

Dr.Öğr.Üyesi GÜLAY YALÇIN ALKAN

Kişisel Bilgiler

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Eğitim Bilgileri

Doktora, Universidad Politecnica De Cataluna, Computer Architecture , İspanya 2007 - 2014

Yüksek Lisans, Tobb Ekonomi Ve Teknoloji Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Türkiye 2006 - 2007

Lisans, Hacettepe Üniversitesi, Mühendislik Fakültesi, Türkiye 1998 - 2003

Yabancı Diller

İngilizce, C1 İleri

İspanyolca, B1 Orta

Yaptığı Tezler

Doktora, Designs for Increasing Reliability While Reducing Energy and Increasing Lifetime, Universidad Politecnica De Cataluna, Computer Architecture , Computer Architecture, 2014

Yüksek Lisans, Mikroişlemcilerde etiket karşılaştırıcılarının kullanılmasıyla geçici hataların tespiti , Tobb Ekonomi Ve Teknoloji Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mhendisliği, 2007

Araştırma Alanları

Bilgisayar Bilimleri, Donanım, İşlemci Mimarisi , Mühendislik ve Teknoloji

Akademik Unvanlar / Görevler

Dr.Öğr.Üyesi, Abdullah Gül Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2018 - Devam Ediyor

Yrd.Doç.Dr., Abdullah Gül Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2016 - 2018

Verdiği Dersler

Object Oriented Programming - S2, Lisans, 2016 - 2017

Computer Architecture, Yüksek Lisans, 2015 - 2016, 2016 - 2017

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

1. A Methodology for Comparing the Reliability of GPU-Based and CPU-Based HPCs

Cini N., YALÇIN ALKAN G.

ACM COMPUTING SURVEYS, cilt.53, sa.1, 2020 (SCI İndekslerine Giren Dergi)

II. Exploiting Existing Comparators for Fine-Grained Low-Cost Error Detection

Yalcin G., Ergin O., Islek E., UNSAL O. S. , CRISTAL A.

ACM TRANSACTIONS ON ARCHITECTURE AND CODE OPTIMIZATION, cilt.11, sa.3, ss.233-256, 2014 (SCI İndekslerine Giren Dergi)

III. Bit Impact Factor: Towards making fair vulnerability comparison

Can S. Z. , Yalcin G., Ergin O., UNSAL O. S. , Cristal A.

Microprocessors and Microsystems, cilt.38, sa.6, ss.598-604, 2014 (SCI İndekslerine Giren Dergi)

IV. Using tag-match comparators for detecting soft errors

Yalçin G., Ergin O.

IEEE Computer Architecture Letters, cilt.6, sa.2, 2007 (SCI Expanded İndekslerine Giren Dergi)

Kitap & Kitap Bölümleri

I. Transactional Memory for Reliability

YALÇIN G., UNSAL O.

Transactional Memory. Foundations, Algorithms, Tools, and Applications, Guerraoui R., Romano P. , Editör, Springer International Publishing, İsviçre, ss.268-282, 2015

II. Transactional Memory for Reliability

YALÇIN G., Unsal O.

Transactional Memory Foundations Algorithms Tools and Applications, Rachid Guerraoui ve Paolo Romano, Editör, Springer, ss.268-282, 2014

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

I. Uygulamaların Güvenilirlik Analizi

AKTAŞ H., YALÇIN G.

İşlemci Tasarım Çalıştayı, Türkiye, 19 Eylül 2019

II. Error Tolerating Methods for Increasing NAND Flash Memory Lifetime

YALÇIN G.

1st WORKSHOP ON TF-X INTEGRATED PROCESSING UNIT TECHNOLOGIES, Türkiye, 11 - 13 Aralık 2018

III. Designing and Modelling Selective Replication for Fault-tolerant HPC Applications

Subasi O., YALÇIN G., Zyulkyarov F., Unsal O., Labarta J.

17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID), Madrid, İspanya, 14 - 17 Mayıs 2017, ss.452-457

IV. A runtime heuristic to selectively replicate tasks for application-specific reliability targets

Subasi O., YALÇIN G., ZYULKYAROV F., UNSAL O., LABARTA J.

IEEE International Conference on Cluster Computing (CLUSTER), Taipei, Tayvan, 13 - 15 Eylül 2016, ss.498-505

V. CRC Based Memory Reliability for Task Parallel HPC Applications

Subasi O., UNSAL O., LABARTA J., YALÇIN G., CRISTAL A.

2016 IEEE International Parallel and Distributed Processing Symposium (IPDPS), Chicago, Amerika Birleşik Devletleri, 23 - 27 Mayıs 2016, ss.1101-1112

VI. Energy minimization at all layers of the data center The ParaDIME project

PALOMAR O., RETHINAGIRI S. K. , YALÇIN G., TITOS R., PRIETO P., TORELLA E., UNSAL O., CRISTAL A., FELBER P., KNAUTH T.

Design Automation and Test in Europe, Dresden, Almanya, 14 - 18 Mart 2016, ss.684-689

VII. Exploring Energy Reduction in Future Technology Nodes via Voltage Scaling with Application to 10nm

YALÇIN G., Rethinagiri S. K. , Palomar O., Unsal O., Cristal A., Milojevic D.

