Murat Manguoğlu, *Professor*
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Research interests: Parallel Computing and Numerical Linear Algebra

Education:
- Ph.D., Computer Science (and a specialization in Computational Science), **Purdue University**, West Lafayette, Indiana, USA, May 2009 (Advisors: Professor Ahmed Sameh and Professor Ananth Grama)
- Msc., Computational Engineering and Science, **The University of Utah**, Salt Lake City, Utah, USA, May 2004 (Advisor: Professor Kris Sikorski)
- Bsc., Electrical and Electronics Engineering (Honor student), **Middle East Technical University**, Ankara, Turkey, June 2002 (Exchange student at the University of Utah during 2000-2001 academic year)

Employment:

Middle East Technical University	Professor	July	2019	-		
Middle East Technical University	Associate Professor	November	2013	- July	2019
Middle East Technical University	Assistant Professor	February	2011	- November	2013
Istanbul Technical University	Assistant Professor	May	2010	- January	2011
Purdue University	Post Doctoral Researcher	May	2009	- May	2010
Intel Corporation	Graduate Intern	May	2008	- August	2008
Purdue University	Research Assistant	January	2005	- May	2009
Purdue University	Teaching Assistant	August	2004	- December	2004
The University of Utah	Teaching Assistant	August	2002	- May	2004
METU Biomedical Engineering Lab.	Undergraduate Intern	June	2000	- August	2000
ERE Telecommunications	Undergraduate Intern	June	1999	- August	1999

Administrative duties:

METU Institute of Applied Mathematics	Associate Director	March	2012	- September	2017

Research grants and awards:

Manguoğlu M; **Alexander von Humboldt Renewed Research Stay for Alumni** , 2023
Manguoğlu M (Researcher): EuroCC@Türkiye, **H2020**, 2020-2022
Manguoğlu M; **Science Academy Young Scientist Award (BAGEP),** 2020
Manguoğlu M; **Alexander von Humboldt Research Fellowship for Experienced Researchers**, 2017
Manguoğlu M; **Turkish Academy of Sciences Distinguished Young Scientist Award (GEBİP)** (5/2013-5/2016)
Manguoğlu M (PI); **TUBITAK Career Award** EEAG111E238; (1/5/2012-1/5/2014) ; Parallel Solution of Sparse Linear Systems
Manguoğlu M (PI); **METU BAP**-08-11-2011-128; (1/7/2011 - 31/12/2013); Solution of Linear Systems on Parallel Computers
Manguoğlu M (Researcher); **The Partnership for Advanced Computing in Europe** First Implementation Phase (PRACE-1IP), European Community's Seventh Framework Programme (FP7/2007- 2013) under grant agreement no: RI-261557; (2/6/2011-2/6/2012)
Sameh A, Manguoğlu M (co-PI); **Intel Corporation**; (1/6/2009 - 31/5/2010); Towards an Adaptive Library for Solving Large Sparse Linear Systems
Manguoğlu M (Researcher); between 2005-2010 various projects;**NSF** (NSF-CCF-0635169), **DARPA/AFRL** (FA8750-06-1-0233), **DOE** (DE-FC52-08NA28617) and **Intel corp**.

Short/Long Term Academic Visits:

1.6.2023-31.7.2023	TU-Berlin, Germany (Host: Volker Mehrmann) (Alexander von Humboldt Foundation)
1.6.2019-31.8.2019	TU-Berlin, Germany (Host:Volker Mehrmann) (Alexander von Humboldt Foundation)
1.10.2017-30.9.2018	TU-Berlin, Germany (Host: Volker Mehrmann) (Alexander von Humboldt Foundation)
29.1.2018-30.1.2018	Eindhoven Technical University, Netherlands (Host: Jan ten Thije Boonkkamp)
16.11.2016-18.11.2016	Eindhoven Technical University, Netherlands (Host: Jan ten Thije Boonkkamp)
28.3.2014-5.4.2014	Heidelberg University, Germany (Host: Peter Bastian) (Erasmus Programme)
20.3.2014	Waseda University, Japan (Host: Hironori Kasahara)
16.2.2013-23.2.2013	Eindhoven Technical University, Netherlands(Host:Michiel Hochstenbach)(Erasmus Programme)
29.8.2010-1.9.2010	Université de Versailles Saint-quentin-en-yvelines, France (Host:William Jalby)

