

Oğuz Ergin

TOBB Ekonomi ve Teknoloji Üniversitesi, Bilgisayar Mühendisliği Bölümü, Söğütözü Cad. No: 43, Söğütözü, Ankara / Türkiye
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1 EĞİTİM

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|-----------------------------|---|----------|
| • Doktora (PhD) | Bilgisayar Bilimleri, State University of New York - Binghamton , New York, ABD | May 2005 |
| | Doktora Tez Başlığı: "Register File Optimizations for Superscalar Microprocessors", Doktora Danışmanı: Prof. Kanad Ghose | |
| • Yüksek Lisans (MS) | Computer Science, State University of New York - Binghamton , New York, USA | May 2003 |
| | Yüksek Lisans Tez Başlığı: "Circuit Techniques for Power-Aware Microprocessors", Yüksek Lisans Danışmanı: Prof. Kanad Ghose | |
| • Lisans (BS) | Elektrik - Elektronik Mühendisliği, Orta Doğu Teknik Üniversitesi , Ankara, Türkiye | Haz 2000 |

2 ÇALIŞMA GEÇMİŞİ

2.1 Akademik Geçmiş

- **TOBB Ekonomi ve Teknoloji Üniversitesi**, Ankara, Türkiye
 - **Rektörlük**
 - **Rektör Danışmanı - Stratejik Planlama** (Ocak'15 - sürüyor)
(Nisan'13 - Ağustos'13)
 - **Bilgisayar Mühendisliği Bölümü**
 - **Bölüm Başkanı** (Temmuz'16 - sürüyor)
 - **Profesör** (Ocak'18 - sürüyor)
 - **Doçent** (Nisan'12 - Ocak'18)
 - **Yardımcı Doçent** (Haziran'06 - Nisan'12)
 - **Öğretim Görevlisi** (Aralık'05 - Haziran'06)
 - **Yapay Zeka Mühendisliği Bölümü**
 - **Bölüm Başkan Vekili** (Temmuz'19 - sürüyor)
 - **Mühendislik Fakültesi**
 - **Mekatronik Yan Dal Programı Danışma Kurulu Üyesi** (Nisan'13 - sürüyor)
 - **Fakülte Kurulu Yardımcı Doçent Temsilcisi** (Temmuz'08 - Ağustos'11)
 - **Fen Bilimleri Enstitüsü**
 - **Müdür Yardımcısı** (Aralık'11 - Temmuz'13)
 - **Komisyonlar**
 - **Kabul Komisyonu Başkanı (Çift Ana Dal, Yan Dal ve Yatay Geçiş)** (Mart'17 - sürüyor)
 - **Üniversite Süreçleri Komisyonu Üyesi** (Kasım'10 - Eylül'11)
 - **Ortak Eğitim Komisyonu Üyesi** (Ekim'09 - Haziran'10)
 - **Yazılım Geliştirme Koordinatörü** (Ağustos'07 - May'08)
- **Kara Harp Okulu**, Ankara, Türkiye
 - **Department of Computer Engineering**
 - **Yarı Zamanlı Öğretim Elemanı** (Eylül'17 - Ocak'18)
(Ekim'15 - Ocak'16)
- **University of Edinburgh**, Edinburgh, UK
 - **School of Informatics - Institute for Computing Systems Architecture**
 - **Araştırmacı** (Mayıs'15 - Ağustos'16)
- **University of Notre Dame**, Indiana, USA
 - **Department of Computer Science and Engineering**
 - **Visiting Associate Professor** (Ocak'14 - Aralık'14)
- **State University of New York (SUNY) - Binghamton**, New York, USA
 - **Bilgisayar Bilimleri ve Mühendisliği Bölümü**
 - **Araştırma Asistanı** (Haziran'01 - Ağustos'04)
 - **Öğretim Asistanı** (Ocak'01 - Haziran'04)
 - CS210 - Logic Design (Mantıksal Devre Tasarımı)
 - CS325 - Computer Organization and Design (Bilgisayar Organizasyonu ve Tasarımı)
 - CS522 - Computer Architecture and Organization (Bilgisayar Mimarisi)

2.2 Piyasa Geçmişi

- **Erendiz Süperbilgisayar**, Eskişehir, Türkiye
 - **Danışman ve Donanım Tasarım Lideri** (Ekim'07 - Ocak'09)
- **Intel Barcelona Research Center (IBRC)**, Barcelona, Spain
 - **Kıdemli Araştırmacı** (Eylül'04 - Kasım'05)
- **ASELSAN**, Ankara, Türkiye
 - **Stajyer**, Termal Kamera Geliştirme Grubu (Ağustos'99 - Eylül'99)
- **TAI**, Ankara, Türkiye
 - **Danışman**, Aviyonik Grubu (Haziran'19 - sürüyor)
 - **Stajyer**, Aviyonik Grubu (Ağustos'98 - Eylül'98)

2.3 Girişimcilik Geçmişi

- **Kasırga Bilişim Ltd.**, Ankara, Türkiye
 - **Kurucu Ortak ve Müdür** (Ocak'09 - Ağustos'17)
 - KOSGEB Destekli (10.000 TL girişim desteği)
- **Yumruk Uzay ve Savunma Ltd.**, Ankara, Türkiye
 - **Kurucu Ortak ve Müdür** (Mart'10 - May'15)
 - Sanayi Bakanlığı Destekli (100.000 TL Teknogirişim desteği)

3 YAYINLAR

3.1 Kitap

1. "Java: Bilgisayar Programlamaya Giriş"
Ali Yazıcı, Erdoğan Doğdu, A. Murat Özbayoğlu, Y. Murat Erten, **Oğuz Ergin**
Palme Yayıncılık, 2007. ISBN: 978-9944-341-57-8.