2016 24th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP), Heraklion, Crete, Greece, 17 - 19 Şubat 2016

- VIII. **JSRAM: A circuit-level technique for trading-off robustness and capacity in cache memories**
Ahangari H., Yalcin G., Ozturk O., UNSAL O., CRISTAL A.
IEEE Computer Society Annual Symposium on VLSI, ISVLSI 2015, Montpellier, Fransa, 8 - 10 Temmuz 2015, ss.149-154
- IX. **Flexicache Highly Reliable and Low Power Cache under Supply Voltage Scaling**
YALÇIN G., SEYEDI A., UNSAL O., CRISTAL A.
Latin American High Performance Computing Conference, Valparaiso, Şili, 20 - 22 Ekim 2014, ss.173-190
- X. **System-level power amp energy estimation methodology and optimization techniques for CPU-GPU based mobile platforms**
Rethinagiri S., YALÇIN G., Moreno J. A. , Palomar O., Unsal O., Cristal A.
2014 IEEE 12th Symposium on Embedded Systems for Real-time Multimedia (ESTIMedia), Greater Noida, India, 16 - 17 Ekim 2014
- XI. **ParaDIME: Parallel Distributed Infrastructure for Minimization of Energy**
RETHINAGIRI S. K. , PALOMAR O., SOBE A., KNAUTH T., BARCZYNSKI W., Yalcin G., Hayduk Y., CRISTAL A., UNSAL O., FELBER P., et al.
17th Euromicro Conference on Digital System Design (DSD), Verona, İtalya, 27 - 29 Ağustos 2014, ss.191-198
- XII. **Exploiting a fast and simple ECC for scaling supply voltage in level-1 caches**
Yalcin G., Islek E., Tozlu O., REVIRIEGO P., Cristal A., UNSAL O. S. , Ergin O.
20th IEEE International On-Line Testing Symposium, IOLTS 2014, Catalunya, İspanya, 7 - 09 Temmuz 2014, ss.1-6
- XIII. **Neighbor cell assisted error correction for MLC NAND flash memories**
CAI Y., YALÇIN G., MUTLU O., HARATSCH E. F. , CRISTAL A., UNSAL O., MAI K.
The 2014 ACM international conference on Measurement and modeling of computer systems - SIGMETRICS '14, Texas, Amerika Birleşik Devletleri, 16 - 20 Haziran 2014, ss.491-504
- XIV. **Combining error detection and transactional memory for energy-efficient computing below safe operation margins**
Yalcin G., SOBE A., HARMANCI D., VORONIN A., Wamhoff J., FELBER P., UNSAL O., CRISTAL A., FETZER C.
2014 22nd Euromicro International Conference on Parallel, Distributed, and Network-Based Processing, PDP 2014, Turin, İtalya, 12 - 14 Şubat 2014, ss.248-255
- XV. **Fault tolerance for multi-threaded applications by leveraging hardware transactional memory**
Yalcin G., UNSAL O. S. , CRISTAL A.
2013 ACM International Conference on Computing Frontiers, CF 2013, Ischia, İtalya, 14 - 16 Mayıs 2013
- XVI. **Circuit design of a novel adaptable and reliable L1 data cache**
Seyedi A., Yalcin G., UNSAL O. S. , Cristal A.
23rd ACM International Conference of the Great Lakes Symposium on VLSI, GLSVLSI 2013, Paris, Fransa, 2 - 03 Mayıs 2013, ss.333-334
- XVII. **FaultM Error Detection and Recovery Using Hardware Transactional Memory**
YALÇIN G., UNSAL O., CRISTAL A.
Design Automation and Test in Europe, Grenoble, Fransa, 18 - 22 Mart 2013, ss.220-2205
- XVIII. **Flash correct-and-refresh: Retention-aware error management for increased flash memory lifetime**
CAI Y., Yalcin G., MUTLU O., HARATSCH E. F. , CRISTAL A., UNSAL O. S. , MAI K.
2012 IEEE 30th International Conference on Computer Design, ICCD 2012, Montreal, Kanada, 30 Eylül - 03 Ekim 2012, ss.94-101
- XIX. **SymptomTM: Symptom-based error detection and recovery using Hardware Transactional Memory**
Yalcin G., UNSAL O. S. , Cristal A., HUR I., VALERO M.
20th International Conference on Parallel Architectures and Compilation Techniques, PACT 2011, Galveston, TX, Amerika Birleşik Devletleri, 10 - 14 Ekim 2011, ss.199-200
- XX. **FIMSIM A fault injection infrastructure for microarchitectural simulators**
YALÇIN G., CRISTAL A., UNSAL O., VALERO M.

2011 IEEE 29th International Conference on Computer Design (ICCD), Boston, Amerika Birleşik Devletleri, 9 - 12 Ekim 2011, ss.431-432

Bilimsel Hakemlikler

Microelectronics Reliability, SCI Kapsamındaki Dergi, Nisan 2016

Atıflar

Toplam Atıf Sayısı (WOS):96

h-indeksi (WOS):3