CURRICULUM VITAE
ANTHONY THEODORE CHRONOPOULOS

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Society Memberships: ACM, IEEE (Senior member), SIAM

Research Areas
Distributed Computing, Grid and Cloud Computing, Numerical ALgorithms, High Performance Computing, Scientific Computing

Educational Background

Institutions	Major	Degree/ GPA	Year
University of Illinois at Urbana-Champaign, Urbana, Illinois, USA	Computer Science	PhD/ 4.8/5.0	Jan 1987
University of Minnesota , Minneapolis, Minnesota, USA	Applied Mathematics	MSc 4.0/4.0	Jul 1981
University of Athens, Athens, GREECE	Mathematics	BSc 8.0/10.0	Jul 1979

Professional Employment History

Institutions	Positions	Start	End
University of Texas, San Antonio, TX, USA	Professor	Aug 2007	Now
University of Texas, San Antonio, TX, USA	Associate Professor	Aug 1998	Jul 2006
Wayne State University, Detroit, MI, USA	Associate Professor	Aug 1994	Jul 1998
University of Minnesota, MPLS, MN, USA	Assistant Professor	Jan 1987	Jul 1994

Awards and honors

Publications
(with 2100 non-self citations and h-index=29, http://www.cs.utsa.edu/faculty/atc/)

Research/scholarly/creative activities summary

Refereed Journal Publications
[J61] H. Siar, K. Kourosh, A. T. Chronopoulos, *A Combination of Game Theory and Genetic Algorithm for Load Balancing in Distributed Computer Systems,* Int. J. Advanced Intelligence Paradigms, Vol. 9, No. 1, pp. 82-95, 2017
[J60] S. Agaian, M. Madhukar, A. T. Chronopoulos, *A New Acute Leukemia Automated Classification System,* Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, Taylor& Francis, Dec 2016 (Online).
[J59] R Ranjan, Y Feng, A Chronopoulos, *Augmented Stabilized and Galerkin Least Squares Formulations,* Journal of Mathematics Research, Vol. 8, No. 6, December 2016

[J58] F G Khan, B Montrucchio, B Jan, A N Khan, W Jadoon, S Shamshirband, A. T. Chronopoulos, I A Khan, *An Optimized Magnetostatic Field Solver on GPU Using Open Computing Language*, Concurrency and Computation: Practice and Experience, Wiley, Nov 2016 (online).
[J57] H. Zareamoghaddam , A.T. Chronopoulos, M. Nouri Kadijani, Z. Zareamoghaddam, *Uzawa Algorithms for Fully Fuzzy Linear Systems*, International Journal of Computational Intelligence Systems, Vol. 9, No. 5 (2016) 971-983 (Online Sept 2016).
[J56] R Ranjan, A Chronopoulos, Y Feng, *Computational Algorithms for Solving Spectral/hp Stabilized Incompressible Flow Problems*, Journal of Mathematics Research, 8 (4), 21-39, August 2016.
[J55] Y. Han, A. T. Chronopoulos, Scalable Loop Self-Scheduling Schemes for Large-Scale Clusters and Cloud Systems, *International Journal of Parallel Programming*, 1-17, (Online), May 2016 (Springer).
[J54] S. Stathakis, F. Balbi, A. T. Chronopoulos, N. Papanikolaou, *Monte Carlo modeling of linear accelerator using distributed computing*, (Journal of Balkan Union of Oncology) , JBUON vol.21, no.1, pp. 252-260, Jan.-Feb. 2016.
[J53] H. Siar, K. Kourosh, A. T. Chronopoulos, *An effective game theoretic static load balancing applied to distributed computing*, Cluster Computing, Vol 18, 4, pp. 1609-1623, Dec 2015.
[J52] M. Meshabi, A. M. Rahmani, A. T. Chronopoulos, *Data Placement using Dewey Encoding in a Hierarchical Data Grid*, Journal of Network and Computer Applications, vol. 49, pp. 88-98,March 2015.
[J51] S. Agaian, M. Madhukar, A. T. Chronopoulos, *Automated Screening System for Acute Myelogenous Leukemia Detection in Blood Microscopic Images*, *IEEE Systems Journal*, Vol. 8, no. 3, pp. 995–1004, 2014.
[J50] S. Penmatsa, A. T. Chronopoulos, *Cost minimization in utility computing systems*, Concurrency and Computation: Practice and Experience, Wiley, Vol. 16, Issue 1, pp. 287-307, 2014.
[J49] I. Riakiotakis, F. M. Ciorba, T. Andronikos, G. Papakonstantinou, A. T. Chronopoulos, *Towards the optimal synchronization granularity for dynamic scheduling of pipelined computations on heterogeneous computing systems*, Concurrency and Computation: Practice and Experience, Wiley, Vol. 24, Issue 18, pp. 2302-2327, 2012.
[J48] S. Penmatsa, A. T. Chronopoulos, *Game-theoretic static load balancing for distributed systems*, Journal of Parallel and Distributed Computing, Vol. 71, Issue 4, pp. 537-555, 2011.
[J47] A. Bassias, A. T. Chronopoulos, *Statistical Performance Analysis of the MUSIC Algorithm in Angular Sectors*, Journal of Signal Processing, Vol.15, No.1, pp. 37-46, 2011.
[J46] T. Andronikos, F. M. Ciorba, I. Riakiotakis, G. Papakonstantinou, A. T. Chronopoulos, *Studying the impact of synchronization frequency on scheduling tasks with dependencies in heterogeneous systems*, Performance Evaluation, Vol. 67, Issue 12, pp. 1324-1339, 2010.
[J45] M. Musku, A. T. Chronopoulos, D. Popescu, A. Stefanescu, *A game-theoretic approach to joint rate and power control for uplink CDMA communications*, IEEE Transactions on Communications, Vol. 58, Issue 3, pp. 923-932, 2010.
[J44] A. T. Chronopoulos, A. Kucherov, *Block s-step Krylov iterative methods*, Numerical Linear Algebra with Applications, Vol. 17, Issue 1, pp. 3-15, 2010.
[J43] C. Tang, D. O. Wu, A. T. Chronopoulos, C.S. Raghavendra, *Efficient multi-party digital signature using adaptive secret sharing for low-power devices in wireless networks*, IEEE Transactions on Wireless Communications, Vol. 8, Issue 2, pp. 882-889, 2009.
[J42] A. M. Castaldo, R. C. Whaley, A. T. Chronopoulos, *Reducing Floating Point Error in Dot Product using the Superblock Family of Algorithms*, SIAM J. Scientific Computing, Vol. 31, Issue 2, pp. 1156-1174, 2008.
[J41] D. Grosu, A.T. Chronopoulos, M. Y. Leung, *Cooperative load balancing in distributed systems*, Concurrency and Computation-Practice and Experience, Vol. 20, Issue 16, pp. 1953-1976, 2008.
[J40] A. T. Chronopoulos, M. Musku, S. Penmatsa, D. Popescu, *Spectrum Load Balancing for Medium Access in Cognitive Radio Systems*, IEEE Communication Letters, Vol. 12, Issue 5, pp. 353-355, 2008.
[J39] F. M. Ciorba, T. Andronikos, I. Riakiotakis, G. Papakonstantinou, A. T. Chronopoulos, *Enhancing self-scheduling algorithms via synchronization and weighting*, Journal of Parallel and Distributed Computing, Vol. 68, Issue 2, pp. 246-264, 2008.
[J38] D. Grosu, A.T. Chronopoulos, *A Truthful Load Balancing Mechanism with Verification*, Parallel Processing Letters, Vol. 16, Issue 1, pp. 3-17, 2006.
[J37] R. Andonie, A. T. Chronopoulos, D. Grosu, H. Galmeanu, *An efficient concurrent implementation of a neural network algorithm*, Concurrency and Computation-Practice and Experience, Vol. 18, Issue 12, pp. 1559-1573, 2006.

