

Prof. HALUK RAHİM TOPCUOĞLU

Personal Information

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International Researcher IDs

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Biography

Dr. Topcuoglu received M.S. degree and B.S. degree in computer engineering from Bogazici University in 1991 and 1993, respectively. He received Ph.D. degree in computer science and engineering from Syracuse University in 1999. Dr. Topcuoglu has been at Faculty of Engineering, Marmara University since 1999 where he currently is a Full Professor in the Department of Computer Engineering.

His research interests mainly focus in two folds:

** Parallel Algorithm Design, Multicore Computing, Scheduling and Mapping for Multicore Architectures, Reliability Metrics for Multicore Architectures*

** Hybrid Evolutionary Algorithms and their applicability on various domains, Hyper-Heuristic Techniques, Dynamic Optimization Problems.*

Dr. Topcuoglu has received the 2008 IBM Faculty Award. The IBM Faculty Awards are competitive worldwide awards that foster collaboration between researchers at leading universities worldwide; and it also promotes courseware and curriculum innovation. Dr. Topcuoglu also received Best Paper Award at IEEE ISDA (Intelligent System Design and Applications) in 2010. His research was recognized by Marmara University with the University Publication Impact Award in January 2012.

He is an editorial board member of Cluster Computing Journal (SCI-Expanded Journal) and he has been serving as reviewer on leading journals including IEEE TPDS, JPDC, IEEE TEC, Information Science, EJOR, Journal of Heuristics and conferences including IPDPS, HPDC, GECCO, EVOCOP conferences.

Education Information

Doctorate, Syracuse University, Engineering and Computer Science, Computer Science, United States Of America 1994 - 1999

Postgraduate, Bogazici University, Institute Of Science, Bilgisayar Mühendisliği (YI) (Tezli), Turkey 1991 - 1993

Undergraduate, Bogazici University, Faculty Of Engineering, Department Of Computer Engineering, Turkey 1986 - 1991

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Scheduling Task Graphs in Heterogeneous Computing Environments, Syracuse University, Graduate School, Computer Science, 1999

Postgraduate, Comparison of Multi Layer Perceptron Algorithms , Bogazici University, Faculty Of Engineering, Department Of Computer Engineering, 1993

Research Areas

algorithms, Distributed Systems, Parallel Algorithms, Numerical Algorithms, Equipment, Processor Architectures, Theoretical Computer Science, Artificial Intelligence, Computer Learning and Pattern Recognition, Evolutionary Computing

Academic Titles / Tasks

Professor, Marmara University, Faculty of Engineering, Computer Engineering, 2010 - Continues

Associate Professor, Marmara University, Faculty of Engineering, Computer Engineering, 2004 - 2010

Assistant Professor, Marmara University, Faculty of Engineering, Computer Engineering, 1999 - 2004

Academic and Administrative Experience

Bölüm Akademik Teşvik Değerlendirme Komisyonu Başkanı, Marmara University, Faculty of Engineering, Computer Engineering, 2018 - Continues

Bölüm Stratejik Plan Komisyonu Başkanı, Marmara University, Faculty of Engineering, Computer Engineering, 2014 - Continues

Bölüm Kalite Komisyonu Başkanı, Marmara University, Faculty of Engineering, Computer Engineering, 2014 - Continues

Fakülte Kurulu Üyesi, Marmara University, Faculty of Engineering, Computer Engineering, 2014 - Continues

Marmara University, Faculty of Engineering, Computer Engineering, 2014 - Continues

Head of Department, Marmara University, Faculty of Engineering, Computer Engineering, 2003 - Continues

Deputy Head of Department, Marmara University, Faculty of Engineering, Computer Engineering, 2005 - 2014

Fakülte Kurulu Üyesi, Marmara University, Faculty of Engineering, Computer Engineering, 2010 - 2013

Fakülte Yönetim Kurulu Üyesi, Marmara University, Faculty of Engineering, Computer Engineering, 2010 - 2012