Journal publications:

Manguoğlu M, Mehrmann V, "Robust iterative methods for linear systems with saddle point structure", **Linear Algebra and Its Applications,** In Review (preprint: https://arxiv.org/pdf/2502.21174), 2025

Bölükbaşı ES, Torun FŞ, Manguoğlu M, A distributed memory parallel randomized Kaczmarz for sparse system of equations, **Concurrency and Computation: Practice and Experience**, 36(25):e8274, 2024

Torun FŞ, Manguoğlu M, Aykanat C, *Enhancing block Cimmino for sparse linear systems with dense columns via Schur complement*, **SIAM Journal on Scientific Computing**, 45(2), pp. C49-C72, 2023

Torun T, Torun FŞ, Manguoğlu M, Aykanat C, *Partitioning and reordering for Spike-based distributed-memory parallel Gauss-Seidel*, **SIAM Journal on Scientific Computing**, 44(2), pp. C99-C123, 2022

Manguoğlu M, Mehrmann V, "A two-level iterative scheme for general sparse linear systems based on approximate skew-symmetrizers", **Electronic Transactions on Numerical Analysis,** 54, pp.370-391, 2021

Çuğu İ, Manguoğlu M, "A Parallel Multithreaded Sparse Triangular Linear System Solver", **Computers and Mathematics with Applications,** 8(2), pp.371-385, 2020

Manguoğlu M, Mehrmann V, "A Robust iterative Scheme for Symmetric Indefinite Linear Systems", **SIAM Journal on Scientific Computing,** 41(3), pp.A1733-A1752, 2019

Torun FS, Manguoğlu M, Aykanat C, "A Novel Partitioning Algorithm for Accelerating the Block Cimmino Algorithm", **SIAM Journal on Scientific Computing**, 40(6), pp.C827-C850, 2018

Arslan H, Manguoglu M, "A Parallel Bio-inspired Shortest Path Algorithm", **Computing**, Volume 101, Issue 8, pp 969–988, 2019

Torun FS, Manguoğlu M, Aykanat C, "Parallel minimum norm solution of sparse block diagonal column overlapped underdetermined systems", **ACM Transactions on Mathematical Software**, 43(4), Article 31 , 2017

Akay HU, Oktay E ,Manguoğlu M, Sivas AA,"Improved Parallel Preconditioners for Multiphysics Topology Optimizations", **International Journal of Computational Fluid Dynamics,** 30 (4), pp. 329-336, 2016

Uzunca M, Karasözen B, Manguoğlu M, "Adaptive discontinuous Galerkin methods for non-linear diffusion-convection-reaction equations", **Computers and Chemical Engineering**, 63, pp.24-37, 2014

Manguoğlu M, "A domain-decomposing parallel sparse linear system solver", **Journal of Computational and Applied Mathematics**, 236(3), pp.319-325, 2011

Manguoğlu M, Takizawa K, Sameh A, Tezduyar T, "A parallel sparse algorithm targeting arterial fluid mechanics computations", **Computational Mechanics**, 48, pp.377-384, 2011

Manguoğlu M, Saied F, Sameh A, Grama A, "Performance Models for the Spike Banded Linear System Solver", **Scientific Programming** (IOS press) , 19(1),pp.13-25, 2011

Dağ H, Yetkin EF, Manguoğlu M, "A new preconditioner design based on spectral division for power flow analysis", **International Review of Electrical Engineering**, 6(3), pp.1339-1348, 2011

Manguoğlu M, Takizawa K, Sameh A, Tezduyar T, "Nested and parallel sparse algorithms for arterial fluid mechanics computations with boundary layer mesh refinement", **International Journal for Numerical Methods in Fluids**, Volume 65, Issue 1-3, pp.135-149, 2010

Naumov M, Manguoğlu M, Sameh A, "A Tearing-based Hybrid Parallel Sparse Linear system Solver", **Journal of Computational and Applied Mathematics**, Volume 234, Issue 10, pp.3025-3038, 2010

Manguoğlu M, Koyuturk M, Sameh A, Grama A, "Weighted Matrix Reordering and Parallel Banded Preconditioners for Iterative Linear System Solvers", **SIAM Journal on Scientific Computing**, 32(3), pp.1201-1216, 2010