[J36] A. T. Chronopoulos, S. Penmatsa, Jianhua Xu, S. Ali, *Distributed loop-scheduling schemes for heterogeneous computer systems*, Concurrency and Computation-Practice and Experience, Vol. 18, Issue 7, pp. 771-785, 2006.
[J35] A. T. Chronopoulos, S. Penmatsa, N. Yu, D. Yu, *Scalable loop self-scheduling schemes for heterogeneous clusters*, International Journal of Computational Science and Engineering, Vol. 1, No. 2/3/4, pp. 110-117, 2005.
[J34] D. Grosu, A.T. Chronopoulos, *Noncooperative load balancing in distributed systems*, Journal of Parallel and Distributed Computing, Vol. 65, Issue 9, pp. 1022-1034, 2005.
[J33] C. Tang, A. T. Chronopoulos, E. Yaprak, *An efficient network-switch scheduling for real-time applications*, IEEE Transactions on Communications, Vol. 53, Issue 3, pp. 401-407, 2005.
[J32] D. Grosu, A.T. Chronopoulos, *Algorithmic mechanism design for load balancing in distributed systems*, IEEE Transactions on Systems, Man and Cybernetics - Part B, Vol. 34, Issue 1, pp. 77-84, 2004.
[J31] A. T. Chronopoulos, Caimu Tang, Ece Yaprak, *An efficient ATM network switch scheduling*, IEEE Transactions on Broadcasting, Vol. 49, Issue 3, pp. 278 -292, 2003.
[J30] A. T. Chronopoulos, D. Grosu, A. M. Wissink, M. Benche, J. Liu, *An efficient 3D grid based scheduling for heterogeneous systems*, Journal of Parallel and Distributed Computing, Vol. 63, Issue 9, pp. 827-837, 2003.
[J29] A. T. Chronopoulos, C. M. Johnston, *A real-time traffic simulation using a communication latency hiding parallelization*, IEEE Transactions on Vehicular Technology, Vol. 51, Issue 3, pp. 498-510, 2002.
[J28] A. Chronopoulos, D. Kincaid, *On the Odir iterative method for non-symmetric indefinite linear systems*, Numerical Linear Algebra with Applications, Vol. 8, Issue 2, pp.71-82, 2001.
[J27] S. Ziavras, H. Grebel, A. T. Chronopoulos, F. Marcelli, *A new-generation parallel computer and its performance evaluation*, Future Generation Computer Systems, Vol. 17, Issue 3, pp. 315-333, 2000.
[J26] E. Yaprak, Y. Xiao, A. T. Chronopoulos, E. Chow, L. Anneberg, *Buffer Management Simulation in ATM Networks*, The International Journal of Modeling and Simulation, Vol. 20, Issue 2, pp. 146-152, 2000.
[J25] E. Yaprak, A. T. Chronopoulos, K. Psarris, Y. Xiao, *Dynamic buffer allocation in an ATM Switch, Computer Networks*, Vol. 31, Issue 18, pp. 1927-1933, 1999.
[J24] A. M. Wissink, A. S. Lyrintzis, A. T. Chronopoulos, *Parallel Newton-Krylov Method for Rotary-wing Flowfield Calculations*, AIAA Journal, Vol. 37, Issue 10, pp. 1213-1221, 1999.
[J23] A. T. Chronopoulos, C. Johnston, *A real-time traffic simulation system*, IEEE Transactions on Vehicular Technology, Vol. 47, Issue 1, pp. 321-331, 1998.
[J22] A. T. Chronopoulos, G. Wang, *Parallel solution of a traffic flow simulation problem*, Parallel Computing, Vol. 22, Issue 14, pp. 1965-1983, 1997.
[J21] A. T. Chronopoulos, G. Wang, *Traffic Flow Simulation through Parallel Processing*, Transportation Research Record, Vol. 1566, pp. 31-38, 1996.
[J20] D. Papadopoulos, C. Siettos, A.G. Boudouvis, A. T. Chronopoulos, *Stability analysis of magnetohydrostatic equilibrium by the finite element method and Arnoldi and Lanczos eigensolvers*, Advances in Engineering Software, Vol. 27, Issues 1-2, pp. 145-153, 1996.
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[J18] A. T. Chronopoulos, C. D. Swanson, *Parallel iterative S-step methods for unsymmetric linear systems*, Parallel Computing, Vol. 22, Issue 5, pp. 623-641, 1996.
[J17] A. T. Chronopoulos, *On the squared unsymmetric Lanczos method*, Journal of Computational and Applied Mathematics, Vol. 54, Issue 1, pp. 65-78, 1994.
[J16] O. Axelsson, A. T. Chronopoulos, *On nonlinear generalized conjugate gradient methods*, Numerische Mathematik, Vol. 69, Issue 1, pp. 1-15, 1994.
[J15] H. Dong, A. T. Chronopoulos, J. Zou, A. Gopinath, *Vectorial integrated finite-difference analysis of dielectric waveguides*, IEEE Journal of Lightwave Technology, Vol. 11, Issue 10, pp. 1559-1564, 1993.
[J14] A. T. Chronopoulos, C. Pedro, *Iterative methods for nonsymmetric systems in DAEs and stiff ODEs codes*, (IMACS) Mathematics and Computers in Simulation, Vol. 35, Issue 3, pp. 211-232, 1993.
[J13] A. T. Chronopoulos, A. Lyrintzis, P. Michalopoulos, C. Rhee and P. Yi, *Traffic flow simulation through high order traffic modelling*, Mathematical and Computer Modeling, Vol. 17, Issue 8, pp. 11-22, 1993.
[J12] A. Lyrintzis, A. M. Wissink, A. T. Chronopoulos, *Efficient iterative methods for the transonic small disturbance equation*, The AIAA Journal, Vol. 30, No. 10, pp. 2556-2558, 1992.
[J11] A. T. Chronopoulos, P. Michalopoulos, J. Donohoe, *Efficient traffic flow simulation computations*, Mathematical and Computer Modeling, Vol. 16, Issue 5, pp. 107-120, 1992.

[J10] A. T. Chronopoulos, Z. Zlatev, *Iterative methods for nonlinear operator equations*, Applied Mathematics and Computation, Elsevier, Vol. 51, Issues 2-3, pp. 167-180, 1992.
[J9] S. K. Kim, A. T. Chronopoulos, *An Efficient Parallel Algorithm for Extreme Eigenvalues of Sparse Nonsymmetric Matrices*, International Journal of High Performance Computing Applications, Vol. 6, Issue 4, pp. 407-420, 1992.
[J8] S. K. Kim, A. T. Chronopoulos, *An efficient nonsymmetric Lanczos method on parallel vector computers*, Journal of Computational and Applied Mathematics, Vol. 42, Issue 3, pp. 357-374, 1992.
[J7] A. T. Chronopoulos, *Nonlinear CG-like Iterative Methods*, Journal of Computational and Applied Mathematics, Vol. 40, Issue 1, pp. 73-89, 1992.
[J6] A. T. Chronopoulos, C. R. Swaminathan, V. R. Voller, *The Stefan Problem Solved via Conjugate Gradient-Like Iterative Methods On a Parallel Vector Machine*, International Journal of High Performance Computing Applications, Vol. 5, No. 3, pp. 74-91, 1991.
[J5] S. K. Kim, A. T. Chronopoulos, *A class of Lanczos-like algorithms implemented on parallel computers*, Parallel Computing, Vol. 17, Issues 6-7, pp. 763-778, 1991.
[J4] A. T. Chronopoulos, *s-Step Iterative Methods for (Non)Symmetric (In)Definite Linear Systems*, SIAM Journal on Numerical Analysis, Vol. 28, Issue 6, pp. 1776-1789, 1991.
[J3] Sangback Ma, A. T. Chronopoulos, *Implementation of Iterative Methods for Large Sparse Nonsymmetric Linear Systems On a Parallel Vector Machine*, International Journal of High Performance Computing Applications, Vol. 4, Issue 4, pp. 9-24, 1990.
[J2] A. T. Chronopoulos, C. W. Gear, *On the efficient implementation of preconditioned s-step conjugate gradient methods on multiprocessors with memory hiera*rchy , Parallel Computing, Vol. 11, Issue 1**,** pp. 37-53, 1989.
[J1] A. T. Chronopoulos, C. W. Gear, s-*step iterative methods for symmetric linear systems*, Journal of Computational and Applied Mathematics, Vol. 25, Issue 2**,** pp. 153-168, 1989.

ACM/IEEE Refereed Conference Proceedings Publications

[C51] X. Zhang, S. Gaddam, A.T. Chronopoulos, *Ceph Distributed File System Benchmarks on an Openstack Cloud*, IEEE International Conference on Cloud Computing in Emerging Markets (IEEE CCEM 2015), 25-27 November, 2015, Bangalore, India.
[C50] P. Rad, A.T. Chronopoulos, P. Lama, P. Madduri, C. Loader, *Benchmarking Bare Metal Cloud Servers for HPC*, IEEE International Conference on Cloud Computing in Emerging Markets (IEEE CCEM 2015), 25-27 November, 2015, Bangalore, India.
[C49] Y. Han, A. T. Chronopoulos, *A Resilient Hierarchical Distributed Loop Self-Scheduling Scheme for Cloud Systems*, Proceed. of IEEE NCA 2014, The 13th IEEE International Symposium on Network Computing and Applications, pp. 81-84, Boston, MA, USA, August 2014.
[C48] M. Meshabi, A. M. Rahmani, A. T. Chronopoulos, *Cloud Light Weight: a New Solution for Load Balancing in Cloud Computing*, Proceed. of IEEE 2014 International Conference on Data Science & Engineering (ICDSE), pp. 44-50, Kerala, India, August 26-28, 2014.
[C47] Weiliang Luo, Nima Golpavar, Carlos Cardenas, A. T. Chronopoulos, *Benchmarking Joyent SmartDataCenter for Hadoop MapReduce and MPI Operations*, IEEE International Conference on Cloud Computing in Emerging Markets (IEEE CCEM 2013), pp. 1-6, Bangalore, INDIA, 16-18 October 2013.
[C46] Y. Han, A. T. Chronopoulos, *A Hierarchical Distributed Loop Self-Scheduling Scheme for Cloud Systems*, Proceedings of IEEE NCA 2013, The 12th IEEE International Symposium on Network Computing and Applications, pp. 7-10, Boston, MA, USA, August 2013.
[C45] Y. Han, A. T. Chronopoulos, *Distributed Loop Scheduling Schemes for Cloud Systems*, Proceedings of the 27th IEEE International Parallel and Distributed Processing Symposium, High-Performance Grid and Cloud Computing Workshop, pp. 955-962, Boston, Massachusetts, USA, May 2013.
[C44] Y. Han, A. T. Chronopoulos, *Scalable Loop Self-Scheduling Schemes Implemented on Large-Scale Clusters*, Proceedings of the 27th IEEE International Parallel and Distributed Processing Symposium, Large-Scale Parallel Processing Workshop, pp. 1735-1742, Boston, Massachusetts, USA, May 2013.
[C43] M. Madhukar, S. Agaian, A.T. Chronopoulos, *Deterministic Model for Acute Myelogenous Leukemia Classification*, IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2012), Seul, Korea, pp. 433-438, 14-17 October 2012.
[C42] A. T. Chronopoulos, S. Penmatsa, N. Jayakumar, E. Ogharandukun, *Two-Dimensional Dynamic Loop Scheduling Schemes for Computer Clusters*, Proceedings of IEEE NCA 2012, The 11th International Symposium on Network Computing and Applications, Boston, MA, pp. 96-100, 23-25August 2012.