Fakülte Yönetim Kurulu Üyesi, Marmara University, Faculty of Engineering, Computer Engineering, 2004 - 2010

Head of Department, Marmara University, Faculty of Engineering, Computer Engineering, 2004 - 2005

Advising Theses

Topcuoğlu H. R., Characterization of changes in dynamic multi-objective optimization problems, Doctorate, S.A.I.SAHMOUD(Student), 2019

Topcuoğlu H. R., Dynamic Multi-Objective Workflow Scheduling in Cloud Computing , Postgraduate, G.ISMAYILOV(Student), 2019

Topcuoğlu H. R., Enhancing fireworks algorithm for dynamic optimization problems, Postgraduate, H.PEKDEMİR(Student), 2017

Topcuoğlu H. R., Characterizing error propagation on scientific applications, Postgraduate, Z.ÖZTÜRK(Student), 2017

Topcuoğlu H. R., Compiler support for enhancing reliability of network-on-chip architectures, Postgraduate, M.ADITYA(Student), 2017

Topcuoğlu H. R., Tosun M. O., Performance and cost efficient reliability framework for multicore architectures, Doctorate, S.ARSLAN(Student), 2017

Topcuoğlu H. R., Impact of sensor detection schemes on performance of evolutionary dynamic optimization techniques, Postgraduate, L.ALtin(Student), 2015

Topcuoğlu H. R., Tosun M. O., Thread vulnerability for multicore architectures, Doctorate, I.ÖZ(Student), 2013

Topcuoğlu H. R., Tosun M. O., Application mapping and optimization for CMP based architectures, Doctorate, B.DEMİRÖZ(Student), 2011

Topcuoğlu H. R., Path planning for multiple mobile sensor platforms, Postgraduate, M.SİFYAN(Student), 2011

TOPCUOĞLU H. R., Scheduling of multiple multi-threaded applications on CMPs, Postgraduate, S.ARSLAN(Student), 2011

Topcuoğlu H. R., Hyper-heuristic approaches for static and dynamic generalized assignment problems, Postgraduate, B.KIRAZ(Student), 2008

Topcuoğlu H. R., 3-D offline path planning for unmanned aerial vehicles by using metaheuristics, Postgraduate, I.HASIRCIOĞLU(Student), 2008

Topcuoğlu H., 3-D offline path planning for unmanned aerial vehicles by using metaheuristics, Postgraduate, I.Hasircioğlu(Student), 2008

Topcuoğlu H. R., Locality aware task scheduling in heterogeneous computing environments, Postgraduate, A.KÖSE(Student), 2007

Topcuoğlu H., Locality aware task scheduling in heterogeneous computing environments, Postgraduate, A.Köse(Student), 2007

Topcuoğlu H. R., Reliability based dynamic scheduling of independent tasks in heterogeneous computing environments, Postgraduate, E.YILDIRIM(Student), 2006

Topcuoğlu H. R., Improving data locality for compiler optimization by using hybrid genetic algorithms, Postgraduate, G.YILMAZ(Student), 2005

Topcuoğlu H. R., Parallel heuristics for location management in mobile networks, Postgraduate, F.CORUT(Student), 2005

TOPCUOĞLU H. R., Location area management for mobile networks with evolutionary algorithms, Postgraduate, B.KARAOĞLU(Student), 2004

Topcuoğlu H. R., Hybrid evolutionary algorithms for solving the register allocation problem, Postgraduate, B.DEMİRÖZ(Student), 2004

TOPCUOĞLU H. R., Parallel implementation of a VQ-based text-independent speaker identification, Postgraduate, R.SOĞANCI(Student), 2004

Topcuoğlu H., Task scheduling techniques for arbitrary network topologies, Postgraduate, A.Fuat(Student), 2003

Topcuoğlu H. R., Task scheduling technique for arbitrary network topologies, Postgraduate, A.FUAT(Student), 2003