Manguoğlu M, Takizawa K, Sameh A, Tezduyar T, "Solution of Linear Systems in Arterial Fluid Mechanics Computations with Boundary Layer Mesh Refinement", **Computational Mechanics**, 46(1), pp.83-89, 2009

Manguoğlu M, Sameh A, Saied F, Tezduyar T, Sathe S, "Preconditioning Techniques for Nonsymmetric Linear Systems in the Computation of Incompressible Flows", **Journal of Applied Mechanics**, 76(2), pp.021204(7 Pages), 2009

Schenk O, Manguoğlu M, Sameh A, Christen M, Sathe M, "Parallel Scalable PDE-Constrained Optimization: Antenna Identification in Hyperthermia Cancer Treatment Planning", **Computer Science Research and Development**, Volume 23, Numbers 3-4/June, 2009

Mikkelsen CCK, Manguoğlu M , "Analysis of the Truncated Spike Algorithm", **SIAM Journal on Matrix Analysis and Applications**, 30(4), pp.1500-1519, 2008

Manguoğlu M, Sameh A, Tezduyar T, Sathe S, "A nested iterative scheme for computation of incompressible flows in long domains", **Computational Mechanics**, 43(1),pp.73-80, 2008

National Journal Publications:

Arslan H, Manguoğlu M, "A Hybrid Single Source Shortest Path Algorithm", **Turk J Elec Eng & Comp Sci**, 27: 2636 – 2647, 2019

Book chapters:

Manguoğlu M, Polizzi E, Sameh AH, "The Effect of Various Sparsity Structures on Parallelism and Algorithms to Reveal Those Structures", **Parallel Algorithms in Computational Science and Engineering** (Editors: A. Grama and AH Sameh). Birkhäuser, 2020

Selvitopi O, Acer S, Manguoğlu M, Aykanat C, "The Effect of Various Sparsity Structures on Parallelism and Algorithms to Reveal Those Structures", **Parallel Algorithms in Computational Science and Engineering** (Editors: A. Grama and AH Sameh). Birkhäuser, 2020

Manguoğlu M, "Parallel solution of sparse linear systems", **High Performance Scientific Computing** (editors:M. Berry, K. Gallivan, E. Gallopoulos, A. Grama, B. Philippe, Y. Saad and F. Saied), Springer, 2012

Bölükbaşı ES, Manguoğlu M, "A Multithreaded Recursive and Nonrecursive Parallel Sparse Direct Solver", **Advances in Computational Fluid-Structure Interactions** (editors: Y. Bazilevs and K. Takizawa), Springer-Birkhäuser, 2016

Conference proceedings:

Mangır C, Cenk M, Manguoğlu M, "An Improved Algorithm for Iterative Matrix-Vector Multiplications over Finite Fields", **Lecture Notes in Computer Science (SECITC 2018)**, vol 11359, pp 358-367, 2019

Sivas AA, Manguoğlu M, J. H. M. ten Thije Boonkkamp, "Discretization and Iterative Schemes for Advection-diffusion-reaction Problems", **Numerical Mathematics and Advanced Applications - ENUMATH 2015**. Lecture Notes in Computational Science and Engineering, Springer, 2016

Karasözen B, Uzunca M, Manguoğlu M, "Adaptive Discontinuous Galerkin Methods for Nonlinear Diffusion-Convection-Reaction Equations." **Numerical Mathematics and Advanced Applications - ENUMATH 2013**. Springer, pp.85-93, 2015

Akaydın B, Manguoglu M, "Parallel Image Segmentation Using the Fiedler Vector", **Computer Graphics and Imaging (CGIM)** (February 12 – 14, 2013**),** Innsbruck, Australia (http://www.actapress.com/Abstract.aspx?paperId=454985)

Sattari M, Toroslu İ, Şenkül P, Manguoğlu M, Symeonidis P, Manolopoulos Y, "Geo-activity Recommendations by using Improved Feature Combination", **4th International Workshop on Location-Based Social Networks** (September 8, 2012), Pittsburgh, Pennsylvania, USA (http://doi.acm.org/10.1145/2370216.2370432)