[C41] S. Penmatsa, A. T. Chronopoulos, *Comparison of Price-Based Static and Dynamic Job Allocation Schemes for Grid Computing Systems*, Proceedings of IEEE NCA 2009, The 8th International Symposium on Network Computing and Applications, Boston, MA, pp. 66 -73, 9-11 July 2009.

[C40] I. Riakiotakis, G. Papakonstantinou, A. T. Chronopoulos, *Implementation of Dynamic Loop Scheduling in Reconfigurable Platforms*, Proceedings of the 3rd IEEE International Symposium on Industrial Embedded Systems (SIES'2008), Montpellier (France), pp. 11-18, 11-13 June 2008.

[C39] M. Ciorba, I. Riakiotakis, T. Andronikos, A. T. Chronopoulos, G. Papakonstantinou, *Optimal Synchronization Frequency for Dynamic Pipelined Computations on Heterogeneous Systems*, Proceedings of the IEEE International Conference on Cluster Computing, Austin, Texas, USA, pp. 410-415, 17-20 September 2007.

[C38] K. Kyriakopoulos, A. T. Chronopoulos, L. Ni, *An Optimal Scheduling Scheme for Tiling in Distributed Systems*, Proceedings of the IEEE International Conference on Cluster Computing, Austin, Texas, USA, pp. 267-274, 17-20 September 2007.

[C37] A. T. Chronopoulos, L. Ni, S. Penmatsa, *Multi-Dimensional Dynamic Loop Scheduling Algorithms*, Proceedings of the IEEE International Conference on Cluster Computing, Austin, Texas, USA, pp. 241-248, 17-20 September 2007.

[C36] F. M. Ciorba, T. Andronikos, I. Riakiotakis, G. Papakonstantinou, A. T. Chronopoulos, *Studying the impact of synchronization frequency on scheduling tasks with dependencies in heterogeneous systems*, Proceedings of the IEEE/ACM 16th International Conference on Parallel Architecture and Compilation Techniques, , Brashov, Romania, pp. 403 - 403, 15-19 September 2007.

[C35] M. Musku, A. T. Chronopoulos, S. Penmatsa , D. Popescu, *A Game Theoretic Approach for Medium Access of Open Spectrum in Cognitive Radios*, Proceedings of the Second IEEE International Conference on Cognitive Radio (CrownCom 2007), Orlando, Florida, USA, pp. 336-341, July 31 - August 3 2007.

[C34] S. Penmatsa, A. T. Chronopoulos, N. T. Karonis, B. Toonen, *Implementation of Distributed Loop Scheduling Schemes on the TeraGrid*, Proceedings of the 21st IEEE International Parallel and Distributed Processing Symposium (IPDPS 2007), 4th High-Performance Grid Computing Workshop, Long Beach, California, USA, pp. 1-8, 26-30 March 2007.

[C33] S. Penmatsa, A. T. Chronopoulos. *Dynamic Multi-User Load Balancing in Distributed Systems*, Proceedings of the 21st IEEE International Parallel and Distributed Processing Symposium (IPDPS 2007), Long Beach, California, USA, pp. 1-10, 26-30 March 2007.

[C32] C. Tang, A. T. Chronopoulos, P. Cotae, An *Iterative Power Allocation Scheme for Spread Spectrum Wireless Systems*, Proceedings of IEEE International Symposium on Wireless Pervasive Computing, Puerto Rico, pp. 600-605, 5-7 February 2007.

[C31] S. Penmatsa, A. T. Chronopoulos, *Price-based User-optimal Job Allocation Scheme for Grid Systems*, Proceedings of IEEE IPDPS 2006, The 20th IEEE International Parallel & Distributed Processing Symposium, Rhodes, Greece, pp. 1-8, 25-29 April 2006.

[C30] S. Penmatsa, A. T. Chronopoulos, *Cooperative Load Balancing for a Network of Heterogeneous Computers*, Proceedings of IEEE IPDPS 2006, The 20th IEEE International Parallel & Distributed Processing Symposium, Rhodes, Greece, pp. 1-8, 25-29 April 2006.

[C29] F. M. Ciorba, T. Andronikos, I. Riakiotakis, A. T. Chronopoulos, G. Papakonstantinou, *Dynamic Multi Phase Scheduling for Heterogeneous Clusters*, Proceedings of IEEE IPDPS 2006, The 20th IEEE International Parallel and Distributed Processing Symposium, Rhodes, Greece, pp. 1-10, 25-29 April 2006.

[C28] M. Musku, A. T. Chronopoulos, D. Popescu, *Joint Rate and Power Control Using Game Theory*, Proceedings of IEEE CCNC 2006, 3rd IEEE Consumer Communications and Networking Conference, Las Vegas NV, pp. 1258 – 1262, 8-10 January 2006.

[C27] M. Musku, A. T. Chronopoulos, D. Popescu, *Joint Rate and Power Control with Pricing*, Proceedings of IEEE Globecom 2005, Vol. 6, pp. 3466 - 3470, 28 November-2 December 2005.

[C26] C. Tang, A. T. Chronopoulos, C. S. Raghavendra, *Soft-Timeout Distributed Key Generation for Digital Signature based on Elliptic Curve D-log for Low-power Devices*, Proceedings of IEEE SecureComm 2005, The 1st IEEE/CreateNet International Conference on Security and Privacy for Emerging Areas in Communication Networks, Athens, Greece, pp. 353-364, 4-9 September 2005.

[C25] M. Musku, A. T. Chronopoulos, D. Popescu, *A Simulation Comparison of Distributed Power Control Algorithms for Wireless Communications*, Proceedings of IEEE ISSCS, The International Symposium on Signals, Circuits, and Systems, Iasi, Romania, pp. 263-268, July 2005.

[C24] C. Tang, A. T. Chronopoulos, An *Efficient Distributed Key Generation Protocol for Secure Communications with Causal Ordering*, Proceedings of IEEE ICPADS 2005, The 11th International Conference on Parallel and Distributed Systems, Vol. 2, Fukuoka, Japan, pp. 285 - 289, 20-22 July 2005.

[C23] S. Penmatsa, A. T. Chronopoulos, *Job Allocation Schemes in Computational Grids based on Cost Optimization*, Proceedings of IEEE IPDPS 2005, 19th International Parallel & Distributed Processing Symposium, Denver, Colorado, pp. 180-187, April 2005.

[C22] D. Popescu, A. T. Chronopoulos, *Power Control and Utility Optimization in Wireless Communication Systems*, Proceedings of IEEE VTC '05, The 61st IEEE Vehicular Technology Conference, Vol. 1, Stockholm, Sweden, pp. 314 - 318, 30 May-1 June 2005.

[C21] A. T. Chronopoulos, F. Balbi, D. Veljkovic, N. Kolani, *Implementation of Distributed Key Generation Algorithms using Secure Sockets*, Proceedings of NCA 2004, The 3rd IEEE International Symposium on Network Computing and Applications, Cambridge, MA, USA, pp. 393-398, 30 August 2004.

[C20] A. T. Chronopoulos , P. Cotae, S. Ponipireddy, *Efficient Power Control for Broadcast in Wireless Communication Systems*, Proceedings of IEEE WCNC '04, The IEEE Wireless Communications and Networking Conference, Vol. 3, Atlanta, GA, pp. 1330 - 1334, 21-25 March 2004.

[C19] D. Grosu, A.T. Chronopoulos, *A truthful mechanism for fair load balancing in distributed systems*, Proceedings of IEEE NCA 2003, The 2nd International Symposium on Network Computing and Applications, Boston, MA, pp. 289 -296, 16-18 April 2003.

[C18] D. Grosu, A.T. Chronopoulos, *A load balancing mechanism with verification*, Proceedings of IEEE IPDPS'03, The 17th International Parallel and Distributed Processing Symposium, Nice, France, pp. 163 - 170, 22-26 April 2003.

[C17] A.T. Chronopoulos, S. Penmatsa, N. Yu, *Scalable Loop Self-Scheduling Schemes for Heterogeneous Clusters*, Proceedings of CLUSTER 2002, The 4th IEEE International Conference on Cluster Computing, Chicago, Illinois, pp. 353-359, 24-26 September 2002.