Jury Memberships

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, January, 2020

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, July, 2017

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, July, 2017

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, July, 2017

Associate Professor Exam, Associate Professor Exam, Marmara Üniversitesi, September, 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Network Congestion Aware Multiobjective Task Scheduling in Heterogeneous Fog Environments**
Altin L., TOPCUOĞLU H. R., GURGEN F. S.
IEEE Transactions on Industrial Informatics, vol.20, no.2, pp.3015-3024, 2024 (SCI-Expanded)
- II. **Latency-Aware Multi-Objective Fog Scheduling: Addressing Real-Time Constraints in Distributed Environments**
Altin L., TOPCUOĞLU H. R., GURGEN F. S.
IEEE Access, vol.12, pp.62543-62557, 2024 (SCI-Expanded)
- III. **Efficient fireworks algorithms for dynamic optimisation problems in continuous space**

Pekdemir H., TOPCUOĞLU H. R.

JOURNAL OF EXPERIMENTAL & THEORETICAL ARTIFICIAL INTELLIGENCE, vol.36, no.3, pp.389-414, 2024 (SCI-Expanded)

- IV. **Dynamic multi-objective evolutionary algorithms in noisy environments**
Sahmoud S., TOPCUOĞLU H. R.
Information Sciences, vol.634, pp.650-664, 2023 (SCI-Expanded)
- V. **Quantifying the impact of data replication on error propagation**
ÖZTÜRK Z., TOPCUOĞLU H. R., Kandemir M. T.
CLUSTER COMPUTING-THE JOURNAL OF NETWORKS SOFTWARE TOOLS AND APPLICATIONS, vol.26, no.3, pp.1985-1999, 2023 (SCI-Expanded)
- VI. **Studying error propagation on application data structure and hardware**
ÖZTÜRK Z., TOPCUOĞLU H. R., Kandemir M. T.
JOURNAL OF SUPERCOMPUTING, vol.78, no.17, pp.18691-18724, 2022 (SCI-Expanded)
- VII. **A general framework based on dynamic multi-objective evolutionary algorithms for handling feature drifts on data streams**
Sahmoud S., TOPCUOĞLU H. R.
Future Generation Computer Systems, vol.102, pp.42-52, 2020 (SCI-Expanded)
- VIII. **Neural network based multi-objective evolutionary algorithm for dynamic workflow scheduling in cloud computing**
Ismayilov G., TOPCUOĞLU H. R.
Future Generation Computer Systems, vol.102, pp.307-322, 2020 (SCI-Expanded)
- IX. **Exploiting characterization of dynamism for enhancing dynamic multi-objective evolutionary algorithms**
Sahmoud S., TOPCUOĞLU H. R.
Applied Soft Computing Journal, vol.85, 2019 (SCI-Expanded)
- X. **A user-assisted thread-level vulnerability assessment tool**
Oz I., TOPCUOĞLU H. R., Tosun O.
Concurrency Computation, vol.31, no.13, 2019 (SCI-Expanded)
- XI. **Scheduling opportunities for asymmetrically reliable caches**
Arslan S., TOPCUOĞLU H. R., Kandemir M. T., Tosun O.
JOURNAL OF PARALLEL AND DISTRIBUTED COMPUTING, vol.126, pp.134-151, 2019 (SCI-Expanded)
- XII. **Impact of sensor-based change detection schemes on the performance of evolutionary dynamic optimization techniques**
ALTIN L., TOPCUOĞLU H. R.
SOFT COMPUTING, vol.22, no.14, pp.4741-4762, 2018 (SCI-Expanded)
- XIII. **A selective protection scheme of applications using asymmetrically reliable caches**
Arslan S., TOPCUOĞLU H. R., Kandemir M. T., Tosun O.
JOURNAL OF SYSTEMS ARCHITECTURE, vol.75, pp.133-144, 2017 (SCI-Expanded)
- XIV. **Asymmetrically reliable caches for multicore architectures under performance and energy constraints**
Arslan S., TOPCUOĞLU H. R., Kandemir M. T., Tosun O.
Cluster Computing-The Journal of Networks Software Tools and Applications, vol.19, no.4, pp.1819-1833, 2016 (SCI-Expanded)
- XV. **A hyper-heuristic based framework for dynamic optimization problems**
TOPCUOĞLU H. R., Ucar A., ALTIN L.
APPLIED SOFT COMPUTING, vol.19, pp.236-251, 2014 (SCI-Expanded)
- XVI. **A meta-heuristic based three-dimensional path planning environment for unmanned aerial vehicles**
Oz I., TOPCUOĞLU H. R., Ermis M.
SIMULATION-TRANSACTIONS OF THE SOCIETY FOR MODELING AND SIMULATION INTERNATIONAL, vol.89, no.8, pp.903-920, 2013 (SCI-Expanded)
- XVII. **Thread vulnerability in parallel applications**