Manguoğlu M, "A Parallel Sparse Solver and Its Relation to Graphs", **Computational Electromagnetics Workshop** (August 10-13, 2011), Izmir, Turkey (http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6047337&tag=1)

Manguoğlu M, Cox E, Saied F, Sameh A, "TRACEMIN-Fiedler: A Parallel Algorithm for Computing the Fiedler Vector", **Lecture Notes in Computer Science (VECPAR10)**, Volume 6449, pp.449-455, 2011

Brodman JC, Evans GC, Garzaran MJ, Manguoğlu M, Sameh A, Padua D, "A Parallel Numerical Solver Using Hierarchically Tiled Arrays", **Lecture Notes in Computer Science(LCPC2010)**, Volume 6548, pp.46-61, 2011

Manguoğlu M, Saied F, Sameh A, Grama A, "Performance Models for the Spike Banded Linear System Solver", **ISPDC** (July 7-9, 2010), Istanbul, Turkey (http://doi.ieeecomputersociety.org/10.1109/ISPDC.2010.8)

Manguoğlu M, "A Parallel Hybrid Sparse Linear System Solver", **Computational Electromagnetics Workshop** (July 19-23, 2009), Izmir, Turkey (http://ieeexplore.ieee.org/servlet/opac?punumber=5210584)

Manguoğlu M, Sameh A, and Schenk O,"PSPIKE: A Parallel Hybrid Sparse Linear System Solver", **Lecture Notes in Computer Science (Europar09),** Volume 5704/2009, pp.797-808, 2008

National conference proceedings:

Bölükbaşı ES, Torun FŞ, Manguoğlu M, "A Distributed Memory Parallel Randomized Kaczmarz For Sparse System of Equations", **8. Ulusal Yüksek Başarımlı Hesaplama konferansı** (May 15-17, 2024), Ankara

Sivas AA, Oktay E, Akay HU, Manguoğlu M, "Paralel Topoloji Optimizasyonu Çözümleri için Etkin bir Önkoşullandırıcı", **4. Ulusal Yüksek Başarımlı Hesaplama konferansı** (October 1-2, 2015), Ankara

Manguoğlu M, "Seyrek doğrusal sistemlerin çözümü için yeni algoritmalar", **3. Ulusal Yüksek Başarımlı Hesaplama konferansı** (April 12-13, 2012), Ankara

Gündoğan M, Aykanat C, Manguoğlu M, "Paralel seyrek çözücü ve bunun çizge ve hiperçizgelerle olan ilişkisi", **3. Ulusal Yüksek Başarımlı Hesaplama konferansı** (April 12-13, 2012), Ankara

Conference and Colloquium presentations:

Manguoğlu M, Mehrmann V, "A family of robust iterative schemes for linear systems with saddle point structure", Mathematics Seminar (28 November 2024), Koc University, İstanbul, Turkey

Yıldırım S, Manguoğlu M, "Parallel Sparse Skew-Symmetric Matrix-Vector Multiplication with Reverse Cuthill-McKee Reordering", SIAM Annual Meeting (Online 18-20 July 2024), Spokane, Washington, USA

Manguoğlu M, Mehrmann V, "A null-space method based algebraic iterative scheme for saddle point problems", Sparse Days (17-18 June 2024), Toulouse, France

Özçoban K, *Yetkin EF*, Manguoğlu M, "Investigation of the Effects of Initial Guess and Subspace Iteration Acceleration on Feast Solver", SIAM Conference on Applied Linear Algebra (3-17 May 2024), Sorbonne Universite I, Paris, France

Bölükbaşı ES, Manguoğlu M, "A parallel randomized Kaczmarz algorithm for the solution of sparse linear systems on distributed memory", 3rd Computational Science, Mathematical Modelling and Engineering Conference (BEYOND 2023), TOBB University of Economics and Technology (20 October 2023), Ankara, Turkey

Manguoğlu M, "Towards a Robust Preconditioner for Solving General Sparse Linear Systems", Colloquium working group "Modellierung, Numerik, Differentialgleichungen", TU-Berlin (11 July 2023), Berlin, Germany

Çuğu İ, Manguoğlu M, "A Parallel Multithreaded Sparse Triangular System Solver", 1st Workshop on High Performance Computing and Applications (21 December 2019), Ankara, Turkey