[C16] S. Jagannathan, A. Tohmaz, A. T. Chronopoulos, H.G. Cheung, *Adaptive Admission Control of Multimedia Traffic in High-Speed Networks*, Proceedings of IEEE ISIC'02, The 17th IEEE International Symposium on Intelligent Control Vancouver, Canada, pp. 728-733, 27-30 October 2002.

[C15] S. Jagannathan, A. T. Chronopoulos, S. Ponipireddy, *Distributed Power Control in Wireless Communication Systems*, Proceedings of IEEE ICCCN 2002, The 11th International Conference on Computer Communications and Networks, Miami, Florida, pp 493-496, 14-16 October 2002.

[C14] D. Grosu, A.T. Chronopoulos, *Algorithmic Mechanism Design for Load Balancing in Distributed Systems*, Proceedings of IEEE CLUSTER 2002, 4th IEEE International Conference on Cluster Computing, Chicago, Illinois, pp. 445-454, 24-26 September 2002.

[C13] A. T. Chronopoulos, J. Sarangapani, *A Distributed Discrete-Time Neural Network Architecture for Pattern Allocation and Control*, Proceedings of IEEE IPDPS 2002, The 16th International Parallel and Distributed Processing Symposium , 3rd Workshop on Bio-Inspired Solutions to Parallel Processing Problems (BioSP3), Fort Lauderdale, Florida, pp. 204-211, 15-19 April 2002.

[C12] D. Grosu, A. T. Chronopoulos, *A Game-Theoretic Model and Algorithm for Load Balancing in Distributed Systems*, Proceedings of IEEE IPDPS 2002, The 16th International Parallel and Distributed Processing Symposium, 4th Workshop on Advances in Parallel and Distributed Computational Models (APDCM'02), Fort Lauderdale, Florida, pp. 146-153, 15-19 April 2002.

[C11] D. Grosu, A. T. Chronopoulos, M.Y. Leung, *Load Balancing in Distributed Systems: An Approach Using Cooperative Games*, Proceedings of IEEE IPDPS 2002, The 16th International Parallel and Distributed Processing Symposium, Fort Lauderdale, Florida, pp. 8-11, 15-19 April 2002.

[C10] A. T. Chronopoulos, R. Andonie, M. Benche, D. Grosu, *A Class of Loop Self-Scheduling for Heterogeneous Clusters*, Proceedings of CLUSTER 2001, The 3rd IEEE International Conference on Cluster Computing, Newport Beach, CA, pp. 282-291, 8-11 October 2001.

[C9] A. T. Chronopoulos, D. Grosu, A. Wissink, M. Benche, *Static Load Balancing for CFD Simulations on a Network of Workstations*, Proceedings of NCA 2001, The 1st IEEE International Symposium on Network Computing & Applications, Cambridge, MA, pp. 364-367, 8-10 October 2001.

[C8] C. Johnston, A. T. Chronopoulos, *A Communication Latency Hiding Parallelization of a Traffic Flow Simulation*, Proceedings of IEEE IPPS '99/SPDP '99, The 13th International Parallel Processing Symposium and 10th Symposium on Parallel and Distributed Processing, Puerto Rico, pp. 688-695, 12-16 April 1999.

[C7] C. Johnston, A. T. Chronopoulos, *The Parallelization of a Highway Traffic Flow Simulation*, Proceedings of IEEE Frontiers '99, The Seventh Symposium on the Frontiers of Massively Parallel Computation, Annapolis, Maryland, pp. 192-199, 21-25 February 1999.

[C6] E. Yaprak, A. T. Chronopoulos, K. Psarris, Y. Xiao, *Adaptive buffer threshold updating for an ATM switch,* Proceedings of ISCC'98, The Third IEEE Symposium on Computers and Communications, Athens, Greece, pp. 400-405, 30 June - 2 July 1998.
[C5] C. Tang, A. T. Chronopoulos, E. Yaprak, *A Cell Burst Scheduling for ATM Networking. II. Implementation,* Proceedings of ISCC'98, The Third IEEE Symposium on Computers and Communications, Athens, Greece, pp. 462-467, 30 June 30-2 July 1998.
[C4] C. Tang, A. T. Chronopoulos, E. Yaprak, *A Cell Burst Scheduling for ATM Networking. I. Theory*, Proceedings of ISCC'98, The Third IEEE Symposium on Computers and Communications, Athens, Greece, pp. 455-461, 30 June - 2 July 1998.
[C3] S. Ziavras, H. Grebel , A. T. Chronopoulos, *A Low-Complexity Parallel System for Gracious, Scalable Performance. Case Study for Near PetaFLOPS Computing,* Proceedings of IEEE Frontiers'96, The Sixth Symposium on the Frontiers of Massively Parallel Computation, Annapolis, Maryland, pp. 363-370, October 1996.
[C2] C. Swanson, A. T. Chronopoulos, *Orthogonal s-step methods for nonsymmetric linear systems of equations,* Proceedings of ICS '92, The 6th ACM International Conference on Supercomputing, Washington, D.C., pp. 456-465, July 1992.
[C1] A. T. Chronopoulos, *Towards Efficient Parallel Implementation of the CG Method Applied to a Class of Block Tridiagonal Linear Systems,* Proceedings of IEEE/ACM Supercomputing '91, Albuquerque, New Mexico, pp. 578-587, 18-22 November 1991.

Other Refereed International Conference Proceedings Publications
[OC20] L. Aaleswara, D. Akopian, A. T. Chronopoulos, *A privacy protection for an mHealth messaging system,* Proc. SPIE 9411, Mobile Devices and Multimedia: Enabling Technologies, Algorithms, and Applications 2015, 94110S1- 94110S8, 11 March, 2015.
[OC19] M. Madhukar, S. Agaian, A.T. Chronopoulos, *New decision support tool for acute lymphoblastic leukemia classification,* Proc. SPIE 8295, Image Processing: Algorithms and Systems X; and Parallel Processing for Imaging Applications II, IS&T/SPIE, San Francisco, Vol. 8295, pp. 829518-1-829518-12, 22–26 January 2012.
[OC18] A.T. Chronopoulos, D. Grosu, H. Kikuchi, *A New Efficient Polynomial Degree Resolution Protocol and Its Application to the (M+1)-st Price Private Auction,* Proceedings of ACNS'04, 2nd International Conference on Applied Cryptography and Network Security, Yellow Mountain, China, pp. 358-367, 8-11 June 2004.
[OC17] A. T. Chronopoulos, S. Ponipireddy, J. Sarangapani, *Constructing Energy-Efficient Broadcast Trees in Wireless Ad Hoc Networks,* Proceedings of the International Symposium on Parallel and Distributed Computing, Iasi, Romania, Sci. Ann. Cuza Univ., 11, pp. 205-213, 17-20 July 2002.
[OC16] A. T. Chronopoulos, A. B. Kucherov, *A Parallel Krylov-Type Method for Nonsymmetric Linear Systems,* Proceedings of the IEEE (sponsored) International Conference on High-Performance Computing, Hyderabad, India, pp. 104-114, 17-20 December 2001- Springer.
[OC15] Jianhua Xu, A. T. Chronopoulos *Distributed Self-Scheduling for Heterogeneous Workstation Clusters,* Proceedings of the ISCA 12th International Conference on Parallel and Distributed Computing Systems, Fort Lauderdale, FL, pp. 211-217, 18-20 August 1999.
[OC14] R. Andonie, A. T. Chronopoulos, D. Grosu, H. Galmeanu, *Distributed backpropagation neural networks on a PVM Heterogeneous System,* Proceedings of the 10th IASTED International Conference on Parallel and Distributed Computing Systems, Las Vegas, Nevada, pp. 555-560, 23-31 October 1998.
[OC13] A. T. Chronopoulos, C. Tang, *An Efficient Implementation of Burst Fair Queuing for ATM Networking,* Proceedings of the 10th IASTED International Conference on Parallel and Distributed Computing Systems, Las Vegas, Nevada, pp. 326-333, 23-31 October 1998.
[OC12] H. Jiang, A. T. Chronopoulos, G. Papakonstantinou, P. Tsanakas, *A Path-Driven Loop Scheduling Mapped onto Generalized Hypercubes,* Proceedings of 10th IASTED International Conference on Parallel and Distributed Computing Systems, Las Vegas, Nevada, pp. 7-13, 23-31 October 1998.
[OC11] A. T. Chronopoulos, Y. Gong, H. Grebel, S. Ziavras, *Performance Evaluation of a 100-TeraOps Parallel System,* Proceedings of the ISCA 11th International Conference on Parallel and Distributed Computing Systems, Chicago, IL, pp. 204-211, 2-4 September 1998.
[OC10] A. M. Wissink, A. S. Lyrintzis, A. T. Chronopoulos, *A Parallel Newton-Krylov Method for Rotorcraft Flowfield Calculations,* Proceedings paper AIAA-97-2049. Presented at the 13th AIAA Computational Fluid Dynamics Conference, Snowmass Village, Colorado, pp. 1060-1070, June 1997.