- Oz I., TOPCUOĞLU H. R., Kandemir M., Tosun O.
JOURNAL OF PARALLEL AND DISTRIBUTED COMPUTING, vol.72, no.10, pp.1171-1185, 2012 (SCI-Expanded)
- XVIII. **Performance evaluation of evolutionary heuristics in dynamic environments**
Ayvaz D., TOPCUOĞLU H. R., Gurgun F.
APPLIED INTELLIGENCE, vol.37, no.1, pp.130-144, 2012 (SCI-Expanded)
- XIX. **Reliability-aware core partitioning in chip multiprocessors**
Oz I., TOPCUOĞLU H. R., Kandemir M., Tosun O.
JOURNAL OF SYSTEMS ARCHITECTURE, vol.58, pp.160-176, 2012 (SCI-Expanded)
- XX. **A new three-dimensional wireless multimedia sensor network simulation environment for connected coverage problems**
Topcuoglu H. R., Ermis M., Bekmezci I., Sifyan M.
SIMULATION-TRANSACTIONS OF THE SOCIETY FOR MODELING AND SIMULATION INTERNATIONAL, vol.88, no.1, pp.110-122, 2012 (SCI-Expanded)
- XXI. **Particle simulation on the Cell BE architecture**
Demiroz B., TOPCUOĞLU H. R., Kandemir M., Tosun O.
CLUSTER COMPUTING-THE JOURNAL OF NETWORKS SOFTWARE TOOLS AND APPLICATIONS, vol.14, no.4, pp.419-432, 2011 (SCI-Expanded)
- XXII. **Positioning and Utilizing Sensors on a 3-D Terrain Part II-Solving With a Hybrid Evolutionary Algorithm**
TOPCUOĞLU H. R., Ermis M., Sifyan M.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.41, no.4, pp.470-480, 2011 (SCI-Expanded)
- XXIII. **Positioning and Utilizing Sensors on a 3-D Terrain Part I-Theory and Modeling**
TOPCUOĞLU H. R., Ermis M., Sifyan M.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART C-APPLICATIONS AND REVIEWS, vol.41, no.3, pp.376-382, 2011 (SCI-Expanded)
- XXIV. **Solving the register allocation problem for embedded systems using a hybrid evolutionary algorithm**
Topcuoglu H. R., Demiroz B., Kandemir M.
IEEE TRANSACTIONS ON EVOLUTIONARY COMPUTATION, vol.11, no.5, pp.620-634, 2007 (SCI-Expanded)
- XXV. **Static task scheduling with a unified objective on time and resource domains**
BOZ B., TOPCUOĞLU H. R.
Computer Journal, vol.49, no.6, pp.731-743, 2006 (SCI-Expanded)
- XXVI. **Static task scheduling with a unified objective on time and resource domains**
Demiröz B., TOPCUOĞLU H. R.
COMPUTER JOURNAL, vol.49, no.6, pp.731-743, 2006 (SCI-Expanded)
- XXVII. **A task scheduling algorithm for arbitrarily-connected processors with awareness of link contention**
Alkaya A. F., Topcuoglu H. R.
CLUSTER COMPUTING-THE JOURNAL OF NETWORKS SOFTWARE TOOLS AND APPLICATIONS, vol.9, no.4, pp.417-431, 2006 (SCI-Expanded)
- XXVIII. **Solving the uncapacitated hub location problem using genetic algorithms**
Topcuoglu H. R., Corut F., Ermis M., Yimaz G.
COMPUTERS & OPERATIONS RESEARCH, vol.32, no.4, pp.967-984, 2005 (SCI-Expanded)
- XXIX. **Evolutionary algorithms for location area management**
Karaoglu B., Topcuoglu H. R., Gurgun F.
APPLICATIONS OF EVOLUTIONARY COMPUTING, PROCEEDINGS, vol.3449, pp.175-184, 2005 (SCI-Expanded)
- XXX. **A hybrid evolutionary algorithm for solving the register allocation problem**
Demiroz B., Topcuoglu H. R., Kandemir M.
EVOLUTIONARY COMPUTATION IN COMBINATORIAL OPTIMIZATION, PROCEEDINGS, vol.3004, pp.62-71, 2004 (SCI-Expanded)
- XXXI. **Parallel implementation of a VQ-based text-independent speaker identification**
Soganci R., Gurgun F., Topcuoglu H. R.