3.2 Dergi Yayınları

1. "Opcode Vector: an Efficient Scheme to Detect Soft Errors in Instructions"
Jorge Martinez, Mert Atamaner, Pedro reviriego, **Oğuz Ergin**, Marco Ottavi
Elsevier Microelectronics Reliability, Vol.86, Temmuz 2018, pp.92-97.
2. "GRIM-Filter: fast seed location filtering in DNA read mapping using processing-in-memory technologies"
Jeremie Kim, Damla Şenol Çalı, Honyi Xin, Donghyuk Lee, Saugata Ghose, Mohammed Alser, Hasan Hassan, **Oğuz Ergin**, Can Alkan, Onur Mutlu
BMC Genomics, Vol.19, Sup.2, Article 89, Mayıs 2018.
3. "GateKeeper: a new hardware architecture for accelerating pre-alignment in DNA short read mapping"
Mohammed Alser, Hasan Hassan, Hongyi Xin, **Oğuz Ergin**, Onur Mutlu, Can Alkan
Bioinformatics, Vol.33, Issue 21, Kasım 2017, pp.3355-3363.
4. "URFA: Update Based Register File Architecture with Partial Register Write for Energy Efficiency"
Abdulaziz Eker, Yakup Murat Mert, **Oğuz Ergin**
Elsevier Microprocessors and Microsystems (MICPRO), Vol.47, Part B, Kasım 2016, pp.445-453.
5. "Exploiting Existing Copies in Register File for Soft Error Correction"
Abdulaziz Eker, **Oğuz Ergin**
IEEE Computer Architecture Letters (CAL), Vol.15, No.1, Ocak-Haziran 2016, pp.17-20.
6. "Exploiting Existing Comparators for Fine-Grained Low-Cost Error Detection"
Gülay Yalçın, **Oğuz Ergin**, Emrah İşlek, Osman Ünsal, Adrian Cristal
ACM Transactions on Architecture and Code Optimization (TACO), Vol.11, No.3, Ekim 2014, Article No. 32.
7. "Bit Impact Factor: Towards Making Fair Vulnerability Comparison"
Serdar Zafer Can, Gülay Yalçın, **Oğuz Ergin**, Osman Ünsal, Adrian Cristal
Elsevier Microprocessors and Microsystems (MICPRO), Vol.38, No. 6, Ağustos 2014, pp.598-604.
8. "Exploiting Processor Features to Implement Error Detection in Reduced Precision Matrix Multiplications"
Pedro Reviriego, Serdar Zafer Can, Çağrı Eryılmaz, Juan Antonio Maestro, **Oğuz Ergin**
Elsevier Microprocessors and Microsystems (MICPRO), Vol.38, No. 6, Ağustos 2014, pp.581-684.
9. "Exploiting Virtual Addressing for Increasing Reliability"
Yaman Çakmakçı, **Oğuz Ergin**
IEEE Computer Architecture Letters (CAL), Vol.13, No.1, Ocak-Haziran 2014, pp.29-32.
10. "Enhanced Duplication: a Technique to Correct Soft Errors in Narrow Values"
İbrahim Burak Karslı, Pedro Reviriego, Muhammed Fatih Ballı, **Oğuz Ergin**, Juan Antonio Maestro
IEEE Computer Architecture Letters (CAL), Vol.12, No.1, Ocak-Haziran 2013, pp.13-16.
11. "Reducing the Energy Dissipation of the Issue Queue by Exploiting Narrow Immediate Operands"
İlknur Cansu Kaynak, Yusuf Onur Koçberber, **Oğuz Ergin**
Journal of Circuits, Systems and Computers (JCSC), Vol. 19, No. 8, Aralık 2010.
12. "Energy-Efficient Register Caching with Compiler Assistance"
Timothy Jones, Michael O'Boyle, Jaume Abella, Antonio González, **Oğuz Ergin**
ACM Transactions on Architecture and Code Optimization (TACO), Vol. 6, Issue 4, Article No. 13, Ekim 2009.
13. "Exploiting Narrow Values for Faster Parity Generation"
Yusuf Onur Koçberber, Yusuf Osmanlioğlu, **Oğuz Ergin**
Microelectronics International, Vol. 26, Issue 3, 2009, pp.22-29.
14. "Modifying Data-Holding Components of the Processors for Energy Efficiency"
Yusuf Osmanlioğlu, Yusuf Sinan Hanay, **Oğuz Ergin**
Journal of Circuits, Systems and Computers (JCSC), Vol.18, No.6, Ekim 2009.
15. "Exploring the Limits of Early Register Release: Exploiting Compiler Analysis"
Timothy Jones, Michael O'Boyle, Jaume Abella, Antonio González, **Oğuz Ergin**
ACM Transactions on Architecture and Code Optimization (TACO), Vol. 6, Issue 3, Article No. 12, Eylül 2009.

16. "Reducing Soft Errors through Operand Width Aware Policies"
Oğuz Ergin, Osman Ünsal, Xavier Vera, Antonio González
IEEE Transactions on Dependable and Secure Computing (TDSC), Vol. 6, No. 3, Temmuz/Eylül 2009, pp.217-230.
17. "Refueling: Preventing Wire Degradation due to Electromigration"
Jaume Abella, Xavier Vera, Osman Ünsal, Oğuz Ergin, Antonio González, James W. Tschanz
IEEE Micro Magazine (MICRO), Vol. 28, No. 6, Kasım/ Aralık 2008, pp.37-46.
18. "Using Tag-Match Comparators for Detecting Soft Errors"
Gülay Yalçın, Oğuz Ergin
IEEE Computer Architecture Letters (CAL), Vol. 6, Issue 2, Ekim 2007, pp.53-56.
19. "Impact of Parameter Variations on Circuits and Microarchitecture"
Osman Ünsal, James W. Tschanz, Keith Bowman, Vivek De, Xavier Vera, Antonio González, Oğuz Ergin
IEEE Micro Magazine (MICRO), Vol. 26, No. 6, Kasım/ Aralık 2006, pp.30-39.
20. "Early Register Deallocation Mechanisms Using Checkpointed Register Files"
Oğuz Ergin, Deniz Balkan, Dmitry Ponomarev, Kanad Ghose
IEEE Transactions on Computers (TC), Vol. 55, No. 9, Eylül 2006, pp.1153-1166.
21. "Exploiting Narrow Values for Soft Error Tolerance"
Oğuz Ergin, Osman Ünsal, Xavier Vera, Antonio González
IEEE Computer Architecture Letters (CAL), Vol. 5, Issue 2, Haziran 2006.
22. "Instruction Packing: Towards Fast and Energy Efficient Instruction Scheduling"
Joseph Sharkey, Dmitry Ponomarev, Kanad Ghose, Oğuz Ergin
ACM Transactions on Architecture and Code Optimization (TACO), Vol. 2, Issue 3, Haziran 2006, pp.156-181.
23. "Reducing the Power Dissipation of Register Alias Tables in High-Performance Processors"
Gürhan Küçük, Oğuz Ergin, Dmitry Ponomarev, Kanad Ghose
IEE Proceedings on Computers and Digital Techniques (PCDT), Vol. 152, Issue 6, Kasım 2005, pp.739-746.
24. "Energy-Efficient Comparators for Superscalar Datapaths"
Dmitry Ponomarev, Gürhan Küçük, Oğuz Ergin, Kanad Ghose
IEEE Transactions on Computers (TC), Vol. 53, No. 7, Temmuz 2004, pp.892-904.
25. "Isolating Short-Lived Operands for Energy Reduction"
Dmitry Ponomarev, Gürhan Küçük, Oğuz Ergin, Kanad Ghose
IEEE Transactions on Computers (TC), Vol. 53, No. 6, Haziran 2004, pp.697-709.
26. "Complexity-Effective Reorder Buffer Designs for Superscalar Processors"
Gürhan Küçük, Dmitry Ponomarev, Oğuz Ergin, Kanad Ghose
IEEE Transactions on Computers (TC), Vol. 53, No. 6, Haziran 2004, pp.653-665.
27. "Energy-Efficient Issue Queue Design"
Dmitry Ponomarev, Gürhan Küçük, Oğuz Ergin, Kanad Ghose, Peter Kogge
IEEE Transactions on Very Large Scale Integration (VLSI) Systems (TVLSI), Vol. 11, No 5, Ekim 2003, pp.789-800.

3.3 Kurultay ve Çalıştay Yayınları

1. "VoltNet: A Reduced-voltage FPGA-based Accelerator for Convolutional Neural Networks (CNNs)"
Behzad Salami, Baturay Onural, İsmail Emir Yüksel, Fahrettin Koç, Oğuz Ergin, Adrián Cristal, Osman S. Unsal, Hamid Sarbazi-Azad, Onur Mutlu
50th IEEE/IFIP International Conference on Dependable Systems and Networks (DSN'20), Valencia, Spain, Temmuz 2020.
2. "A Microprocessor Protection Architecture Against Hardware Trojans in Memories"
Alperen Bolat, Luca Cassano, Pedro Reviriego, Oğuz Ergin, Marco Ottavi
15th IEEE International Conference on Design & Technology of Integrated Systems (DTIS'20), Marakesh, Morocco, Nisan 2020.
3. "A Novel FPGA-Based High Throughput Accelerator For Binary Search Trees"
Öykü Melikoğlu, Oğuz Ergin, Behzad Salami, Julian Pavon, Osman S. Unsal, Adrián Cristal
International Workshop on Exploitation of High Performance Heterogeneous Architectures and Accelerators (WEHA'19), Dublin, Ireland, Temmuz 2019.
4. "GRIM-Filter: fast seed location filtering in DNA read mapping using processing-in-memory technologies"
Jeremie Kim, Damla Şenol Çalı, Honyi Xin, Donghyuk Lee, Saugata Ghose, Mohammed Alser, Hasan Hassan, Oğuz Ergin, Can Alkan, Onur Mutlu
2nd Accelerator Architecture in Computational Biology and Bioinformatics (AACBB'19), Washington, USA, February 2019.
16th Asia Pacific Bioinformatics Conference (APBC'18), Yokohoma, Japan, Ocak 2018.
5. "Detecting Errors in Instructions with Bloom Filters"
Mert Atamaner, Oğuz Ergin, Marco Ottavi, Pedro Reviriego Vasallo
30th IEEE Defect and Fault Tolerance in VLSI and Nanotechnology Systems Symposium (DFTS'17), Cambridge, UK, Eylül 2017.
6. "SoftMC: A Flexible and Practical Open-Source Infrastructure for Enabling Experimental DRAM Studies"
Hasan Hassan, Nandita Vijaykumar, Samira Khan, Saugata Ghose, Kevin Chang, Gennady Pekhimenko, Oğuz Ergin, Onur Mutlu
23rd IEEE Symposium on High Performance Computer Architecture (HPCA'17), Austin, Texas, February 2017, pp.241-252.
7. "Error Recovery Through Partial Value Similarity"
Abdulaziz Eker, Oğuz Ergin
29th IEEE Defect and Fault Tolerance in VLSI and Nanotechnology Systems Symposium (DFTS'16), Connecticut, USA, Eylül 2016, pp.103-106.
8. "Genome Read In-Memory (GRIM) Filter: Fast Location Filtering in DNA Read Mapping with Emerging Memory Technologies"
Jeremie Kim, Damla Şenol, Honyi Xin, Donghyuk Lee, Mohammed Alser, Hasan Hassan, Oğuz Ergin, Can Alkan, Onur Mutlu
20th Annual International Conference on Research in Computational Molecular Biology (RECOMB'16) Poster Session, Santa Monica, CA, Nisan 2016.