[OC9] A. M . Wissink, A. S Lyrintzis, and A. T. Chronopoulos, *Parallel Krylov Solvers Applied to the Rotorcraft CFD code TURNS*, Proceedings of the 1996 Computational Aerosciences (CAS) Workshop, NASA Ames Research Center, Aug. 1996, NASA Conference Publication CD 20011, pp. 43-48, May 1997.
[OC8] S. Ziavras, H. Grebel, A. T. Chronopoulos, *A Scalable-Feasible Parallel Computer Implementing Electronic and Optical Interconnections for 156 TeraOps Minimum Performance*, Proceedings of PetaFLOPS Architecture Workshop, Oxnard, California, pp. 179-209, April 1996 .
[OC7] A. M. Wissink, A. S. Lyrintzis, A. T. Chronopoulos, *High Performance Computing Techniques for Solving the Transonic Small Disturbance Equation*, AIAA Proceedings Paper 95-0576, 33rd AIAA Aerosciences Conference, Reno, Nevada, pp. 1-12, January 1995.
[OC6] D. Papadopoulos, C. Siettos, A. G. Boudouvis, A. T. Chronopoulos, *Implementation and Performance of Arnoldi and Lanczos Eigensolvers in Galerkin-Finite Element Computations*, Proceedings of Advances in Computational Mechanics, CICIL-COMP Ltd, Edinburgh, Scotland, M. Papadrakakis and B.H.V. Topping (Editors), 1994; Second International Conference on Computational Structures Technology, Athens, Greece, pp. 1-9, August 1994.
[OC5] H. Dong, A. T. Chronopoulos, A. Gopinath, *Vectorial Integrated Finite-difference Analysis of Dielectric Waveguide Without Spurious Modes*, Proceedings of Integrated Photonics Research Topical Meeting, sponsored by Optical Society of America, Palm Springs, California, pp. 225-228, March 1993.
[OC4] A. T. Chronopoulos, M. Pernice, *Vector Preconditioned s-step Methods on the IBM 3090/600S/6VF*, Proceedings of Fifth SIAM Conference on Parallel Processing, Houston, Texas, pp. 130-137, March 1991.
[OC3] A. T. Chronopoulos, Z. Zlatev, *Iterative Methods for Nonlinear Operator Equations*, Proceedings of Sixth Southeastern Approximation Theory Conference, Lecture Notes in Pure and Applied Mathematics, Marcel-Dekker, Vol. 138, Memphis State University, Memphis, Tennessee, pp. 243-256, March 1991.
[OC2] S. Kim, A. T. Chronopoulos, *An Efficient Arnoldi Method Implemented on Parallel Computers*, Proceedings of International Conference on Parallel Processing, Vol. III, Pheasant Run Resort St. Charles, Illinois, pp. 167- 170, August 1991.
[OC1] A. T. Chronopoulos, *Parallel Iterative Methods for (Non)Symmetric (In)Definite Linear Systems*, Extended Abstract, Proceedings of the Fourth SIAM Conference on Parallel Processing for Scientific Computing, Chicago, Illinois, pp. 63-65, 11-13 December 1989.

Other (Non-overlapping) Publications

[OP10] R Ranjan, Y Feng, A Chronopoulos, *Augmented Stabilized Formulations with Ficticious Boundary Conditions*, CS-TR-2016-010, Department of Computer Science, University of Texas at San Antonio, December 2016
[OP9] A. T. Chronopoulos, I. K. Sethi, *Traffic route generation and adaptation using case-based reasoning (Commentary)*, ITS JOURNAL (GORDON BREACH PUBLISHING, TAYLOR & FRANCIS GROUP), Vol. 3, Issue 3, pp. 252-254, 1996.
[OP8] A. T. Chronopoulos, S. K. Kim, *s-Step Orthomin and GMRES implemented on parallel computers*,Technical Report UMSI 90/43R, University of Minnesota Supercomputing Institute, Minneapolis, 1990. Also, published as: *Towards Efficient Parallel Implementation of s-step Iterative Methods*, Supercomputer, Vol. 47, No. IX-1, pp. 4-17, 1992.
[OP7] G. Rockswold, A. T. Chronopoulos, *Efficient Parallel Implementation of Matrix-free Iterative Methods in Stiff ODE Codes*, Technical Report UMSI 91/16, University of Minnesota Supercomputing Institute, Minneapolis, Minnesota, pp. 1-13, 1991.
[OP6] A. T. Chronopoulos, *A fast squared Lanczos method for nonsymmetric linear systems*, Technical Report UMSI 91310, University of Minnesota Supercomputing Institute,Minneapolis, Minnesota, pp. 1-25, 1991.
[OP5] A. T. Chronopoulos, *Krylov Subspace Iterative Methods for Nonsymmetric Indefinite Linear Systems*, Technical Report TR 90-21, Department of Computer Science, University of Minnesota, Minneapolis, Minnesota, pp. 1-27, 1990. Also, Army High Performance Computing Center preprint AHPCRC 91-23, 1991.
[OP4] S. K. Kim, A. T. Chronopoulos, *s-step Lanczos and Arnoldi Methods on Parallel Computers*, Technical Report UMSI 1990/14R, University of Minnesota Supercomputing Institute, Minneapolis, pp. 1-26, 1990.
[OP3] A. T. Chronopoulos, S. Ma, *On Squaring Krylov Subspace Iterative methods for Nonsymmetric Linear Systems*, Technical Report TR 89-67, Department of Computer Science, University of Minnesota, Minneapolis, Minnesota, pp. 1-28, 1989.

[OP2] S. K. Kim, A. T. Chronopoulos, *Multitasking Application using CRAY-2 on Arnoldi's Method for Computing a few Eigenvalues in a Large Sparse Matrix*, Technical Report UMSI 1988/142, University of Minnesota Supercomputing Institute, Minneapolis, Minnesota, pp. 1-19, 1988.

[OP1] A. T. Chronopoulos, *A Class of Parallel Iterative Methods Implemented on Multiprocessors*, Ph. D. thesis, Technical Report UIUCDCS-R-86-1267, Department of Computer Science, University of Illinois, Urbana, Illinois, pp. 1-116, 1986.

Scholarly presentations

Invited Lectures

[28] *Hierarchical Distributed Loop Self-Scheduling Schemes on Cluster and Cloud Systems*,
[iii] Univesrity of Belfast (Computer Science), Belfast, UK, 14 May 2015.
[ii] Univesrity of Ljubljana (Computer Science), Ljubljana, Slovenia, 28 May 2014.
[i] University of Thessaly (Electrical and Computer Engineering), Volos, Greece, 29 October, 2013.

[27] *Scalable Self-Scheduling Schemes for Large Clusters*, Demokritos, National Center for Scientific Research, Athens, Greece, 19 December, 2012.

[26] *Block S-step Krylov Iterative Methods for Large Sparse Linear Systems of Equations*, National Technical University of Athens (Applied Mathematics), Greece, 27 May, 2008.

[25] *Game Theory Based Load Balanced Job Allocation in Distributed Systems*, University College Dublin (Computer Science), 23 May, 2008.

[24] *Game Theory Methods Applied to Wireless Communications*, Technical University of Denmark (Informatics and Mathematical Modeling), Copenhagen, Denmark, 12 December, 2007.

[23] *Implementation of Distributed Loop Scheduling Schemes on the TeraGrid* ,
[iv] Technical University of Vienna, Vienna, Austria, 22 March, 2010.
[iii] Technical University of Aachen, Aachen, Germany, 16 April, 2009.
[ii] ISCAS, Chinese Academy of Sciences, Beijing, China, 21 May, 2007.
[i] The Hong Kong University of Science and Technology (Computer Science), Hong Kong, China, 14 May, 2007.

[22] *Game Theory Applied to Distributed Systems*,
[vii] TsingHua University (Computer Science), Beijing, China, 22 May, 2007.
[vi] University of Lund (Communication Systems), Sweden, 18 December, 2006.
[v] Copenhagen University (Computer Science), Denmark, 15 December, 2006.
[iv] University of Adelaide, Australia (Electrical and Electronic Engineering), Adelaide, Australia, 16 December, 2005.
[iii] Monash University, Australia, (Computer Engineering), Melbourne, Australia, 9 December, 2005.
[ii] University of Sydney, Australia (Electrical and Computer Engineering), Sydney, Australia, 6 December, 2005.
[i] University of Bucharest, Romania (Mathematics and Informatics), Romania, 29 June, 2005.

[21] *Noncooperative Load Balancing in Distributed Systems*,
[iv] University of Warwick (Computer Science), Warwick, U.K. 14 December, 2004.
[iii] George Washington University (Electrical and Computer Engineering), Washington D.C., 12 November, 2004.
[ii] National Technical University of Athens (Electrical and Computer Engineering), Athens, Greece, 9 June, 2003.
[i] University of Southern California (Electrical and Computer Engineering), Los Angeles, California, 24 October, 2003.

[20] *Scalable Loop Self-Scheduling Schemes for Heterogeneous Clusters*, University of Bayreuth (Institute of Mathematics and Informatics), Bayreuth, Germany, 12 December, 2002.

[19] *Parallel Block s-Step Iterative Methods for Non-symmetric Linear Systems*,
[iii] LaRIA - Universite de Picardie - Jules Verne (Computer Science), AMIENS - FRANCE, 18 May, 2001.
[ii] Moscow State University, Moscow (Applied Mathematics), Russia, 25 May, 2001.
[i] University of Central Florida, Orlando, Florida, March 30, 2001.

[18] *DAE Methods and Approximate Inertial Manifolds*, Moscow State University (Applied Mathematics), Moscow, Russia, July 2000.