- ADVANCES IN INFORMATION SYSTEMS, PROCEEDINGS, vol.3261, pp.291-300, 2004 (SCI-Expanded)
- XXXII. **Performance-effective and low-complexity task scheduling for heterogeneous computing**
Topcuoglu H. R., Hariri S., Wu M.
IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, vol.13, no.3, pp.260-274, 2002 (SCI-Expanded)
- XXXIII. **Task scheduling with conflicting objectives**
Topcuoglu H. R., Sevilmis C.
ADVANCES IN INFORMATION SYSTEMS, vol.2457, pp.346-355, 2002 (SCI-Expanded)
- XXXIV. **Efficient code deployment for heterogeneous distributed data sources**
Demir D., Topcuoglu H. R., Kavukcu E.
ADVANCES IN INFORMATION SYSTEMS, vol.2457, pp.395-404, 2002 (SCI-Expanded)
- XXXV. **ATM High Performance Distributed Computing Laboratory**
Hariri S., Bing X., Chen T., Furmanski W., Ganesh K., Kim D., Kim Y., Lee J., Menon V., Park S., et al.
WORKSHOP ON HIGH PERFORMANCE COMPUTING AND GIGABIT LOCAL AREA NETWORKS, vol.226, pp.50-74, 1997 (SCI-Expanded)

Articles Published in Other Journals

- I. **Task scheduling algorithms for heterogeneous processors**
TOPCUOĞLU H. R., Hariri S., Wu M.
Proceedings of the Heterogeneous Computing Workshop, HCW, pp.3-14, 1999 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **A New Prediction-Based Algorithm for Dynamic Multi-objective Optimization Problems**
Karkazan K., TOPCUOĞLU H. R., Sahmoud S.
26th International Conference on Applications of Evolutionary Computation, EvoApplications 2023, held as part of EvoStar 2023, Brno, Czech Republic, 12 - 14 April 2023, vol.13989 LNCS, pp.194-209
- II. **Memory-Assisted Dynamic Multi-Objective Evolutionary Algorithm for Feature Drift Problem**
SAHMOUD S. A., TOPCUOĞLU H. R.
2020 IEEE Congress on Evolutionary Computation (CEC), Glasgow, United Kingdom, United Kingdom, 19 - 24 July 2020
- III. **Hybrid techniques for detecting changes in less detectable dynamic multiobjective optimization problems**
Sahmoud S., TOPCUOĞLU H. R.
2019 Genetic and Evolutionary Computation Conference, GECCO 2019, Prague, Czech Republic, 13 - 17 July 2019, pp.1449-1456
- IV. **Dynamic Multi-Objective Workflow Scheduling for Cloud Computing Based on Evolutionary Algorithms**
Ismayilov G., TOPCUOĞLU H. R.
11th IEEE/ACM International Conference on Utility and Cloud Computing (UCC-Companion) / 5th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT), Zürich, Switzerland, 17 - 20 December 2018, pp.103-108
- V. **Soft Error Characterization on Scientific Applications**
Ozturk Z., TOPCUOĞLU H. R., Arslan S., Kandemir M. T.
16th IEEE Int Conf on Dependable, Autonom and Secure Comp/16th IEEE Int Conf on Pervas Intelligence and Comp/4th IEEE Int Conf on Big Data Intelligence and Comp/3rd IEEE Cyber Sci and Technol Congress (DASC/PiCom/DataCom/CyberSciTech), Athens, Greece, 12 - 15 August 2018, pp.592-599
- VI. **A Type Detection Based Dynamic Multi-objective Evolutionary Algorithm**
Sahmoud S., TOPCUOĞLU H. R.