9. "ChargeCache: Reducing DRAM Latency by Exploiting Row Access Locality"
Hasan Hassan, Gennady Pekhimenko, Nandita Vijaykumar, Vivek Seshadri, Donghyuk Lee, **Oğuz Ergin**, Onur Mutlu
22nd IEEE Symposium on High Performance Computer Architecture (**HPCA'16**), Barcelona, Spain, Mart 2016, pp.581-593.
10. "Collective Pointing: Protecting Pointer Values Against Soft Errors"
Emrah İşlek, Serdar Zafer Can, **Oğuz Ergin**
5th Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale (**MEDIAN'Finale**), Talinn, Estonia, Kasım 2015, pp.54-59.
11. "Exploiting Existing Replicas of Stack Pointer in Register File for Error Detection"
Hale Oğur, Davut Deniz Yavuz, Gözde Boztepe, Serhat Gesoğlu, Abdulaziz Eker, Gülay Yalçın, Osman S. Ünsal, **Oğuz Ergin**
5th Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale (**MEDIAN'Finale**), Talinn, Estonia, Kasım 2015, pp.60-67.
12. "Using Value Similarity of Registers for Soft Error Mitigation"
Abdulaziz Eker, **Oğuz Ergin**
28th IEEE Defect and Fault Tolerance in VLSI and Nanotechnology Systems Symposium (**DFTS'15**), Amherst, Massachusetts, USA, Ekim 2015, pp.91-96.
13. "User Specific Skin Temperature-Aware DVFS for Smartphones"
Begüm Birsen Eğilmez, Gökhan Memik, Seda Öğrenci-Memik, **Oğuz Ergin**
18th Design, Automation and Test in Europe (**DATE'15**), Grenoble, France, Mart 2015, pp.1217-1220.
14. "Exploiting a Fast and Simple ECC for Scaling Supply Voltage in Level-1 Caches"
Gülay Yalçın, Adrian Cristal, Osman S. Ünsal, **Oğuz Ergin**, Emrah İşlek, Öykü Tozlu, Pedro Reviriego,
20th IEEE International On-Line Testing Symposium (**IOLTS'14**), Catalunya, Spain, Temmuz 2014, pp.1-6.
15. "Improving the Reliability of Skewed Caches through ECC based Hashes"
Sercan Yeğin, İbrahim Burak Karşlı, **Oğuz Ergin**, Marco Ottavi, Salvatore Pontarelli, Pedro Reviriego
3rd Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale (**MEDIAN'14**), Dresden, Germany, Mart 2014.
16. "GPU Based Parallel Image Processing Library for Embedded Systems"
Mustafa Çavuş, Hakkı Doğaner Sümerkan, Osman Seçkin Şimşek, Hasan Hassan, Abdullah Giray Yağlıkçı, **Oğuz Ergin**
9th International Conference on Computer Vision Theory and Applications (**VISAPP'14**), Lisbon, Portugal, Ocak 2014, pp.234-241.
17. "Adapting the Columns of Storage Components for Lower Static Energy Dissipation"
Mehmet Burak Aykenar, Muhammet Özgür, Osman Seçkin Şimşek, **Oğuz Ergin**
21st IFIP/IEEE International Conference on Very Large Scale Integration (**VLSI-SoC'13**), Istanbul, Türkiye, Ekim 2013, pp.222-227.
18. "Exploiting Replicated Checkpoints for Soft Error Detection and Correction"
Fahrettin Koç, Kenan Bozdaş, İbrahim Burak Karşlı, **Oğuz Ergin**
16th Design, Automation and Test in Europe (**DATE'13**), Grenoble, France, Mart 2013, pp.1494-1497.
19. "Exploiting Bus Level and Bit Level Inactivity for Preventing Wire Degradation due To Electromigration"
Mehmet Kayaalp, Fahrettin Koç, **Oğuz Ergin**
15th Euromicro Symposium on Digital System Design (**DSD'12**), Izmir, Türkiye, Eylül 2012.
20. "Improving the Soft Error Resilience of the Register Files Using SRAM Bitcells with Builtin Comparators"
Mehmet Kayaalp, Fahrettin Koç, **Oğuz Ergin**
15th Euromicro Symposium on Digital System Design (**DSD'12**), Izmir, Türkiye, Eylül 2012.
21. "Global Co-op: Engineering Education through Outsourcing"
Oğuz Ergin, Utku Diril, Wei-Jin Dai
2nd Interdisciplinary Engineering Design Education Conference (**IEDEC'12**), Santa Clara, California, USA, Mart 2012.
22. "Tag Simplification: Achieving Power Efficiency through Reducing the Complexity of the Wakeup Logic"
Mehmet Burak Aykenar, Muhammet Özgür, Vehbi Eşref Bayraktar, **Oğuz Ergin**
2nd International Conference on Energy Aware Computing (**ICEAC'11**), Istanbul, Türkiye, Aralık 2011.
23. "Using Content-Aware Bitcells to Reduce Static Energy Dissipation"
Fahrettin Koç, Osman Seçkin Şimşek, **Oğuz Ergin**
29th International Conference on Computer Design (**ICCD'11**), Amherst, Massachusetts, USA, Ekim 2011, pp.51-56.
24. "Dynamic Register File Partitioning in Superscalar Microprocessors for Energy Efficiency"
Meltem Özsoy, Yusuf Onur Koçberber, Mehmet Kayaalp, **Oğuz Ergin**
28th International Conference on Computer Design (**ICCD'10**), Amsterdam, Netherlands, Ekim 2010, pp.515-520.
25. "Complexity-Effective Rename Table Design for Rapid Speculation Recovery"
Görkem Aşılıoğlu, Emine Merve Kaya, **Oğuz Ergin**
23th Conference on Architecture of Computing Systems (**ARCS'10**), Hannover, Germany, February 2010, pp.15-24.
26. "Exploiting Inactive Rename Slots for Detecting Soft Errors"
Mehmet Kayaalp, **Oğuz Ergin**, Osman Ünsal, Mateo Valero
23th Conference on Architecture of Computing Systems (**ARCS'10**), Hannover, Germany, February 2010, pp.126-137.
27. "Reducing Parity Generation Latency through Input Value Aware Circuits"
Yusuf Osmanlioğlu, Yusuf Onur Koçberber, **Oğuz Ergin**
19th ACM Great Lakes Symposium on VLSI (**GLSVLSI'09**), Boston, Massachusetts, USA, May 2009, pp.109-112.
28. "Exploiting Register Renaming Logic for Soft Error Detection"
Oğuz Ergin, Gülay Yalçın, Osman Ünsal, Mateo Valero
1st Workshop on Design for Reliability (**DFR'09**), Paphos, Southern Cyprus, Ocak 2009.
29. "Evaluating the Effects of Compiler Optimizations on AVF"
Timothy Jones, Michael O'Boyle, **Oğuz Ergin**
12nd Annual Workshop on the Interaction between Compilers and Computer Architecture (**INTERACT'08**), Salt Lake City, Utah, USA, February 2008.