[17] *Parallel Newton-Krylov Method Applied to Helicopter Aerodynamics Calculations*, IRISA Research Institute at Universite de Rennes, France, December 1999.

[16] *Performance Evaluation of a 100-Teraflop Parallel Computer*, University of Texas San Antonio (Computer Science), San Antonio, Texas, 17 April, 1998.

[15] *Parallel Iterative S-step Methods for Non-symmetric Linear Systems*, Illinois Institute of Technology (Computer Science), Chicago, IL, May 1998.

[14] *Parallel Programming of Distributed Memory Machines*, (Series of 10 lectures), National Technical University of Athens (Electrical and Computer Engineering), Greece, May 1995.

[13] *Iterative Methods for Solving Algebraic Systems of Equations*, (Series of 10 lectures), University of Umea (Computer Science), Umea, Sweden, Fall 1995.

[12] *DAE Methods and Approximate Inertial Manifolds*

[iii] University of Athens (Mathematics), Athens, Greece, December 1995.

[ii] University of Umea (Computer Science), Umea, Sweden, December 1995.

[i] (CWI) Research Center for Mathematics and Computer Science, Amsterdam, Holland, January 1995.

[11] *Parallel Iterative Methods for Linear Systems of Equations*,

[v] Catholic University of Nijimegen (Mathematics), Nijimegen, Holland, 5 October, 1995.

[iv] University of Texas San Antonio (Computer Science), San Antonio, Texas, 17 March, 1995.

[iii] The University of Georgia (Computer Science), Athens, Georgia, April 1994.

[ii] Wayne State University (Computer Science), Detroit, Michigan, 25 February, 1994.

[i] New Jersey Institute of Technology (Electrical and Computer Engineering), Newark, New Jersey, March 1993.

[10] *Traffic Flow Simulation Through Parallel Processing*, University of Minnesota (Center for Transportation Studies), May 1992.

[9] *On the Squared Lanczos Method for Non-symmetric Linear Systems*, University of Minnesota (Institute of Mathematics and its Applications), May 1992.

[8] *S-step Iterative Methods for Non-symmetric Linear Systems*,

[iii] INRIA Research Institute, Paris, France, December 1991.

[ii] Technical University of Denmark (Numerical Analysis Institute), Copenhagen, Denmark, September 1991.

[i] University of Utrecht (Computer Science), Utrecht, Holland, June 1991.

[7] *Conjugate Gradient Type Methods for Nonlinear Operator Equations*,

[vii] IRISA Research Institute at Universite de Rennes, France, December 1991.

[vi] National Technical University of Athens, (Mechanics), Greece, December 1991.

[v] The Danish Computing Center, Copenhagen, Denmark, September 1991.

[iv] (CWI) Research Center for Mathematics and Computer Science, Amsterdam, Holland, June 1991.

[iii] University of Utrecht (Mathematics), Utrecht, Holland, June 1991.

[ii] Catholic University of Nijimegen (Mathematics), Nijimegen, Holland, June 1991.

[i] University of Illinois in Chicago (Electrical and Computer Engineering), Chicago, Illinois, May 1991.

[6] *On Squaring Krylov Subspace Iterative Methods*,

[iv] Indiana University (Mathematics), Bloomington, Indiana, December 1990.

[iii] NASA RIACS, Moffett Field, California, May 1990.

[ii] Lawrence Livermore National Laboratory (Mathematics), Livermore, California, May 1990.

[i] University of Illinois (Computer Science), Urbana, Illinois, December 14, 1989.

[5] *Parallel Lanczos-like Methods Implemented on Parallel Computers*, University of Utah (Supercomputing Institute), Salt Lake City, Utah, May 1990.

[4] *S-step Orthomin and GMRES Implemented on Parallel Computers*, University of Utah (Supercomputing Institute), Salt Lake City, Utah, May 1990.

[3] *Parallel Iterative Methods for Non-symmetric Linear Systems of Equations*,

[ii] University of Southern California (Electrical and Computer Engineering), Los Angeles, California, July 1989.

[i] Penn-State University (Computer Science), State College, Pensylvania, April 1989.

[2] *A Class of Parallel Iterative Methods Implemented on Multiprocessors*,

[vi] Cray Research, Inc. Chipewa Falls, Wisconsin, May 1986.

[v] AT & T Bell Laboratory, Murray Hill, New Jersey, May 1986.
[iv] Michigan State University (Computer Science), East Lansing, Michigan, April 1986.
[iii] Ohio State University (Computer Science), Columbus, Ohio, March 1986.
[ii] Yale University (Computer Science), New Haven, Connecticut, April 1986.
[i] University of Toronto (Computer Science), Toronto, CANADA, April 1986.

[1] *Non-linear Conjugate Gradient-like Methods Used in Stiff ODE Codes*, ICASE, NASA Langley, Virginia, March 1986.

Refereed Conference Lectures

[22] *Game Theory Based Load Balanced Job Allocation in Distributed Systems*, Second Scheduling Workshop organized by INRIA and Ecole Normale in Lyon France, Aussois, France, May 18-2, 2008.

[21] *Multi-Dimensional Dynamic Loop Scheduling Algorithms*, IEEE International Conference on Cluster Computing, Austin, Texas, USA, September 17-20, 2007.

[20] *Implementation of Distributed Key Generation Algorithms using Secure Sockets*, 3rd IEEE International Symposium on Network Computing and Applications, Cambridge, MA, USA, 30 August, 2004.

[19] *Scalable Loop Self-Scheduling Schemes for Heterogeneous Clusters*, [ii] In the Dagstuhl-Workshop 'Adaptivity in Parallel Scientific Computing', International Conference and Research Center for Computer Science, Schloss Dagstuhl, Wadern, Germany, 17 May, 2003. [i] 4th IEEE International Conference on Cluster Computing (CLUSTER 2002), Chicago, Illinois, 24-26 September, 2002.

[18] *A Distributed Discrete-Time Neural Network Architecture for Pattern Allocation and Contr*ol, The IEEE International Parallel and Distributed Processing Symposium (IPDPS 2002), Fort Lauderdale, Florida, 8-11 April, 2002.

[17] *Static Load Balancing for CFD Distributed Simulations on a Network of Workstations*, The IEEE Int'l Symp. on Network Computing and Applications, Cambridge, MA, 11-13 February, 2002.

[16] *A Class of Distributed Self-Scheduling Schemes for Heterogeneous Clusters*, The 3rd IEEE International Conference on Cluster Computing (CLUSTER 2001), Newport Beach, California, 8-11 October, 2001.

[15] *On the Odir Iterative Method for Non-symmetric Indefinite Linear Systems*, SIAM Conference on Parallel Processing, Northfolk, Virginia, 13-15 March, 2001.

[14] *The Parallelization of a Highway Traffic Flow Simulation*, IEEE Seventh Symposium on the Frontiers of Massively Parallel Computation, Annapolis, Maryland, 22-25 February, 1999.

[13] *Performance Evaluation of a 100-TeraOps Parallel System*, Proceed. of the ISCA 11th Intern. Conf. on Parallel and Distributed Computing Systems, Chicago, IL, 2-4 September, 1998.

[12] *Adaptive buffer threshold updating for an ATM switch*, ISCC'98, The Third IEEE Symposium on Computers and Communications Athens, Greece, 30 June -2 July, 1998.

[11] *Traffic Flow Simulation through Parallel Processing*, Transportation Research Board 75th Annual Conference, Washington, D.C., 7-11 January, 1996.

[10] *DAE Methods and Approximate Inertial Manifolds*, SIAM 40th Anniversary Conference, Los Angeles, California, July 1992.

[9] *Towards Efficient Implementation of the CG Method Applied to a Class of Tridiagonal Linear Systems*, Supercomputing '91, Albuquerque, New Mexico, November 1991.

[8] *Conjugate Gradient Type Methods for Nonlinear Operator Equations*, Numerical Analysis Day in Honor of Professor Eugene Golub, University of Illinois, Urbana, Illinois, May 1991.

[7] *Iterative Methods for Nonlinear Operator Equations*, Sixth Southeastern Approximation Theory Conference, Memphis State University, Memphis, Tennessee, March 1991.

[6] *On Squaring Krylov Subspace Iterative Methods*,

[ii] Numerical Analysis Workshop, Catholic University of Nijimegen (Mathematics), Nijimegen, Holland, June 1991.

[i] Vienna Conference on Scientific Computing in Honor of Professor Hans Stetter's 60th Birthday, Vienna, Austria, June 1990.

[5] *S-step Orthomin and GMRES Implemented on Parallel Computers*, Copper Mountain Conference on Iterative Methods, Copper Mountain, Colorado, April 1990.

[4] *Krylov Subspace Iterative Methods for Non-symmetric Indefinite Linear Systems*, Copper Mountain Conference on Iterative Methods, Copper Mountain, Colorado, April 1990.

[3] *Parallel Iterative Methods for (Non)Symmetric (In)Definite Linear Systems of Equations*, SIAM Conference on Parallel Processing for Scientific Computing, Chicago, Illinois, December 1989.

[2] *S-step Iterative Methods for Symmetric Linear Systems*, SIAM Conference on Linear Algebra, Madison, Wisconsin, Spring 1988.
[1] *Non-linear Conjugate Gradient-like Methods Used in Stiff ODE Codes*, SIAM Fall meeting, Phoenix, Arizona, November 1985.