21st International Conference on the Applications of Evolutionary Computation (EvoApplications), Parma, Italy, 4 - 06 April 2018, vol.10784, pp.879-893

VII. Hybridizing Change Detection Schemes For Dynamic Optimization Problems

ALTIN L., TOPCUOĞLU H. R., ERMIŞ M.

IEEE Congress on Evolutionary Computation (CEC 2017), Donostia - San Sebastián, Spain, 5 - 08 June 2017

VIII. Compiler-Enhanced Reliability for Network-on-Chip Architectures

Sasongko M. A., TOPCUOĞLU H. R., Arslan S., Kandemir M. T.

25th Euromicro International Conference on Parallel, Distributed and Network-Based Processing (PDP), St Petersburg, Russia, 6 - 08 March 2017, pp.584-588

IX. Sensor-Based Change Detection Schemes for Dynamic Multi-Objective Optimization Problems

Sahmoud S., TOPCUOĞLU H. R.

IEEE Symposium Series on Computational Intelligence (IEEE SSCI), Athens, Greece, 6 - 09 December 2016

X. Enhancing Fireworks Algorithms for Dynamic Optimization Problems

Pekdemir H., TOPCUOĞLU H. R.

IEEE Congress on Evolutionary Computation (CEC) held as part of IEEE World Congress on Computational Intelligence (IEEE WCCI), Vancouver, Canada, 24 - 29 July 2016, pp.4045-4052

XI. Protecting Code Regions on Asymmetrically Reliable Caches

ARSLAN S., TOPCUOĞLU H. R., KANDEMİR M. T., TOSUN M. O.

Architecture of Computing Systems, Germany, 4 - 07 April 2016, pp.375-387

XII. A Memory-Based NSGA-II Algorithm for Dynamic Multi-objective Optimization Problems

Sahmoud S., TOPCUOĞLU H. R.

19th European Conference on the Applications of Evolutionary Computation (EvoApplications), Porto, Portugal, 30 March - 01 April 2016, vol.9598, pp.296-310

XIII. Evolutionary Dynamic Optimization Techniques for Marine Contamination Problem

ALTIN L., TOPCUOĞLU H. R., Ermiş M.

GECCO (Genetic and Evolutionary Computing Conference) Workshop, 11 - 15 July 2015

XIV. Performance and Energy Efficient Asymmetrically Reliable Caches for Multicore Architectures

Arslan S., TOPCUOĞLU H. R., Kandemir M. T., Tosun O.

29th IEEE International Parallel and Distributed Processing Symposium (IPDPS), Hyderabad, Pakistan, 25 - 29 May 2015, pp.1025-1032

XV. Performance Evaluation of Sensor-Based Detection Schemes on Dynamic Optimization Problems

ALTIN L., TOPCUOĞLU H. R.

IEEE Symposium on Computational Intelligence in Dynamic and Uncertain Environments (CIDUE), Florida, United States Of America, 9 - 12 December 2014, pp.24-31

XVI. Hyper-Heuristics for Online UAV Path Planning Under Imperfect Information

Akar E., TOPCUOĞLU H. R., Ermis M.