30. "Fuse: A Technique to Anticipate Failures due to Degradation in ALUs"
Xavier Vera, Jaume Abella, Osman Ünsal, **Oğuz Ergin**, Antonio González
13th IEEE International On-Line Testing Symposium (**IOLTS'07**), Crete, Greece, Temmuz 2007.
31. "Designing Efficient Processors Using Compiler-Directed Optimisations"
Timothy Jones, Michael O'Boyle, Jaume Abella, Antonio González, **Oğuz Ergin**
11th Annual Workshop on the Interaction between Compilers and Computer Architecture (**INTERACT'07**), Phoenix, Arizona, USA, February 2007.
32. "Exploiting Narrow Values for Energy Efficiency in the Register Files of Superscalar Microprocessors"
Oğuz Ergin
16th International Workshop on Power and Timing Modeling, Optimization and Simulation (**PATMOS'06**)
Lecture Notes in Computer Science, (LNCS 4148), Springer-Verlag, 2006, pp.477-485
33. "Empowering a Helper Cluster through Data-Width Aware Instruction Selection Policies"
Osman Ünsal, **Oğuz Ergin**, Xavier Vera, Antonio González
International Parallel and Distributed Processing Symposium (**IPDPS'06**), Rhodes, Greece, Nisan 2006.
34. "Checker Backend for Soft and Timing Error Detection and Recovery"
Xavier Vera, Jaume Abella, Osman Ünsal, Antonio González, **Oğuz Ergin**
2nd Workshop on System Effects of Logic Soft Errors (**SELSE 2**), Urbana-Champaign, Illinois, USA, Nisan 2006.
35. "Power-Efficient Wakeup Tag Broadcast"
Joseph Sharkey, Dmitry Ponomarev, Kanad Ghose, **Oğuz Ergin**
23rd International Conference on Computer Design (**ICCD'05**), San Jose, USA, Ekim 2005, pp.654-6 61.
36. "Compiler Directed Early Register Release"
Timothy Jones, Michael O'Boyle, Jaume Abella, Antonio González, **Oğuz Ergin**
14th International Conference on Parallel Architectures and Compilation Techniques (**PACT'05**), Saint Louis, USA, Eylül 2005, pp.110-119.
37. "Instruction Packing: Reducing Power and Delay of the Dynamic Scheduling Logic"
Joseph Sharkey, Dmitry Ponomarev, Kanad Ghose, **Oğuz Ergin**
International Symposium on Low Power Electronics and Design (**ISLPED'05**), San Diego, USA, Ağustos 2005, pp.30-35.
38. "Reducing Delay and Power Consumption of the Wakeup Logic through Instruction Packing and Tag Memoization"
Joseph Sharkey, Dmitry Ponomarev, Kanad Ghose, **Oğuz Ergin**
Workshop on Power Aware Computer Systems (**PACS'04**)
Lecture Notes in Computer Science, (LNCS 3471), Springer-Verlag, 2005, pp.15-29.
39. "Register Packing: Exploiting Narrow-Width Operands for Reducing Register File Pressure"
Oğuz Ergin, Deniz Balkan, Kanad Ghose, Dmitry Ponomarev
37th International Symposium on Microarchitecture (**MICRO'04**), Portland, USA, Aralık 2004, pp.304-315.
40. "Increasing Processor Performance Through Early Register Release"
Oğuz Ergin, Deniz Balkan, Dmitry Ponomarev, Kanad Ghose
22nd International Conference on Computer Design (**ICCD'04**), San Jose, USA, Ekim 2004, pp.480-487.
41. "Defining Wakeup Width for Efficient Dynamic Scheduling"
Aneesh Aggarwal, Manoj Franklin, **Oğuz Ergin**
22nd International Conference on Computer Design (**ICCD'04**), San Jose, USA, Ekim 2004, pp.36-41.
42. "Selective Writeback: Improving Processor Performance and Energy Efficiency"
Deniz Balkan, **Oğuz Ergin**, Dmitry Ponomarev, Kanad Ghose
1st IBM Watson Conference on Interaction between Architecture, Circuits, and Compilers (**P=AC'04**), IBM Research Center, Yorktown Heights, USA, Ekim 2004, pp.171-180.
43. "Distributed Reorder Buffer Schemes for Low Power"
Gürhan Küçük, **Oğuz Ergin**, Dmitry Ponomarev, Kanad Ghose
21st International Conference on Computer Design (**ICCD'03**), San Jose, USA, Ekim 2003, pp.258-268.
44. "Reducing Datapath Energy Through the Isolation of Short-Lived Operands"
Dmitry Ponomarev, Gürhan Küçük, **Oğuz Ergin**, Kanad Ghose
12th International Conference on Parallel Architectures and Compilation Techniques (**PACT'03**), New Orleans, USA, Eylül 2003, pp.258-268.
45. "Energy-Efficient Register Renaming"
Gürhan Küçük, **Oğuz Ergin**, Dmitry Ponomarev, Kanad Ghose
Proceedings of 13th International Workshop on Power and Timing Modeling, Optimization and Simulation (**PATMOS'03**)
Lecture Notes in Computer Science, (LNCS 2799), Springer-Verlag, 2003, pp.219-228.
46. "Power Efficient Comparators for Long Arguments in Superscalar Processors"
Dmitry Ponomarev, Gürhan Küçük, **Oğuz Ergin**, Kanad Ghose
International Symposium on Low Power Electronics and Design (**ISLPED'03**), Seoul, South Korea, Ağustos 2003, pp.378-383.
47. "Reducing Reorder Buffer Complexity Through Selective Operand Caching"
Gürhan Küçük, Dmitry Ponomarev, **Oğuz Ergin**, Kanad Ghose
International Symposium on Low Power Electronics and Design (**ISLPED'03**), Seoul, South Korea, Ağustos 2003, pp.235-240.
48. "A Circuit-Level Implementation of Fast, Energy-Efficient CMOS Comparators for High-Performance Microprocessors"
Oğuz Ergin, Kanad Ghose, Gürhan Küçük, Dmitry Ponomarev
20th International Conference on Computer Design (**ICCD'02**), Freiburg, Germany, Eylül 2002, pp.118-121.

3.4 Patentler

1. "Bir algılama ve bildirme sistemi"
[A sensing and reporting system]
Oğuz Ergin
Turkish Patent TR 2015 14556 B. filed: Kasım 18, 2015 granted: Temmuz 23, 2018 Assignee: TOBB University of Economics and Technology.
2. "Dynamically Estimating the Lifetime of Semiconductor Storage Elements"
Xavier Vera, Jaume Abella, Osman Ünsal, **Oğuz Ergin**, and Antonio González
US Patent 8,151,094. filed: Aralık 30, 2005 granted: Nisan 3, 2012 Assignee: Intel Corporation.
3. "Detecting Soft Errors via Selective Re-execution"
Xavier Vera, **Oğuz Ergin**, Osman Ünsal, Jaume Abella, and Antonio González
US Patent 8,090,996. filed: Mart 31, 2006 granted: Ocak 3, 2012 Assignee: Intel Corporation.
4. "Enhancing Reliability of a Many-Core Processor"
Xavier Vera, Osman Ünsal, **Oğuz Ergin**, Jaume Abella, and Antonio González
US Patent 8,074,110. filed: February 28, 2006 granted: Aralık 6, 2011 Assignee: Intel Corporation.
5. "Clustered Variations-Aware Microarchitecture"
Xavier Vera, **Oğuz Ergin**, Osman Ünsal and Antonio González
US Patent 7,600,145. filed: Ekim 26, 2005 granted: Ekim 6, 2009 Assignee: Intel Corporation.
6. "Reducing the Soft Error Vulnerability of Stored Data"
Oğuz Ergin, Osman Ünsal, Xavier Vera and Antonio González
US Patent 7,558,992. filed: Ekim 10, 2005 granted: Temmuz 7, 2009 Assignee: Intel Corporation.