Manguoğlu M, "High Performance Sparse Matrix Computations with Applications in Computational Fluid Dynamics", 31st International Conference on Parallel Computational Fluid Dynamics (15-17 May 2019), Antalya, Turkey

Manguoğlu M, Mehrmann V, "A Robust Nested Krylov Subspace Method for Solving Sparse Symmetric Indefinite Linear Systems", BEYOND: Workshop on Computational Science and Engineering (20-21 October 2018), Ankara, Turkey

Arslan H, Manguoğlu M, "Parallel solution of sparse linear systems to find the shortest path in large scale graphs, 10th International Workshop on Parallel Matrix Algorithms and Applications (27-29 June 2018), Zurich, Switzerland

Torun FS, Manguoğlu M, Aykanat C, "Solving Sparse Underdetermined Linear least Squares Problems on Parallel Computing Platforms", SIAM Conference on Parallel Processing for Scientific Computing (12-15 April 2016), Paris, France

Akay HU, Oktay E, Manguoğlu M, Sivas AA, " Improved Parallel Preconditioners for Multiphysics Topology Optimizations", 27th International Conference on Parallel Computational Fluid Dynamics (17-20 May 2015), Montreal, Canada

Manguoğlu M, "Novel Algorithms for Solving Large Sparse Linear System of Equations in Parallel", Advances in Computational Fluid-Structure Interaction and Flow Simulations (March 19-21, 2014), Tokyo, Japan

Kollias G, Manguoğlu M, Saied F, Sameh A, "TRACEMIN-Fiedler: Reducing the weighted bandwidth of a matrix in parallel", Preconditioning of Iterative Methods (1-5 July 2013), Prague, Czech Republic

Tari O, Manguoğlu M, "Revealing the Saddle Point Structure Using the Largest Eigenvector of the Laplacian", International Conference On Preconditioning Techniques For Scientific And Industrial Applications (19-21 June 2013), Oxford, UK

Manguoğlu M, "New Parallel Algorithms for Solving Large Sparse Linear Systems", 9th International Conference on Large-Scale Scientific Computations (3-7 June 2013), Sozopol, Bulgaria

Bölükbaşı E, Manguoğlu M, "A new multi-threaded and recursive direct algorithm for parallel solution of sparse linear systems", 5th International Conference of the ERCIM working group on Computing and Statistics (1-5 December, 2012), Oviedo, Spain

Sameh A, Saied F, Schenk O, Manguoğlu M, "Scalable parallel sparse matrix computations", 5th International Conference of the ERCIM working group on Computing and Statistics (1-5 December, 2012), Oviedo, Spain

Gençtav M, Manguoğlu M, "Enhancing parallelism in Monte-Carlo techniques for solving large sparse linear systems", International Conference on Applied and Computational Mathematics (October 3-6, 2012), Ankara, Turkey

Manguoğlu M, "New advances in parallel solution of large sparse linear systems", European Seminar in Computing (June 25-29, 2012), Pilsen, Czech Republic

Manguoğlu M, Saied F, Sameh A, "Eigensolver-based reordering and parallel traceMIN", SIAM Conference on Applied Linear Algebra (June 18-22, 2012), Valencia, Spain

Yetkin EF, Dağ H, Manguoğlu M, "An efficient way to compute the eigenvalues in a specific region of complex plane", SIAM Conference on Applied Linear Algebra (June 18-22, 2012), Valencia, Spain

Manguoğlu M, "Parallel Algorithms for Solution of Large Sparse Linear Systems with Applications", PRACE Workshop on HPC approaches on life sciences and chemistry, (February 16-19, 2012), Sofia, Bulgaria

Manguoğlu M, Takizawa, Sameh A, Tezduyar T, "Sparse Matrix Computations in Arterial Fluid Mechanics", Sparse Days, (September 6-7, 2011), Toulouse, France

Sameh A, Manguoğlu M, "Towards a Scalable Parallel Sparse Linear System Solver", Coupled Problems in Science and Engineering, (June 20-22, 2011), Kos Island, Greece

Manguoğlu M, Takizawa K, Sameh A, Tezduyar T, "A Nested Scheme with Nodal Ordering for Arterial Fluid-structure Interactions ", Coupled Problems in Science and Engineering, (June 20-22, 2011), Kos Island, Greece