17th European Conference on Applications of Evolutionary Computation (EvoApplications), Granada, Nicaragua, 23 - 25 April 2014, vol.8602, pp.741-752

XVII. Examining Thread Vulnerability Analysis Using Fault-Injection

Oz I., TOPCUOĞLU H. R., Kandemir M., Tosun O.

IFIP/IEEE WG 10.5 21st International Conference on Very Large Scale Integration (VLSI-SoC), İstanbul, Turkey, 6 - 09 October 2013, pp.240-245

XVIII. Parallelizing Broad Phase Collision Detection Algorithms for Sampling Based Path Planners

Geleri F., Tosun O., Topcuoglu H. R.

21st Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP), Belfast, United Kingdom, 27 February - 01 March 2013, pp.384-391

XIX. Performance-Reliability Tradeoff Analysis for Multithreaded Applications

Oz I., TOPCUOĞLU H. R., Kandemir M., Tosun O.

Design, Automation and Test in Europe Conference and Exhibition (DATE), Dresden, Germany, 12 - 16 March 2012, pp.893-898

XX. Locality-Aware Dynamic Mapping for Multithreaded Applications

BOZ B., TOPCUOĞLU H. R., KANDEMİR M., Tosun O.

2012 20th Euromicro International Conference on Parallel, Distributed and Network-based Processing, Munich, Germany, 15 - 17 February 2012, pp.185-189

XXI. Quantifying Thread Vulnerability for Multicore Architectures

Oz I., TOPCUOĞLU H. R., Kandemir M., Tosun O.

19th International Euromicro Conference on Parallel, Distributed and Network-Based Processing (PDP), Ayia Napa, CYPRUS, 9 - 11 February 2011, pp.32-39

XXII. Hyper-heuristic approaches for the dynamic generalized assignment problem

Kiraz B., TOPCUOĞLU H. R.

2010 10th International Conference on Intelligent Systems Design and Applications, ISDA'10, Cairo, Egypt, 29 November - 01 December 2010, pp.1487-1492

XXIII. Path Planning for Mobile Sensor Platforms on a 3-D Terrain Using Hybrid Evolutionary Algorithms

Sifyan M., TOPCUOĞLU H. R., Ermis M.

2010 IEEE World Congress on Computational Intelligence, Barcelona, Spain, 18 - 23 July 2010

XXIV. Hybrid Evolutionary Algorithms for Sensor Placement on a 3D Terrain

TOPCUOĞLU H. R., Ermis M., Sifyan M.

9th International Conference on Intelligent Systems Design and Applications, Pisa, Italy, 30 November - 02 December 2009, pp.511-512

XXV. 3 D path planning for the navigation of unmanned aerial vehicles by using evolutionary algorithms

Hasircioğlu I., Topcuoğlu H. R., Ermiş M.

Genetic and Evolutionary Computing Conference (GECCO), Georgia, United States Of America, 12 - 16 July 2008

XXVI. A memetic algorithm for reliability-based dynamic scheduling in heterogeneous computing environments

Yildirim E., Kosar T., TOPCUOĞLU H. R.

19th IASTED International Conference on Parallel and Distributed Computing and Systems, Cambridge, MA, United States Of America, 19 - 21 November 2007, pp.448-453

XXVII. Hybrid techniques for dynamic optimization problems

Ayvaz D., Topcuoglu H. R., Gorgen F.

21st International Symposium on Computer and Information Sciences (ISCIS 2006), İstanbul, Turkey, 1 - 03 November 2006, vol.4263, pp.95-104

XXVIII. A comparative study of evolutionary optimization techniques in dynamic environments

Ayvaz D., Topcuoglu H. R., Gorgen F.

8th Annual Genetic and Evolutionary Computation Conference, Washington, United States Of America, 8 - 12 July 2006, pp.1397-1398

XXIX. Genetic algorithms for positioning and utilizing sensors in synthetically generated landscapes

Topcuoglu H. R., Ermis M.