3.5 Yerel (Ulusal) Yayınlar

1. "ADRAM: Yenileme Sıklığı İyileştirilmiş Düşük Güç Tüketimli Adaptif DRAM Mimarisi"
Fahrettin Koç, Fatma Nisa Bostancı, **Oğuz Ergin**
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
2. "Yazmaç Öbeğindeki Geçici Hataları Düzeltmek İçin Yükleme-Kaydetme Kuyruğundaki Hazır Kopyaların Kullanılması"
Buğra Çon, **Oğuz Ergin**
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
3. "Paylaşımlı Önbelleklerde Tutarlılık Protokolleri Kullanılarak Hata Düzeltimi"
Mert Atamaner, **Oğuz Ergin**
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
4. "FPGA BRAM'lerde Çalışma Voltajı Düşürülmesine Sıcaklık Etkileri"
Fulya Ağırnas, Fatih Say, **Oğuz Ergin**
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
5. "Süperiletken Bilgisayarlar İçin SRAM Bellek Tasarımı"
İlker Bolat, **Oğuz Ergin**, Ali Bozbey
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
6. "On-line Detection and Prevention of HW Trojans in Program Memories"
Alperen Bolat, **Oğuz Ergin**, Marco Ottavi, Luca Cassano, Pedro Reviriego
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
7. "DNN Mikroservisleri ile Makine Çevirisi Modelleri için Performans Analizi"
Simla Harma, Mario Drumond, **Oğuz Ergin**, Babak Falsafi
İşlemci Tasarım Çalıştayı (İTÇ), İstanbul, Türkiye, Eylül 2019.
8. "DRAM Bellek Gecikmelerini azaltabilmek için Yedek Dize Yöntemi"
Eyüphan İpek, Hasan Hassan, **Oğuz Ergin**
19th Turkish National Embedded Systems and Applications Symposium (AB2017), Aksaray, Türkiye, February 2017.
9. "GPU Önbelleklerinde Yerelliğe Bağlı Dinamik Yazma Politikası"
Çağatay Turgut, **Oğuz Ergin**
19th Turkish National Embedded Systems and Applications Symposium (AB2017), Aksaray, Türkiye, February 2017.
10. "Çok Çekirdekli İşlemciler için Ölçeklenebilir Çok Portlu Yazmaç Öbeğinin FPGA Tasarımı"
A. Giray Yağlıkçı, Hasan Hassan, **Oğuz Ergin**, Fatih Say
4th Turkish National Embedded Systems and Applications Symposium (GömSis 2014), İstanbul, Türkiye, Kasım 2014.
11. "FIR Filtre Uygulamalarını Hızlandırmak: FPGA ve GPU Performans Karşılaştırması"
Mehmet Burak Aykenar, Hasan Hassan, **Oğuz Ergin**
22nd Signal Processing and Communications Applications Conference (SiU'14), Trabzon, Türkiye, Nisan 2014.
12. "Verileri Nota Kullanarak Şifreleme ve Ses Dosyası İçerisine Gizleme"
Muhammet Hamdi Yavuz, **Oğuz Ergin**
3rd International Conference on Information Security and Cryptology (ISCTürkiye'08), Ankara, Türkiye, Aralık 2008.
13. "Telsiz Bilgisayar Mimarisi"
Oğuz Ergin, Yusuf Onur Koçberber, Meltem Özsoy
1st Turkish National Embedded Systems and Applications Symposium (GömSis 2008), İstanbul, Türkiye, Kasım 2008, p:2.

14. "Güç Kesintisi Uygulayan Devrelerin Uyanma Gecikmelerinin Belirlenme Zamanının Azaltılması"
Yusuf Sinan Hanay, **Oğuz Ergin**, Utku Diril
Turkish National Meeting on Automatic Control (TOK'06), Ankara, Türkiye, Kasım 2006, pp.185-189.

3.6 Diğer Yayınlar

1. "Why the Names? Anubanani and His Clan in the Cuthaeon Legend"
Selim F. Adalı, M. Fatih Demirci, A. Murat Özbayoğlu, **Oğuz Ergin**
Gephyra 11, 2014, pp.15-28.

4 AKADEMİK ETKİNLİKLER

4.1 Projeler

4.1.1 Yürütücü

1. "Design and Implementation of the Cache Architecture for Mission-Critical Multicore Microprocessors"
ASELSAN - SAYP Programı, Ekim 2017 - Ekim 2019
Bütçe: 18 ay için 74.118 TL (1 lisansüstü öğrenci, seyahat, araç-gereç)
2. "Design of a Processor Core of the Turkish Microprocessor"
ASELSAN, Ekim 2017 - Ekim 2019
Bütçe: 18 ay için 250.000 TL (2 lisansüstü ve 2 lisans öğrencisi, araç-gereç)
3. "OpenCL Compatible High Performance Accelerator Hardware Design for AIHS"
ASELSAN, May 2013 - Nisan 2015
Bütçe: 18 ay için ~180.000 TL for 18 months (4 lisansüstü öğrenci, araç-gereç)
4. "Reliable Microprocessor Design"
TÜBİTAK - COST Programı, Haziran 2012 - Haziran 2015.
Bütçe: 36 ay için 240.988 TL (3 lisansüstü öğrenci, seyahat, araç-gereç)
5. "Development of an OpenCL Based Image Processing Library"
Bilim, Sanayi ve Teknoloji Bakanlığı - SANTEZ Programı, Mart 2012 - Mart 2014.
Bütçe: 140.550 TL for 24 months (2 graduate students, travel, equipment)
6. "Design of an Embedded Processor, Designing the Test Infrastructure for OpenCL Driver and Compilers of Vivante Graphical Processors"
Vivante Corporation, Silicon Valley (USA), May 2011 - Haziran 2012.
Bütçe: 14 ay için \$108.830 (3 graduate and 4 undergraduate students, equipment)
7. "A Scalable Register Renaming Technique"
TÜBİTAK - 1001 Programı, Eylül 2009 - Eylül 2011.
Bütçe: 116.450 TL for 24 months (2 graduate students, travel, equipment)
8. "Reducing the power dissipation of out-of-order microprocessors by detecting narrow values and narrow value phases"
TÜBİTAK - 1001 Programı, Temmuz 2007 - Temmuz 2009.
Bütçe: 96.650 TL for 24 months (2 graduate students, travel, equipment)
9. "Reliable Embedded Processors"
European Network of Excellence on High-Performance Embedded Architecture and Compilation (HiPEAC), Temmuz 2007 - Aralık 2008.
Bütçe: €20.400 for 12 months (1 graduate student, travel)

4.1.2 Danışman

1. "Development of an RSFQ Based Integrated Circuit Design Tool and Arithmetic Logic Unit"
TÜBİTAK - 1001, February 2012 - February 2015.
Yürütücü: Associate Prof. Ali Bozbey, Bütçe: 445.691 TL for 36 months

4.1.3 Yönetim Kurulu Üyesi

1. "Manufacturable and Dependable Multicore Architectures at Nanoscale"
European Cooperation in Science and Technology (COST), Information and Communication Technologies (ICT)
COST Action IC1103, Aralık 2011 - Aralık 2015.