Granting Activities

[15] E. Michaelides (Principal Investigator) (Department of Mechanical Engineering, UTSA), A. T. Chronopoulos et al. (12 co-authors), *Integrating High Performance Computing in Research and Education for Simulation, Visualization and Real Time Prediction*, National Science Foundation (CREST) 2009-2014 ($5,000,000).
[14] A. T. Chronopoulos (Principal Investigator) and D. Popescu (Department of Electrical Engineering, UTSA), *Computationally Efficient Methods for Power Control in Wireless Systems*, National Science Foundation (ITR), 2003-2008 ($150,000).
[13] A. T. Chronopoulos (Principal Investigator), *New Cryptographic Protocols with Applications to Wireless Communications*, AFOSRL (through the Center for Infrastructure Assurance and Security at UTSA), 2001-2004, ($120,000).
[12] A. T. Chronopoulos (Principal Investigator), *Parallel Aerodynamics Simulation in Distributed Environments*, NASA, 1999-2002 ($194,000).
[12] J. Kallinderis (Principal Investigator) (Department of Aerospace Engineering, University of Texas, Austin) and A. T. Chronopoulos, *Prediction of Flow-structure Interactions for Designing Deepwater Platforms in the Gulf of Mexico*, Texas Higher Education Coordinating Board, 1999-2001 ($182,000).
[10] W. Groski (Principal Investigator), A. T. Chronopoulos, F. Fatoohi, I. Sethi, (Department of Computer Science, Wayne State University), *Distributed Model Simulation Computations*, National Science Foundation Research Instrumentation CISE EIA-9729818, 1997-1998 ($160,000).
[9] S. Ziavras (Principal Investigator), A. T. Chronopoulos and H. Grebel (Department of Electrical and Computer Engineering, New Jersey Institute of Technology), *A Scalable-Feasible Parallel Computer Implementing Electronic and Optical Interconnections for 156 TeraOps Minimum Performance*, National Science Foundation, CISE-New Technologies, New Millennium Computing Point Design Research Grant ASC-9634775, 9/1/1996-8/31/1997 ($100,000).
[8] A. T. Chronopoulos (Principal Investigator), *Efficient Iterative Methods for (Non)linear Systems and Application to 3-D CFD Problems*, CRAY Research, Inc., 1996-1997, ($7,000).
[7] A. T. Chronopoulos (Principal Investigator), and A. Lyrintzis (Department of Aerospace Engineering, University of Minnesota), *The Use of Parallel Iterative Methods for Full Potential Rotor Codes*, NASA Ames High Performance Computing, 1994-1996 ($66,000).
[6] A. T. Chronopoulos (Principal Investigator), *Variable Step Numerical Schemes on Approximate Inertial Manifolds*, National Science Foundation, Research Grant CCR-9496327, 1994–1996 ($60,000).
[5] A. T. Chronopoulos (Principal Investigator), *Parallel Traffic Flow Simulation of Freeway Networks*, State of Minnesota Department of Transportation, 1992-1994 ($75,000).
[4] P. Michalopoulos (Principal Investigator) (Department of Civil Engineering Department, University of Minnesota), A. T. Chronopoulos and A. Lyrintzis (Department of Aerospace Engineering, University of Minnesota), *Development of Advanced Traffic Flow Models and Implementation in Parallel*, State of Minnesota Department of Transportation, 1991-1992 ($50,000).
[3] A. T. Chronopoulos (Principal Investigator) and P. Michalopoulos (Department of Civil Engineering Department, University of Minnesota), *Traffic Flow Simulation through Parallel Processing*, State of Minnesota Department of Transportation, 1990-1991 ($45,000).
[2] G. Sell (Principal Investigator) (Department of Mathematics, University of Minnesota), A. T. Chronopoulos et al. (30 co-authors), *University of Minnesota Army Center High Performance Computing Research Grant*, U.S. Army Research Office, 1989-1994 ($ 8,500,000).
[1] A. T. Chronopoulos (Principal Investigator), *Parallel Numerical Algorithms and Software*, National Science Foundation, Research Grant CCR-8722260, 1988-1990 ($85,000).

Intellectual property

Teaching Activities

List of Formal Courses Taught

(**14 different course preparations)**

Graduate

(1) Distributed Systems (CS 6523, reorganized course): [Fall 2000], [Fall 2001], [Fall 2002], [Fall 2004], [Spring 2006], [Fall2012] (reorganized course with 70% new content on Cloud Systems and Programming)
(2) Numerical Linear Algebra Algorithms (CS 5293): [Fall 1999], [Spring 2001], [Spring 2002], [Spring 2004]
(3) Parallel Algorithms (CS 6653): [Fall 2003]
(4) Advanced Topics in Distributed Systems (CS 6593, Special Topics): [Spring 2003]
(5) Parallel Processing (CS 6643): [Spring 2002], [Spring 2013], [Spring 2015]
(6) Numerical Algorithms (CS 5603, reorganized course): [Spring 2000]
(7) Parallel Numerical Algorithms and Software (CS 6613, reorganized course): [Fall 2000]
(8) Operating Systems (CS 5523): [Spring 2000]
(9) Performance Evaluation (CS 6553): [Spring 1999]
(10) Theory of Algorithms (CS 5633): [Fall 1998], [Fall 1999]

Undergraduate

(11) Microcomputer Applications (CS 1033): [Spring 2008, Fall 2008]
(12) Introduction to (JAVA) Programming (CSC1063): [Fall 2006, Spring 2007, Fall 2007, Spring 2010, Fall 2010, Spring 2011, Fall 2011,Spring 2012, Fall 2014]
(13) Introduction to Scientific Computing (CS 1073): [Spring and Fall (2005, 2006, 2007, 2008), Spring 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012,Spring 2013]
(14) Introduction to Parallel Programming (CS 4823): [Fall 2001], [Fall 2002], [Spring 2005]

Wayne State University (Semester courses)
Data Structures and Algorithms (Undergraduate)
Numerical Linear Algebra Algorithms and Software (Graduate)
Distributed Computing (Graduate)
Parallel Computing (New course, Graduate)

University of Minnesota (Semester courses, taught several times 1987-1993)
Introduction to Numerical Algorithms and Software (Undergraduate)
Data Structures and Algorithms (Undergraduate)
Numerical Algorithms and Software (Graduate)
Parallel Numerical Algorithms (New course, Graduate)
Special Topics in High Performance Computing (New course, Graduate)
Numerical Methods for Ordinary Differential Equations (Graduate)

List of students mentored

PhD dissertations directed

University of Texas San Antonio
Yiming Han, (PhD, First Position: Cloud Software Engineer, Rubicon Project, Los Angeles, California), Title: *Hierarchical Distributed Loop Self-scheduling on Cluster and Cloud Systems*, May 2014.
Satish Penmatsa, (PhD, First Position: Assistant Professor, Computer Science, University of Maryland-Eastern Shore, USA), Title: *Game Theory Based Job Allocation/Load balancing in Distributed Systems with Applications to Grid Computing*, December 2007.
Dan Grosu (PhD, Associate Professor, CS Dept, Wayne State University, USA), *Load Balancing for Clusters of Heterogeneous Workstations Using a Game Theory Approach*, Spring 2003.

Wayne State University
Andrew Wissink (PhD Co-advised, First Position: Researcher, Lawrence Livermore Laboratory, CA, U.S.A; Now: NASA-Ames, Moffett Field, CA, USA) (Department of Aerospace Engineering, University of Minnesota), Title: *Efficient parallel implicit methods for rotary-wing aerodynamics calculations*, October 1996.

University of Minnesota

Sun Kyung Kim (PhD, Associate Professor, Taegu University, Korea), Title: *A Class of Iterative Methods for Computing a Few Extreme Eigen-values of Large and Sparse Matrices Implemented on Parallel Computers*, 1991.

MS Thesis Supervised

University of Texas San Antonio

Monica Madhukar, (M.S. Co-advised, First Position: Image Research Associate**,** Intrinsic Imaging, San Antonio), Title: *Microscopic Image Segmentation and Classification for Acute Leukemia*, August 2012.

Madhusudhan Musku (MS Co-advised, First Position: PhD student/R.A. University of Texas San Antonio), Title*: A Comparison of Power Control and Utility Optimization Algorithms in Wireless Communication Systems*, Summer 2004.

S. Ponipireddy (MS, First Position: Employed AT&T), Title: *Implementation of Distributed Power Control in Wireless Communication Systems*, Summer 2002.

Jingyu Liu (MS, First Position: PhD student/R.A., University of Pittsburgh, USA), Title: *Parallel Block S-step Krylov Iterative Method*, Spring 2002.

Manuel Benche (MS, First Position: PhD student/R.A. at University of Oregon, USA), Title: *Loop-level Load Balancing Algorithms for Clusters of Heterogeneous Workstations,* December 2000.

Wayne State University

Hai Jiang (MS, First Position: PhD student/R.A. at Wayne State University. Currently: Associate Professor, Computer Science, Arkansas State University, USA), Title: *Path-Driven Loop Scheduling Mapped onto Generalized Hypercubes*, Summer 1998.

Jian Hua Xu (MS, First Position: employed at Lucent Technologies, Murray Hill, NJ, USA) Title: *Distributed Self-Scheduling for Heterogeneous Workstation Clusters*, Summer 1998.

