000. Solo grant.

- "Algorithms and Metrics for New Generation Data Stream Management Systems", National Science Foundation award IIS-0534531 from Data Management Systems Program, September 2006 to September 2009, $516,000. Joint with Panos Chrysanthis and Alex Labrinidis.

- "Algorithmic support for power aware computing and communication", National Science Foundation award CCF-0514058 from the Computer and Communication Foundations Program July 2005 to July 2008, $150,000. Solo grant.

- "Algorithmic support for temperature aware computing and networking", National Science Foundation award CCF-0448196 from the Computer and Communication Foundations Program. August 2004 to August 2005, $100,000. Solo grant.

- "ITR: Secure CITI: A Secure Critical Information Technology Infrastructure for Disaster Management", National Science Foundation award CNS- 0325353 from the ITR medium program, September 2003 to September 2008, $2,806,000. Joint with 8 other faculty.

- "Middleware support for multicast data dissemination", National Science Foundation award ANIR-0123705 from the Network Centric Middleware Services Program, October 2001 to October 2004, $555,000. Joint with Panos Chrysanthis.

- "Dynamic spectrum allocation algorithms", United States Air Force, October 2001 to October 2002, $100,000. Joint with Bala Kalyanasundaram.

- "Algorithmic problems in next generation networks", National Science Foundation award CCR-0098752 from the Theory of Computing Program, July 2001 to July 2004, $240,000. Solo grant.

- "Dynamic storage allocation", United States Air Force, December 1999 to December 2000, $100,000. Joint with Bala Kalyanasundaram.

- "Scheduling protocols for networked multi-media applications", National Science Foundation award CCR-9734927 from the Theory of Computing Program, June 1998 to June 2001. $206,000. Joint with Bala Kalyanasundaram.

- "Online network optimization", National Science Foundation Research Initiation Award CCR-9209283 from the Theory of Computing Program, June 1992 to June 1995, $72,000. Solo grant.

EDUCATIONAL GRANTS AND AWARDS

- Several "student choice" teaching awards for graduate algorithms.

- Innovation in Teaching Award from the University of Pittsburgh Advisory Council on Instructional Excellence, 2000.

- Several NSF Research Experiences for Undergraduates (REU) Supplements.

POST-DOCS SUPERVISED

- Ilan Cohen, 2017. Next position: post-doc at Eindhoven University.

- Peter Kling, 2014. Next position: post-doc at Simon Fraser University.

- Michele Scquizzato, 2014. Next position: post-doc at University of Houston.

- Antonios Antoniadis, 2013. Next position: post-doc at Max Planck Institute in Saarbrucken.

- Ho-Leung Chan, 2007-2008. Next position: Assistant professor University of Hong Kong

Ph.D. STUDENTS SUPERVISED

- Max Bender. Expected graduation December 2023.

- Alireza Samadian. Graduated 202. First position: Google.

- Neal Barcelo, graduated 2016. First position: McKinsey Consulting.

- Michael Nugent, graduated 2016. First position: Local Industry.

- Daniel Cole, graduated 2013. First position: Local Industry.

- Christine Chung, graduated 2009. First position: Jean C. Tempel Assistant Professor of Computer Science at Connecticut College.

- Mohamed Aly, graduated 2009. (Co-supervised with Panos Chrysanthis). First position: Yahoo Research.

- Jonathan Beaver, graduated 2005. (Co-supervised with Panos Chrysanthis). First position: Local Industry.

PROFESSIONAL ACTIVITIES

- Associate Editor:

  - *ACM Transactions on Algorithms*, 2007-2016.
  - *INFORMS Journal of Computing*.
  - *Journal of Scheduling*.
  - *Encyclopedia of Algorithms*, first edition.
  - *Sustainable Computing: Informatics and Systems*, 2011-2013.