4.2 Verdiği Dersler

- **Kara Harp Okulu**, Ankara, Türkiye
 - BM 4102 **Bilgisayar Mimarisi** [(Fall: 2015, 2017)]
- **University of Notre Dame**, Notre Dame, Indiana, United States
 - CSE 60321 **Advanced Computer Architecture** [(Spring: 2014)]
 - CSE 60462 **VLSI Design** [(Fall: 2014)]
- **TOBB Ekonomi ve Teknoloji Üniversitesi**, Ankara, Türkiye
 - BİL 102 **Programming with Java** [(Spring: 2006)]
 - BİL 264 **Logic Design** [(Fall: 2011 - 2013, 2015, 2017) (Spring: 2007, 2013, 2015) (Summer: 2006, 2015 - 2017, 2020)]
 - BİL 264L **Logic Design Laboratory** [(Fall: 2011 - 2013, 2015, 2017) (Spring: 2013, 2015) (Summer: 2006, 2015 - 2017)]
 - BİL 361 **Computer Architecture and Organization** [(Fall: 2006 - 2008, 2012, 2013, 2015 - 2018) (Spring: 2010 - 2013, 2015 - 2018) (Summer: 2011, 2013)]
 - BİL 362 **Microprocessors** [(Fall: 2008 - 2010, 2012) (Spring: 2007 - 2009) (Summer: 2009 - 2011)]
 - BİL 362L **Microprocessors Laboratory** [(Fall: 2008 - 2010, 2012) (Spring: 2007 - 2009) (Summer: 2009 - 2011)]
 - BİL 465/BİL566 **Advanced Computer Architecture** [(Fall: 2008 - 2010) (Spring: 2012) (Summer: 2009)]

- o BİL 466/BİL569 **Embedded Systems** [(Spring: 2011)]
- o ELE 222 **Analog Electronics** [(Spring: 2006)]
- o ELE 222L **Analog Electronics Laboratory** [(Spring: 2006)]

4.3 Öğrenci Danışmanlığı

4.3.1 Doktora Sonrası Araştırmacı

- TOBB Ekonomi ve Teknoloji Üniversitesi, Ankara, Türkiye
 1. **Kenan Bozdaş**, Nisan 2011 – Haziran 2012. *Sonra:* **TÜBİTAK SAGE (R&D Engineer), Ankara, Türkiye**

4.3.2 Doktora (Ph.D.)

- TOBB Ekonomi ve Teknoloji Üniversitesi, Ankara, Türkiye
 1. **Abdülaziz Eker**, Ağustos 2016. *Sonra:* **TÜBİTAK İLTAREN (R&D Engineer), Ankara, Türkiye**
Şu anda: **Philips (R&D Engineer), Eindhoven, Netherlands**
Thesis Title: "Avoiding Register File Inefficiency in Terms of Power and Reliability"
 2. **Fahrettin Koç**, ongoing

4.3.3 Yüksek Lisans (M.S.)

- TOBB University of Economics and Technology, Ankara, Türkiye
 1. **Fulya Ağırnas**, Kasım 2020. *Sonra:* **ASELSAN (Digital Design Engineer), Ankara, Türkiye**
Thesis Title: "Accelerated High Throughput Parallel Search on Binary Search Trees via Field Programmable Gate Arrays"
 2. **Öykü Melikoğlu**, Ağustos 2019. *Sonra:* ?
Thesis Title: "Accelerated High Throughput Parallel Search on Binary Search Trees via Field Programmable Gate Arrays"
 3. **Çağatay Turgut**, Ağustos 2017. *Sonra:* **Meteksan Savunma (R&D Engineer), Ankara, Türkiye**
Thesis Title: "Locality Driven Dynamic Cache Write Policy on Graphics Processing Units"
 4. **Eyüphan İpek**, Nisan 2017. *Sonra:* **SDT (R&D Engineer), Ankara, Türkiye**
Şu anda: **Rovenma (Digital Design Engineer), Ankara, Türkiye**
Thesis Title: "Hardware Based Accelerator Design for DRAM Operations"
 5. **Hasan Hassan**, Ağustos 2016. *Sonra:* **ETH Zurich (PhD Student), Zurich, Switzerland**
Thesis Title: "Reducing DRAM Access Latency by Exploiting DRAM Leakage Characteristics and Common Access Patterns"
 6. **Serdar Zafer Can**, Ağustos 2015. *Sonra:* **University of Minnesota (PhD Student), Minneapolis, USA**
Şu anda: **TAI (R&D Engineer), Ankara, Türkiye**
Thesis Title: "Bit Impact Factor: Towards Making Fair Vulnerability Comparison"
 7. **Emrah İşlek**, May 2015. *Sonra:* **RST Technologies (R&D Engineer), Ankara, Türkiye**
Şu anda: **General Directorate of Security (Engineer), Ankara, Türkiye**
Thesis Title: "Collective Pointing: Protecting Pointer Values Against Soft Errors on Processors"
 8. **Muhammet Özgür**, Aralık 2014. *Sonra:* **Linera (R&D Engineer), Ankara, Türkiye**
Thesis Title: "Performance Analysis of Implementation of Radar Signal Processing Algorithms on FPGA and GPU"
 9. **Mustafa Çavuş**, Aralık 2014. *Sonra:* **University of Rhode Island (PhD Student), Rhode Island, USA**
Şu anda: **Intel (Software Engineer), Hillsboro, Oregon, USA**
Thesis Title: "Online AVF Estimation Using Multi Processing"
 10. **Osman Seçkin Şimşek**, Eylül 2014. *Sonra:* **University of Manchester (PhD Student), Manchester, Great Britain**
Thesis Title: "OpenCL Based Image Processing Library for Embedded GPGPUs and a Sample Face Detection Application"
 11. **Hakkı Doğaner Sümerkan**, Ağustos 2014. *Sonra:* **University of Notre Dame (PhD Student), Indiana, USA**
Şu anda: **Digital Software Corporation (Software Engineer), Virginia, USA**
Thesis Title: "OpenCL Based Image Processing Library and Kernel Fusion on Embedded Systems"
 12. **Abdullah Giray Yağlıkcı**, Ağustos 2014. *Sonra:* **University of Notre Dame (PhD Student), Indiana, USA**
Şu anda: **ETH Zurich (PhD Student), Zurich, Switzerland**
Thesis Title: "Design of an FPGA Based Co-Processor For Digital Signal Processing Applications"
 13. **Fahrettin Koç**, Ağustos 2013. *Sonra:* **TÜBİTAK SAGE (R&D Engineer), Ankara, Türkiye**
Thesis Title: "Content Aware Bitcells Developed to Reduce Static Energy Dissipation for a New SRAM Design: CSRAM"
 14. **Mehmet Burak Aykenar**, Ağustos 2013. *Sonra:* **ROKETSAN (R&D Engineer), Ankara, Türkiye**
Thesis Title: "FIR Filter Energy and Performance Comparison of GPU and FPGA for Mobile Platforms"
 15. **Yaman Çakmakçı**, Eylül 2012. *Sonra:* **University of Manchester (PhD Student), Manchester, Great Britain**
Şu anda: **OpenSynergy GmbH (Software Engineer), Berlin, Germany**
Thesis Title: "Exploiting Virtual Addresses For Achieving Fault Tolerance In Microprocessors"
 16. **Vehbi Eşref Bayraktar**, Eylül 2011. *Sonra:* **Vivante Corporation (R&D Engineer), Silicon Valley, USA**
Şu anda: **University of California-Davis (PhD Student), California, USA**
Thesis Title: "Tag Simplification : Achieving Power Efficiency Through Reducing The Complexity of the Wake Up Logic"
 17. **Görkem Aşlıoğlu**, Ağustos 2011. *Sonra:* **Michigan Technological University (PhD Student), Michigan, USA**
Thesis Title: "Complexity-Effective Rename Table Design For Rapid Speculation Recovery"
 18. **Muhammet Hamdi Yavuz**, Eylül 2010. *Sonra:* **Infodif (Engineer), Ankara, Türkiye**
Şu anda: **Sigun Information Systems (Director of Simulation Systems), Ankara, Türkiye**
Thesis Title: "Cryptography - Steganography System Design And Implementation Using Music"

