

Asst. Prof. SANEM ARSLAN YILMAZ

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: Z-4587-2019

ScopusID: 57188688851

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Biography

She is working as an Assistant Professor in the Computer Engineering Department, Marmara University. She completed her Ph.D. study in Computer Engineering Department, Boğaziçi University in 2017. She worked as a post-doctoral researcher at Barcelona Supercomputing Center (BSC) between Nov. 2019 - Oct. 2020. Her research interests are Computer Architecture, Multicore Systems, High-Performance Computing, Fault Tolerance, Reliability, and Parallel Programming.

Education Information

Doctorate, Bogazici University, Institute Of Science, Bilgisayar Mühendisliği (Dr), Turkey 2011 - 2017

Postgraduate, Bogazici University, Institute Of Science, Bilgisayar Mühendisliği (YI) (Tezli), Turkey 2009 - 2011

Undergraduate, Marmara University, Faculty of Engineering, Computer Engineering, Turkey 2004 - 2009

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Performance and cost efficient reliability framework for multicore architectures, Boğaziçi Üniversitesi, Institute Of Science, Bilgisayar Mühendisliği (Dr), 2017

Postgraduate, Scheduling of Multiple Multithreaded Applications on Chip Multiprocessors, Boğaziçi Üniversitesi, Institute Of Science, 2011

Research Areas

Parallel Algorithms, Equipment, Processor Architectures, Application Based Architecture

Academic Titles / Tasks

Assistant Professor, Marmara University, Faculty of Engineering, Computer Engineering, 2021 - Continues
Research Assistant PhD, Marmara University, Faculty of Engineering, Computer Engineering, 2009 - 2021

Courses

Advanced Unix Programming, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021
Computer Programming II, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021, 2018 - 2019, 2017 - 2018
Principles of Embedded System Design, Undergraduate, 2023 - 2024
Computer Programming I, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021, 2018 - 2019, 2017 - 2018
Special Topics in Computer Engineering III, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Approximate execution and grouping of critical sections for performance-accuracy tradeoff**
ALTUNTAŞ Z., ARSLAN YILMAZ S., BOZ B.
Concurrency and Computation: Practice and Experience, vol.35, no.24, 2023 (SCI-Expanded)
- II. **Efficient thread-to-core mapping alternatives for application-level redundant multithreading**
ARSLAN YILMAZ S., Ünsal O.
Concurrency and Computation: Practice and Experience, vol.35, no.24, 2023 (SCI-Expanded)
- III. **Efficient selective replication of critical code regions for SDC mitigation leveraging redundant multithreading**
Arslan S., Unsal O.
JOURNAL OF SUPERCOMPUTING, vol.77, no.12, pp.14130-14160, 2021 (SCI-Expanded)
- IV. **Predicting the Soft Error Vulnerability of Parallel Applications Using Machine Learning**
Oz I., Arslan S.
INTERNATIONAL JOURNAL OF PARALLEL PROGRAMMING, vol.49, no.3, pp.410-439, 2021 (SCI-Expanded)
- V. **A Survey on Multithreading Alternatives for Soft Error Fault Tolerance**
ÖZ I., ARSLAN S.
ACM COMPUTING SURVEYS, vol.52, no.2, 2019 (SCI-Expanded)
- VI. **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)
- VII. **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)
- VIII. **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)

Refereed Congress / Symposium Publications in Proceedings

- I. **Soft Error Characterization on Scientific Applications**
Öztürk Z., TOPCUOĞLU H. R., ARSLAN YILMAZ S., Kandemir M. T.
16th IEEE Intl Conf on Dependable, Autonomic and Secure Computing, 12 - 15 August 2018
- II. **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

III. 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

IV. 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

Scientific Refereeing

JOURNAL OF SUPERCOMPUTING, National Scientific Refreed Journal, December 2020

CLUSTER COMPUTING-THE JOURNAL OF NETWORKS SOFTWARE TOOLS AND APPLICATIONS, National Scientific Refreed Journal, July 2020

FUTURE GENERATION COMPUTER SYSTEMS-THE INTERNATIONAL JOURNAL OF GRID COMPUTING-THEORY METHODS AND APPLICATIONS, Journal Indexed in SCI-E, May 2020

IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS, Journal Indexed in SCI-E, January 2020

Mobility Activity

Post Doc, Post Doc, Barcelona Supercomputing Center (BSC), Spain, 2019 - 2020

Metrics

Publication: 12

Citation (WoS): 13

Citation (Scopus): 15

H-Index (WoS): 2

H-Index (Scopus): 3

Scholarships

2219 - Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TUBITAK, 2019 - 2020

2211 - Yurt İçi Lisansüstü Burs Programı, TUBITAK, 2011 - 2017

Awards

Arslan Yılmaz S., Lisans Mezuniyet Üçüncülüğü, Marmara Üniversitesi, June 2009

Non Academic Experience

Barcelona Supercomputing Center