8th Annual Genetic and Evolutionary Computation Conference, Washington, United States Of America, 8 - 12 July 2006, pp.1801-1802

XXX. Evolutionary algorithms for location area management

Karaoğlu B., TOPCUOĞLU H. R., Gürgen F.

EvoWorkshops 2005: EvoBIO, EvoCOMNET, EvoHOT, EvoIASP, EvoMUSART, and EvoSTOC, Lausanne, Switzerland, 30 March - 01 April 2005, vol.3449, pp.175-184

XXXI. A hybrid evolutionary algorithm for solving the register allocation problem

BOZ B., TOPCUOĞLU H. R., KANDEMİR M.

Evolutionary Computation in Combinatorial Optimization, Portugal, 5 - 07 April 2004, pp.62-71

XXXII. Task scheduling with conflicting objectives

TOPCUOĞLU H. R., Sevilmis C.

2nd International Conference on Advances in Information Systems, ADVIS 2002, İzmir, Turkey, 23 - 25 October 2002, vol.2457, pp.346-355

XXXIII. Efficient code deployment for heterogeneous distributed data sources

DEMİR D., TOPCUOĞLU H. R., Kavukcu E.

2nd International Conference on Advances in Information Systems, ADVIS 2002, İzmir, Turkey, 23 - 25 October 2002, vol.2457, pp.395-404

XXXIV. Task scheduling algorithms for heterogeneous processors

Topcuoglu H. R., Hariri S., Wu M.

8th Heterogeneous Computing Workshop (HCW 99), San Juan, Argentina, 12 April 1999, pp.3-14

XXXV. A global computing environment for networked resources

Topcuoglu H. R., Hariri S.

1997 International Conference on Parallel Processing, Illinois, United States Of America, 11 - 15 August 1997, pp.493-496

XXXVI. The software architecture of a virtual distributed computing environment

Topcuoglu H. R., Hariri S., Furmanski W., Valente J., Ra I., Kim D., Kim Y., Bing X., Ye B.

6th IEEE International Symposium on High Performance Distributed Computing, Oregon, United States Of America, 5 - 08 August 1997, pp.40-49

XXXVII. Global computing environment for networked resources

TOPCUOĞLU H. R., Hariri S.

Proceedings of the 1997 International Conference on Parallel Processing, Bloomington, IL, USA, 11 - 15 September 1997, pp.493-496

Supported Projects

Topcuoğlu H. R., TUBITAK Project, Error Propagation-Centric Application Optimization, 2019 - 2021

Topcuoğlu H. R., Bozkuş Z., TUBITAK Project, Birt Yüksek performanslı Çok Büyük Ölçekli Beyin Simülasyonu İçin Runtime Sistemi, 2014 - 2018

Topcuoğlu H. R., TUBITAK Project, Elastik - Çok-Çekirdekli Mimarilere Yönelik Katmanlar Arası Güvenilirlik Optimizasyon Sistemi, 2014 - 2018

Topcuoğlu H. R., Project Supported by Higher Education Institutions, Dinamik Eniyileme Problemine Karma Yaklaşımlar, 2015 - 2017

Topcuoğlu H. R., Altinkut Uncuoğlu A., Mertoğlu B., Kayaman Apohan N., Kahraman M. V., Sezer A. D., TUBITAK Project, Marmara Üniversitesinin ARDEB Programlarına Yönelik Proje Desteklerinden Faydalanma Potansiyelinin Artırılması, 2014 - 2017

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Memberships / Tasks in Scientific Organizations

IEEE - Computer Society, Member, 2000 - Continues, United States Of America

Scientific Refereeing

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Publication: 73
Citation (WoS): 2584
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H-Index (WoS): 12
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Awards

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Topcuoğlu H. R., 129. Yıl Yayın Performans Ödülü, Marmara Üniversitesi, January 2012
Topcuoğlu H. R., Best Paper Award, International Conference On Intelligent Systems Design And Applications , November 2010
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