Manguoğlu M, Sathe M, Schenk O, Sameh A, "A Scalable Parallel Preconditioned Sparse Linear System Solver", International Conference on Preconditioning Techniques for Scientific and Industrial Applications (May 16-18, 2011), Bordeaux, France

Akaydın B, Manguoğlu M, "Parallel Image Segmentation Using Fiedler Vector", 2nd International conference on Pervasive Computing, Signal Processing and Applications (September 5-7, 2011), Gjovik, Norway

Manguoğlu M, Cox E, Saied F, Sameh A, "Parallel Computation of the Fiedler Vector and Solution of Large Sparse Linear Systems via Banded Preconditioners", The 7th International Conference on Numerical Methods and Applications(August 20-24, 2010), Borovets, Bulgaria

Cox E, Saied F, Manguoğlu M, Sameh A, "A Split Sparse/Dense Matrix-vector Multiplication Routine", SIAM Annual Meeting (July 12-16, 2010), Pittsburgh, Pennsylvania, USA

Sameh A, Manguoğlu M, Sathe M, Schenk O,"A Scalable Parallel Sparse Linear System Solver", 6th International Workshop on Parallel Matrix Algorithms and Applications (June 29 - July 02, 2010), University of Basel, Switzerland

Sameh A, Manguoğlu M, Saied F, "A Scalable Parallel Sparse Linear System Solver", 1075th American Mathematical Society Meeting (March 27-28 2010), Lexington, Kentucky, USA

Schenk O, Manguoğlu M, Sameh A, Christen M, Sathe M, "Parallel Scalable PDE-Constrained Optimization: Antenna Identification in Hyperthermia Cancer Treatment Planning", Schweizer Numerik Kolloquium (April 24, 2009), University of Basel, Switzerland

Manguoğlu M, Takizawa K, Sameh A, Tezduyar T, "Novel solvers for Linear systems in Computational Fluid Dynamics", *Computational Methods in Marine Engineering* (June 15-17 2009), Trondheim , Norway

Grama A, Koyuturk M, Manguoğlu M, Sameh A , " Parallel banded preconditioners for non-symmetric linear system solvers", 5th International Workshop on Parallel Matrix Algorithms and Applications (June 20-22, 2008), Neuchatel, Switzerland

Manguoğlu M, Koyuturk M, Grama A, Sameh A, "Weighted Matrix Reordering and Parallel Banded Preconditioners for Non-Symmetric Linear Systems" , SIAM Parallel Processing (March 12-14, 2008), Atlanta, Georgia, USA

Sameh A, Manguoğlu M, Naumov M, "A tearing-based hybrid parallel sparse system solver", Computational Methods for Coupled Problems (June 8-9, 2007), Ischia, Italy

Sameh A, Manguoğlu M, Sathe S, Pausewang J, Tezduyar T,"Iterative schemes for time accurate solution of flow in long domains ", 3rd Asian Pacific Congress on Computational Mechanics (December 3-6, 2007), Kyoto, Japan

Sameh A, Manguoğlu M, Sathe S, Tezduyar T, Saied F, "A Nested Iterative Scheme for Linear Systems in Computational Fluid Dynamics", International Conference on Preconditioning Techniques for Large Sparse Matrix Problems in Scientific and Industrial Applications (July 9-12, 2007), Toulouse, France

Sameh A, Manguoğlu M, Sathe S, Pausewang J, Tezduyar T,"Iterative Techniques with Banded Preconditioners for Fluid Mechanics Computations Over Long Domains", Computational Methods in Marine Engineering (June 5-7, 2007) , Barcelona, Spain

Sameh A, Manguoğlu M, Sathe S, Tezduyar T, "A Nested Scheme for Nonsymmetric Linear Systems", Computational Methods for Coupled Problems (May 21-23, 2007) , Ibiza, Spain

Sameh A, Manguoğlu M, Tezduyar T, Sathe S, "A Parallel Hybrid Sparse System Solver", ASME International Mechanical Engineering Congress and Exposition (November 11-15, 2007), Seattle, Washington, USA

Sameh A, Manguoğlu M, Saied F, "A Nested Iterative Linear System Solver", ASME International Mechanical Engineering Congress and Exposition (November 5-10, 2006), Chicago, IL, USA