19. **Mehmet Kayaalp**, Ağustos 2010. *Sonra:* **State University of New York – Binghamton**, (PhD Student), New York, USA
Şu anda: **University of New Hampshire** (Assistant Professor), New Hampshire, USA
Thesis Title: "Protecting The Register File Against Soft Errors Using SRAM Bit Cells With Built-in Comparators"
20. **Yusuf Onur Koçberber**, Eylül 2009. *Sonra:* **Ecole Polytechnique Federale de Lausanne (EPFL)** (PhD Student), Switzerland
Şu anda: **Oracle Labs** (Senior Member of Technical Staff), Zurich, Switzerland
Thesis Title: "Reducing Static Energy Dissipation of Data Holding Components of Modern Processors"
21. **Meltem Özsoy**, Temmuz 2009. *Sonra:* **State University of New York – Binghamton** (PhD Student), New York, USA
Şu anda: **Intel** (Research Scientist), Portland, Oregon, USA
Thesis Title: "Register File Partitioning for Energy Efficiency in Microprocessors"
22. **Hatice Şeyma Ülker**, Ekim 2007. *Sonra:* **Türk Telekom** (Engineer), Ankara, Türkiye
Şu anda: **TÜBİTAK BİLGEM YTE** (Chief Expert Researcher), Ankara, Türkiye
Thesis Title: "Hardware design for predicting widths of values produced in microprocessors"
23. **Gülay Yalçın**, Eylül 2007. *Sonra:* **Barcelona Supercomputing Center** (PhD Student), Barcelona, Spain
Şu anda: **Abdullah Gul University** (Assistant Professor), Kayseri, Türkiye
Thesis Title: "Soft Error Detection by Using Tag Comparators in Microprocessors"
24. **Yusuf Sinan Hanay**, Haziran 2007. *Sonra:* **University of Massachusetts – Amherst** (PhD Student), Massachusetts, USA
Şu anda: **Erzurum Teknik Üniversitesi** (Assistant Professor), Erzurum, Türkiye
Thesis Title: "Low Power Techniques for Superscalar Microprocessors"
25. **Nisa Bostancı**, sürüyor.
26. **Mert Atamaner**, sürüyor.
27. **İsmail Emir Yüksel**, sürüyor.
28. **Alperen Bolat**, sürüyor.
29. **Esra Nur Ayaz**, sürüyor.
30. **Ataberk Olgun**, sürüyor.

4.3.4 Undergraduate

- Orta Doğu Teknik Üniversitesi, Ankara, Türkiye
 1. **Çağrı Eryılmaz**, Ağustos 2014. *Sonra:* **The University of Texas at Austin** (PhD Student), Austin, Texas, USA
Şu anda: **AMD** (Deep Learning Software Engineer), Austin, Texas
- TOBB Ekonomi ve Teknoloji Üniversitesi, Ankara, Türkiye
 2. **Volkan Keleş**, Nisan 2016. *Sonra:* **Apple Inc.** (GPU Compiler Engineer), London, Great Britain
Şu anda: **Apple Inc.** (GPU Compiler Engineer), San Fransisco, USA
Senior Project Title: "Energy Aware Big Data Processing Framework"
 3. **Serhat Gesoğlu**, Ağustos 2015. *Sonra:* **University of Manchester** (PhD Student), Manchester, Great Britain
Senior Project Title: "Exploiting Existing Replicas of Stack Pointer in Register File for Error Detection"
 4. **Begüm Birsen Eğilmez**, Nisan 2014. *Sonra:* **Northwestern University** (PhD Student), Chicago, Illinois, USA
Senior Project Title: "Accurate Estimation of Smartphone Skin Temperature at Runtime"
 5. **Mustafa Korkmaz**, Ağustos 2010. *Sonra:* **Bilkent University** (MS Student), Ankara, Türkiye
Şu anda: **University of Waterloo** (PhD Student), Ontario, Canada
Senior Project Title: "Employing a General Purpose GPU for Improving the Performance of Regular Workloads"
 6. **Zeynep Saka**, Ağustos 2010. *Sonra:* **Bilkent University** (MS Student), Ankara, Türkiye
Şu anda: **University of Waterloo** (PhD Student), Ontario, Canada
Senior Project Title: "Employing a General Purpose GPU for Improving the Performance of Regular Workloads"
 7. **Emine Merve Kaya**, Ağustos 2009. *Sonra:* **Johns Hopkins University** (PhD Student), Baltimore, Maryland, USA
Şu anda: **X** (Research Scientist), San Francisco, California
Senior Project Title: "House LP - A 3-Dimensional Social Networking Game"
 8. **İlknur Cansu Kaynak**, Ağustos 2009. *Sonra:* **Ecole Polytechnique Federale de Lausanne (EPFL)** (PhD Student), Switzerland
Şu anda: **Oracle Labs** (Senior Member of Technical Staff), Zurich, Switzerland
Senior Project Title: "Reducing the Energy Dissipation of the Issue Queue by Exploiting Narrow Immediate Operands"

4.4 Ödüller

1. **HiPEAC Paper Award**, May 2016.
HiPEAC, for our paper titled "ChargeCache: Reducing DRAM latency by exploiting row access locality" presented in HPCA 2016.
2. **2009 – 2010 Distinguished Researcher Award**, May 2011.
TOBB University of Economics and Technology
3. **Second Prize in Conceptual Processor Design Category (Kasırğa Processor)**, Kasım 2008.
"CPU-Türkiye" processor design contest
4. **Graduate Student Award for Excellence in Research**, 2005.
State University of New York at Binghamton
5. **Department of Computer Science Fellowship**, Spring 2003.
State University of New York at Binghamton

4.5 Teknik Sunumlar

1. "Cloud Computing for Government"
Turkish Information Technologies Association – 14th Meeting of the Union of Government IT Managers, Belek - Antalya, Türkiye, 11 May 2012.
2. "Employing On-Chip Comparator Circuits for Detecting Errors"
HiPEAC Computing Systems Week, Reliability Task Force Meeting, Wroclaw, Poland, 27 Ekim 2009.
3. "Register Packing: Exploiting Narrow-Width Operands for Reducing Register File Pressure"
37th International Symposium on Microarchitecture (MICRO'04), Portland, Oregon, USA, 8 Aralık 2004.
4. "Reducing Datapath Energy Through the Isolation of Short-Lived Operands"
12th International Conference on Parallel Architectures and Compilation Techniques (PACT'03), New Orleans, Louisiana, USA, 1 Ekim 2003.
5. "Reducing Reorder Buffer Complexity Through Selective Operand Caching"
ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED'03), Seoul, South Korea, 27 Ağustos 2003.
6. "Power Efficient Comparators for Long Arguments in Superscalar Processors"
ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED'03), Seoul, South Korea, 26 Ağustos 2003.