- Selected Program Committees

  - ACM/SIAM Symposium on Discrete Algorithms (SODA): 2001, 2005, 2010, 2013.
  - Conference on Algorithm Engineering and Experience (ALENEX): 2015
  - European Symposium on Algorithms (ESA): 2005, 2007, 2014, 2017.
  - Symposium on Parallelism in Algorithms and Architectures (SPAA): 2009, 2016, 2019, 2023.
  - International Conference on Green Computing (IGCC): 2010, 2011, 2012, 2013, 2014, 2016, 2017, 2018.
  - Workshop on Approximation and Online Algorithms (WAOA): 2005, 2007, 2012, 2013, 2020, 2023.
  - International Symposium on Algorithms and Computation (ISAAC): 2020.
  - Symposium on Theoretical Aspects of Computer Science (STACS): 2023
  - Symposium on Simplicity in Algorithms (SOSA):2022

- Guest Editor:

  - Special issue of *Theory of Computing Systems* devoted to selected papers from the 2013 Workshop on Approximation and Online Algorithms.
  - Special issue of *Journal of Scheduling* devoted to selected papers from the 2007 Workshop on Models and Algorithms for Planning and Scheduling.
  - Special issue of *Journal of Scheduling* devoted to selected papers from the 2002 ACM/SIAM Symposium on Discrete Algorithms (SODA).
  - Special issue of *Journal of Scheduling* devoted to selected papers from the 2001 Phillips Workshop on Scheduling and Resource Management (SCHARM)
  - Two special issues of *Journal of Scheduling* devoted to online scheduling
  - Special issue of *Journal of Algorithms* devoted selected papers from the 2001 ACM/SIAM Symposium on Discrete Algorithms (SODA)

- Special issue of *Journal of Scheduling* devoted to papers from the 1999 Phillips Workshop on Scheduling and Resource Management (SCHARM)

- Program Committee Chair:

  - 2017 European Symposium on Algorithms (ESA), track B on algorithms engineering and applications.
  - 2013 Workshop on Approximation and Online Algorithms (WAOA), with Christos Kaklamanis.
  - 2007 Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP)

- Organizer:

  - 2013 Dagstuhl Seminar on Scheduling, with Susanne Albers and Onno Boxma.
  - 2012 Symposium on Theory of Computing (STOC) Workshop on Computational Sustainability, with David Shmoys and Steven Phillips.
  - 2010 Dagstuhl Seminar on Scheduling, with Rolf Mohring and Sanjoy Baruah.
  - 2010 Second NSF Workshop on the Science of Power Management, with Cliff Stein.
  - 2009 NSF Workshop on the Science of Power Management, with Kirk Cameron.
  - 2008 Dagstuhl Workshop on Scheduling, with Rolf Mohring and Jane Liu.
  - 2007 Dagstuhl Workshop on Fair Division, with Steven Brams and Gerhard Woeginger.
  - 2006 Cluster on Online Optimization at International Symposium on Mathematical Programming (ISMP)
  - 2004 Bertinoro Workshop on Models and Algorithms for Information Networks, with Stefano Leonardi.

- Invited Speaker Gigs:

  - 2021 Latin and American Algorithms, Graphs and Optimization Symposium
  - 2017 Networks Scientific Conference.
  - 2017 Workshop on Approximation and Online Algorithms (WAOA).
  - 2015 Scheduling Under Uncertainty Workshop.
  - 2015 Max Planck Advanced Course on the Foundations of Computer Science (ADFOCS).
  - 2012 Latin American Symposium on Theoretical Informatics (LATIN).
  - 2011 International Conference on Theory and Practice of Algorithms in (Computer) Systems (TAPAS).
  - 2011 IEEE Symposium on Foundations of Computer Science (FOCS).
  - 2009 Inaugural Workshop for the Microsoft-CNRS Chair on Optimization and Sustainable Development at Ecole Polytechnique in Paris.
  - 2006 New Horizons in Computing School on Discrete Algorithms in Japan.
  - 2004 Conference on the Mathematics of Operations Research in the Netherlands.

- Steering Committees:

  - European Symposium on Algorithms (2017 - 2020).

- – Latin American Symposium on Theoretical Informatics (2016 - 2020).
- – Workshop on Models and Algorithms for Planning and Scheduling Problems (Chair).

- Referee: Many journals and conferences

- Panel Member: Many NSF Panels, primarily in Algorithmic Foundations.

- Chair of undergraduate program committee in the Computer Science Department since 1995.

- Director of the undergraduate program in Bioinformatics (2007 - 2020).