Sameh A, Polizzi E, Manguoğlu M, "Parallel Banded System Solvers and Preconditioners", Supercomputing (November 11-17, 2006), Tampa, FL, USA

Sameh A, Manguoğlu M, Saied F, "Parallel System Solvers for Navier-Stokes Equations", Parallel Matrix Algorithms and Applications (September 7-9, 2006) , IRISA, Rennes, France

Posters:

Manguoglu M, Kaya GT, Yetkin EF, "Sca-ML: A Novel Approach for Scalable Manifold Learning", ISC High Performance, DIGITAL, June 24-July 2, 2021

Salin S, Manguoglu M, Aktulga M, "Learning the Domain of Sparse Matrices", 15th IEEE International Conference on Machine Learning and Applications, Anaheim, CA, December 18-20, 2016 (Proceedings: https://doi.org/10.1109/ICMLA.2016.0143)

Manguoglu M, Saied F, Sameh A, "SPIKE: A Parallel Scalable Sparse Linear System Solver", SIAM Conference on Parallel Processing for Scientific Computing, Seattle, WA, February 24-26, 2010

Manguoglu M, Saied F, Sameh A, "Scalable Solution of Sparse Linear Systems", PRISM Annual Review Meeting, West Lafayette, IN, October 14-15, 2009

Ananth G, Koyuturk M, Manguoglu M, Sameh A, "WSO Preconditioning Techniques", Supercomputing, Austin, TX, November 15-21, 2008

Technical reports and whitepapers:

Manguoğlu M, "A General sparse linear system solver and its application in OpenFOAM", Partnership for Advanced Computing in Europe (PRACE) Whitepaper, 2012 (www.prace-project.eu/IMG/pdf/A_General_Sparse_Sparse_Linear_System_Solver_and_Its_Application_in_OpenFOM.pdf)

Mustafa Gündoğan, Cevdet Aykanat, Manguoğlu M, "A Parallel Sparse Hybrid Solver and Its Relationship to Graphs and Hypergraphs", Partnership for Advanced Computing in Europe (PRACE) Whitepaper, 2012

(http://www.prace-project.eu/IMG/pdf/aparallelsparsehybridsolveranditsrelationstographsandhypergraphs.pdf)

Grama A, Manguoğlu M, Koyutürk M, Naumov M, Sameh A, "Evaluating Sparse Linear System Solvers on Scalable Parallel Architectures ", Air Force Research Laboratory, AFRL-RI-RS-TR-2008-273, 2008

Naumov M, Manguoğlu M, Mikkelsen CCK, Arsenieva A, Sameh A, "Reliability of Krylov subspace methods - A practical perspective I", Purdue University, Department of Computer Sciences, CSD TR #07-21, 2007

Naumov M, Manguoğlu M, Mikkelsen CCK, Sameh A, "Reliability of Krylov subspace methods - A practical perspective II", Purdue University, Department of Computer Sciences, CSD TR #07-22, 2007

Conference and workshop organization:
7th National High Performance Computing Conference, May 15-17, 2024, http://www.basarim.org.tr/2024/
4rd Workshop on High Performance Computing and Applications, November 25, 2023, https://hpca.toplanti.info.tr/
3rd Workshop on High Performance Computing and Applications, March 26, 2022, https://hpca.toplanti.info.tr/
2nd Workshop on High Performance Computing and Applications, March 6, 2021, https://hpca.toplanti.info.tr/archive
1st Workshop on High Performance Computing and Applications, December 21, 2019, https://hpca.toplanti.info.tr/archive
31st International Conference on Parallel Computational Fluid Dynamics, May 14-17, 2019, http://www.parcfd.org/2019/
European Conference on Numerical Mathematics and Advanced Applications, September 14-18, 2015, http://enumath2015.iam.metu.edu.tr/
4th National High Performance Computing Conference, October 1-2, 2015, http://www.basarim.org.tr/2015/
3rd National High Performance Computing Conference, April 12-14, 2012, http://www.basarim.org.tr/2012
Parallel Algorithms and Programming on GPUs, December 18-19 2010, http://gpgpu.uybhm.itu.edu.tr/page.php?id=12