4.6 Konferans Görevleri

- Program Kurulu Üyesi
 - ACM International Conference on Supercomputing (ICS)
 - ICS - 30, May 2016, Istanbul, Türkiye
 - IEEE International Conference on Computer Design (ICCD)
 - ICCD - 33, Ekim 2015, New York City, USA
 - ICCD - 32, Ekim 2014, Seoul, South Korea
 - ICCD - 31, Ekim 2013, Asheville, North Carolina, USA
 - ICCD - 30, Ekim 2012, Montreal, Quebec, Canada
 - ICCD - 29, Ekim 2011, Amherst, Massachusetts, USA
 - ICCD - 28, Ekim 2010, Amsterdam, Netherlands
 - IEEE Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS)
 - DFTS - 33, Ekim 2020, Rome, Italy
 - DFTS - 32, Ekim 2019, Delft, Netherlands
 - DFTS - 31, Ekim 2018, Chicago, USA
 - DFTS - 30, Ekim 2017, Cambridge, UK
 - DFTS - 29, Ekim 2016, Storrs, Connecticut, USA
 - DFTS - 28, Ekim 2015, Amherst, Massachusetts, USA
 - DFTS - 27, Ekim 2014, Amsterdam, Netherlands
 - IEEE International Conference on High Performance Computing, Data and Analytics (HiPC)
 - HiPC - 23, Aralık 2016, Hyderabad, India
 - Asia Symposium on Quality Electronic Design (ASQED)
 - ASQED - 6, Ağustos 2015, Penang, Malaysia
 - ASQED - 5, Ağustos 2013, Penang, Malaysia
 - ASQED - 4, Temmuz 2012, Penang, Malaysia
 - ASQED - 3, Temmuz 2011, Kuala Lumpur, Malaysia
 - Manufacturable and Dependable Multicore Architectures at Nanoscale Workshop (MEDIAN)
 - MEDIAN - Finale, Kasım 2015, Talinn, Estonia
 - MEDIAN - 3, held in conjunction with the Design, Automation and Test in Europe Conference (DATE'14), Mart 2014, Dresden, Germany
 - MEDIAN - 2, held in conjunction with the IEEE European Testing Symposium (ETS'13), May 2013, Avignon, France
 - MEDIAN - 1, held in conjunction with the IEEE European Testing Symposium (ETS'12), May 2012, Annecy, France
 - International Conference on Energy Aware Computing (ICEAC)
 - ICEAC - 5, Mart 2015, Cairo, Egypt
 - ICEAC - 4, Aralık 2013, Istanbul, Türkiye
 - ICEAC - 3, Aralık 2012, Northern Cyprus
 - ICEAC - 2, Aralık 2011, Istanbul, Türkiye, (Publication Chair)
 - Joint Euro-TM/MEDIAN Workshop on Dependable Multicore and Transactional Memory Systems (DMTM)
[to be held in conjunction with the (HiPEAC'14) conference], Ocak 2014, Vienna, Austria
 - HiPEAC Workshop on Design for Reliability (DFR)
 - DFR - 5, held in conjunction with the (HiPEAC'13), Ocak 2013, Berlin, Germany
 - DFR - 4, held in conjunction with the (HiPEAC'12), Ocak 2012, Paris, France
 - DFR - 3, held in conjunction with the (HiPEAC'11), Ocak 2011, Heraklion, Crete, Greece
 - DFR - 2, held in conjunction with the (HiPEAC'10), Ocak 2010, Pisa, Italy
 - DFR - 1, held in conjunction with the (HiPEAC'09), Ocak 2009, Paphos, Cyprus
 - Interdisciplinary Engineering Design Education Conference (IEDEC)
 - IEDEC - 4, Mart 2014, Santa Clara, California, USA
 - IEDEC - 3, Mart 2013, Santa Clara, California, USA
 - Turkish National Embedded Systems and Applications Symposium (GömSis)
 - GömSis - 4, Kasım 2014, Istanbul
 - GömSis - 3, Kasım 2012, Istanbul
 - GömSis - 2, Kasım 2010, Istanbul
 - GömSis - 1, Kasım 2008, Istanbul
 - Signal Processing and Communications Applications Conference (SIU)
 - SIU -22, Nisan 2014, Trabzon, Türkiye

- o 22. International Symposium on Computer and Information Sciences (ISCIS 2007), Kasım 2007, Ankara
- o Workshop on Architectural Support for Gigascale Integration (ASGI'06), Boston, USA
[held in conjunction with the International Symposium on Computer Architecture (ISCA - 33)], Haziran 2006
- **Düzenleme Kurulu Üyesi**
 - o Workshop on Architectural Reliability (later Workshop on Dependable Architectures)
 - (WDA - 3) - [held in conjunction with the International Symposium on Microarchitecture (MICRO - 41)], Kasım 2008
 - (WAR - 2) - [held in conjunction with the International Symposium on Microarchitecture (MICRO - 39)], Kasım 2006, Cochairman
 - (WAR - 1) - [held in conjunction with the International Symposium on Microarchitecture (MICRO - 38)], Kasım 2005

4.7 Teknik Hakemlik

4.7.1 Araştırma Projeleri

- T.C. Bilim, Sanayi ve Teknoloji Bakanlığı
 - o Industrial Thesis Program (SAN-TEZ) [2011, 2013]
 - o Technological Entrepreneurship Program (Teknogirişim) [2012]
 - o R&D Centers [2012, 2013]
- TÜBİTAK
 - o Electrical and Electronics Technology Group Advisory Board Member (ELOTEG) [2018, 2019]
 - o Technology and Innovation Support Programs (TEYDEB) [2008, 2011 - 2020]
 - o Electrical, Electronics, Informatics Research Support Programs (EEEAG) [2012, 2013, 2017, 2018]
 - o Public Sector Research Grant Committee (KAMAG) [2018, 2019]
- Avrupa Birliği
 - o CHISTERA [2014]
- Netherlands Organization for Scientific Research (NWO)
 - o Smart Energy Systems Research Program [2010]

4.7.2 Bilimsel Dergiler

- ACM Transactions on Architecture and Code Optimization (TACO) [2009, 2011, 2013, 2017]
- ACM Transactions on Design Automation of Electronic Systems (TODAES) [2011, 2015, 2016]
- Computer Applications in Engineering Education (CAE) [2010]
- Elsevier Microelectronics Reliability (MR) [2015, 2016]
- Elsevier Microprocessors and Microsystems (MICPRO) [2013]
- Gazi University Journal of Science (GUJS) [2010, 2011]
- IEE Proceedings on Computers and Digital Techniques (CDT) [2006]
- IEEE Computer Architecture Letters (CAL) [2008, 2015]
- IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS1) [2016]
- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD) [2011, 2013, 2016, 2017]
- IEEE Transactions on Computers (TC) [2004, 2006 - 2015]
[2015]
- IEEE Transactions on Device and Materials Reliability (TDMR) [2014, 2016, 2018]
- IEEE Transactions on Emerging Topics in Computing (TETCSI) [2016, 2019]
- IEEE Transactions on Industrial Electronics (TIE) [2009, 2010]
- IEEE Transactions on Nanotechnology (TNANO) [2012]
- IEEE Transactions on Parallel and Distributed Computing (TPDS) [2013]
- IEEE Transactions on Reliability [2014]
- IEEE Transactions on Very Large Scale Integration Systems (TVLSI) [2014]
- IET Circuits, Devices and Systems (IET-CDS) [2013]
- IET Electronics Letters (IET-ELL) [2019]
- Journal of Circuits, Systems and Computers (JCSC) [2008, 2016]
- Journal of Electronic Testing (JETT) [2020]
- Turkish Journal of Electrical Engineering and Computer Sciences (TJEECS) [2011, 2012, 2014, 2016, 2019]

4.7.3 Konferanslar

- European Conference on Circuit Theory and Design (ECCTD) [2009]
- Intel Design and Test Technology Conference [Internal Conference] (Intel DTTC) [2005]
- International Conference on Computer Design (ICCD) [2005, 2006, 2010 - 2013]
- International Conference on High Performance Computing (HiPC) [2005]
- International Conference on Parallel Architectures and Compilation Techniques (PACT) [2012]
- International Conference on Parallel Processing and Applied Mathematics (PPAM) [2013]
- International Conference on Supercomputing (ICS) [2014]
- International Symposium on Computer and Information Sciences (ISCIS) [2006]
- International Symposium on Computer Architecture (ISCA) [2005, 2006, 2010, 2011]
- International Symposium on Microarchitecture (MICRO) [2011]
- International Symposium on Performance Analysis of Systems and Software (ISPASS) [2006]

5 ETKİNLİKLER ve ÜYELİKLER

- Member of the European Network of Excellence on High-Performance Embedded Architecture and Compilation (HiPEAC) (2006 - sürüyor)
- Institute of Electrical and Electronics Engineers (IEEE)
 - o Member, (2011 - 2016)

Oğuz Ergin'in Özgeçmişi (17 Mayıs 2020 Pazar)

- **Student Member**, (2001 - 2005)
- **Computer Society Member**, (2001 - 2005)
- Association for Computing Machinery (ACM)
 - **Member**, (2015 - 2016)
- Turkish Information Technologies Association - Union of Government IT Managers
 - **Cloud Computing** Work Group, Chairman, 2012
 - **Virtualization** Work Group, Vice Chairman, 2010
- President of the Binghamton University Turkish Student Association (Ağustos'01 - Mart'02), (Eylül'03 - May'04)

6 YETENEKLER

- Diller: Turkish (Native), English
- Tasarım Araçları: Cadence (Virtuoso, Spectre, Affirma), Magic, VHDL, Verilog HDL, HSpice, Microarchitecture Simulators
- Programlama: C, C++, Java, Pascal, Haskell