Ying Gong (MS, First Position: employed at FORD Motor Co. Headquarters, Michigan) Title: *Performance Evaluation of Teraflops Parallel Computers with Optical Components*, Summer 1998.

Charles Johnston (MS, First Position: employed at Concurrent Computer Corporation) Title: *Massively Parallel Computer Simulation of Freeway Traffic*, Summer 1998.

Caimu Tang (MS, First Position: PhD student/R.A at E.C.E., University of Southern California, USA) Title: *Burst based fair queuing scheduling for ATM networks*, Summer 1997.

Xiao Yi (MS, First Position: employed at Micro-crafts Inc., Redmond, WA, USA) Title: *Dynamic Buffer Allocation in an ATM Switch*, Fall 1996.

University of Minnesota

Gang Wang (MS, employed at X-Pat Trading, LLC, Chicago, IL, USA), Title: *Traffic Flow Simulation through Parallel Processing*, 1994.

Choong-Youl Rhee (MS, First Position: employed as Data-Base Administrator for the State of Minnesota, USA), Title: *Traffic flow simulation through high order traffic modeling*, 1993.

Andrew Wissink (MS Co-advised, Department of Aerospace Engineering, University of Minnesota, First Position: Researcher at Lawrence Livermore Laboratory, CA, U.S.A), Title: *Efficient iterative methods for the transonic small disturbance equation*, 1993.

Christofer Pedro (MS, First Position: employed at UNISYS Corporation), Title: Iterative methods for nonsymmetric systems in DAEs and stiff ODEs codes,1992.

Charles Swanson (MS, First Position: employed at Cray Supercomputer Corporation), Title: *Orthogonal s-step methods for nonsymmetric linear systems of equations*, 1991.

Master's Degree (non-Thesis option) supervised

Xin Zhang (May 2015), presentation title: Cloud Computing Scalable Storage Systems

Sahiti Koganti (May 2015), presentation title: Security and Cloud Computing Application

Temitope Ajagbe, presentation title: Cloud Computing and High Performance Computing : Data Management and Scheduling (December 2014)

Nima Golpavar (May 2013), presentation title: Data Management and Benchmarking in Cloud Systems

Emhemed Shaklawoon (December 2012)

Lakshmipathi Aeleswara, presentation title: Privacy protection for mHealth messaging systems (May 2012)
Lavanya Thaduri (May 2012), presentation title: A Comparison of Loop Scheduling Schemes Implemented on Linux Clusters
Doppalapudi Niveditha (June 2011), presentation title: Distributed Loop Scheduling Algorithms Programmed on Clusters
Naveen Jayakumar (June 2011), presentation title: Multi-Dimensional Loop Scheduling Schemes Implemented On Linux Clusters
Swapna Siju, presentation title: Distributed Loop Scheduling Algorithms Programmed on Clusters (April, 2008)
Siraj Qassim Ali, presentation title: A Class of Loop Self-Scheduling Schemes for Distributed Systems (May 2003)
Federico Balbi, presentation title: Parallel Iterative Methods Implemented on the IBM SP3 Supercomputer (May 2003).
Satish Penmatsa, presentation title: Scalable Loop Self-Scheduling Schemes for Heterogeneous Clusters (May 2003)
Raja Gavini, presentation title: Approaches to DNS Security (May 2003)
Vinod Putchala, presentation title: Analysis of Network on Chip Architectures (NOC) (November 2003)
Naveen Kolani, presentation title: Distributed Key Generation (December 2003)
Sridar Guduru, presentation title: Jobs Load Balancing in Distributed Systems (December 2003)
Pavan Kantipudi, presentation title: A Class of Loop Self-Scheduling Algorithms for Distributed Systems (December 2003)
Keyin Tu, presentation title: Distributed Algorithms in Digital Signature Standard (May 2002)
S. Nekoueian, presentation title: Distributed Key Generation for Secure Communication (May 2002)
Yu Ning, presentation title: Improvements/Comparisons of Loop Scheduling Algorithms (June 2001)
Yu Du, presentation title: Distributed Loop Scheduling Algorithms (Spring 2001)

Service as a member of the exam committees of Graduate Students

Saedy Saedy, (PhD) presentation title: Cooperation and consensus in wireless cluster communications and networks (December 2012)
Gregory Sloan, (MS) presentation title: Development and parallelization of a direct numerical simulation to study the formation and transport of nanoparticle clusters in a viscous fluid (December 2012)
Monica Madhukar, (MS) presentation title: Microscopic Image Segmentation and Classification for Acute Leukemia (December 2012)
Anthony Castaldo, (PhD) presentation title: Parallelism and error reduction in a high performance environment (December 2010)
Catalin Lacatus, (PhD) presentation title: Distributed codeword adaptation and power control in CDMA systems (May 2008)
S. Rao Gona, (MS) presentation title: Data Mining Association Rules (November 2002)
Shengchun Ye, (MS) presentation title: Media Access Protocols for Wireless LAN (December 1999)
Kui Cai (MS) (May 1999)
Najafi Rad Peyman (MS) (April 1999)
Zhaohua Qiu (MS) (April 1999)
Ping Jiang (MS) (March 1999)
Sui Luo (MS) (February 1999)
Lei Zhao, (MS) presentation title: Unimodular Transformations for Parallelizing Compilers (December 1998)

Service activities

List of committee assignments

University of Texas San Antonio
Academic Senate
Member, University Faculty Senate Evaluation, Merit, Rewards, and Workload Committee (UFSEMRWC) (2006-2007)

Member, University Faculty Senate (UFS) (2004-2005)
Member, University Faculty Senate Nominating, Elections and Procedures Committee (UFSNEPC) (2003-2005)
Vice-Chair, University Faculty Senate (UFS) (2003-2004)
Member, University Faculty Senate Executive Committee (UFSEC) (2003-2004)

Administrative Committees, University Level
University Curriculum Committee (UCC) (2008-2012)
Member, University Faculty Grievance Committee (UFGC) (2003-2005, 2007-2008)
Member, University Standing Committee on Committees (USCC) (2002-2004, 2005-2007)
Member, University Standing Committee on Athletics (USCA) (2001-2003)
Member, University Standing Committee on University Libraries (USCUL) (2002-2004)
Member, University Standing Committee on Building Advisory and Design Review (USCBDR) (2002-2004)
Chair, University Finance and Budget Advisory Committee (UFSBC) (2003-2004)
Member, University Standing Committee on University Scholarships (USCUS) (2005-2007)

Administrative Committees, College of Science
Member, College Faculty Review Advisory Committee (CFRAC) (2002-2004, 2012-2015)
Member, College Policy Committee (CPC) (2002-2003)
Member, College Search Committee for the Chair of the (CS) Department (CSCCD) (2000-2001)
Chair, College Academic Policy and Curricula Committee (CAPCC) (2000-2002)

Administrative Committees, Department of Computer Science
Chair, Department Faculty Review Advisory Committee (DFRAC) (2011-2014)
Member, Department Faculty Review Advisory Committee (DFRAC) (1999-2015)
Member, Department Faculty Search Committee (DFSC) (2005-2006 , 2007-2008, 2015-2016)
Chair, Department Faculty Search Committee (DFSC) (2003-2004)
Member, Department Periodic Performance Evaluation Committee (DPPEC) (2002-2003, 2012-2014)
Member, Department Academic Policy and Curricula Committee (DAPCC) (2000-2002)
Member, Department Graduate Studies Committee (DGSC) (1999-2001, 2014-2015)

Professional service activities
Conference organizing/program committees membership
(ix) General Chair, The IEEE 14th International Symposium on Network Computing and Applications (NCA 2015), Boston, Sept 28-Sept 30, 2015, USA
(viii) The 24th IEEE International Conference on Computer Communication and Networks (ICCCN 2015), Track : Grid, Cloud, Internet, and Peer-to-Peer Computing and Communication (GCIP), August 3 – August 6, 2015, Las Vegas, Nevada, USA
(vii) The 14th IEEE International Symposium on Parallel and Distributed Computing (ISPDC 2015), June 29-July 1, 2015, Limassol, Cyprus
(vi) IEEE International Symposium on Network Computing and Applications (NCA, each year 2004-2014), Boston, USA
(v) IEEE International Parallel and Distributed Processing Symposium (IPDPS), High-Performance Grid Computing Workshop (HPGC), (each year 2006-2014)
(iv) IEEE 13th International Conference on Computational Science and Engineering (track Cluster, Grid, Cloud and P2P Computing) (2010)
(iii) IEEE 13th International Conference on Computational Science and Engineering (track Cluster, Grid, Cloud and P2P Computing) (2010)
(ii) IEEE International Conference on Computing in Engineering, Science and Information (April 2-9, 2009, California State University, Fullerton, CA, USA)
(i) IEEE/WIC/ACM Conference on Web Intelligence, First International Workshop on Incentive Based Computing (IBC'05), September 19, 2005, Compiegne, France ; International Workshop on Incentive-Based Computing (IBC'06), at the 26th IEEE International Conference on Distributed Computing Systems (July 4-6,2006) , Lisboa, Portugal.
Reviewing experience
NSF proposals (panels), IEEE journals and conferences, International Conferences (in my research areas)