

Uras Tos

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W: [Personal web site](#), [Google Scholar page](#)

Born: 1982

Nationality: Turkish



Research interests

Cloud computing • Big data • Large-scale data management systems • Distributed systems

Education

- 2017 **PhD in Computer Science (cotutelle), Institut de Recherche en Informatique de Toulouse (IRIT), Université Paul Sabatier, Toulouse, France**
- 2017 **PhD in Computer Science and Engineering, Ege University, Izmir, Turkey**
I completed my PhD in a jointly-supervised doctorate program between Ege University and Université Paul Sabatier under the supervision of Prof. Abdelkader Hameurlain, Dr. Tolga Ayav, Dr. Riad Mokadem and Dr. Sebnem Bora. My thesis, titled *Data Replication in Large-scale Data Management Systems* deals with simultaneous satisfaction of performance objectives and monetary profit of the service provider for analytical queries executed on a distributed database environment operating in a multi-tenant cloud computing context. More info on this can be found in my publications. I successfully defended my thesis on June 27, 2017.
- 2012 **MSc in Computer Engineering, Izmir Institute of Technology, Izmir, Turkey**
During my MSc studies, I proposed a *Quality-Adaptive Media Streaming* strategy. RTP streams for media playback may become unfriendly towards TCP traffic sharing the same network channel. My strategy addresses this problem by extending RTP with a TCP-friendly rate control mechanism to allow fair sharing of bandwidth among RTP and TCP packet streams. More info on this can be found in my publications.
- 2004 **BSc in Computer Engineering, Izmir Institute of Technology, Izmir, Turkey**

Appointments held

- 2009-2017 **Research Assistant, Izmir Institute of Technology, Izmir, Turkey**
I was employed at this post for the duration of my Master's and PhD degree studies. Among many diverse tasks, my experiences include: Doing research in computer science field, teaching lab/application courses to undergraduate computer engineering students (especially in the contexts of data management and embedded systems), and various administrative tasks of the Department of Computer Engineering.
- 2012 Nov **Visiting Researcher, University of Paderborn, Paderborn, Germany**
I have collaborated with a research group in University of Paderborn to do some joint research on testing and verification of digital circuits for self detection and correction of faults. Results of this research effort can be seen in more detail among my publications.

- 2007-2009 **Software Engineer, SiDEnet Internet Services, Izmir, Turkey**
I worked at this position as an engineer with dual duties of software/system engineer. My experiences at this job include, administration of Windows and Linux servers, development of B2B backend for handling reseller relations (Java, C#, ASP.NET), development of several automation tools regarding server administration and CRM for internal use (C#, ASP.NET, Windows.Forms).
- 2006-2007 **Software Engineer, Proset Software, Izmir, Turkey**
Contributed on a number of software projects on topics including, B2B application on product warranty management (C#, ASP.NET), point of sale applications on mobile platforms (Windows Embedded, C#), back-end development for handling business logic on various projects (C#, ASP.NET), hardware integration of mobile applications (C++).
- 2005-2006 **Second Lieutenant (Military Service), General Command of Gendarmarie, Ankara, Turkey**
Obligatory military service of all Turkish males. Served as an officer of planning and coordination in Logistics Command HQ. Performed general day-to-day administrative tasks.
- 2004-2005 **Software Engineer, SiDEnet Internet Services, Izmir, Turkey**
Please see above.

Publications

JOURNAL ARTICLE (SCI/SCIE)

- 2017b **Tos U.**, Mokadem R., Hameurlain A., Ayav T., and Bora S., *Achieving query performance in the cloud via a cost-effective data replication strategy*, ACM Transactions on Internet Technology, (under review)
- 2017a **Tos U.**, Mokadem R., Hameurlain A., Ayav T., and Bora S., *Ensuring performance and provider profit through data replication in cloud systems*, Cluster Computing, (accepted, in press), 2017 [\[Link\]](#)
- 2015 **Tos U.**, Mokadem R., Hameurlain A., Ayav T., and Bora S., *Dynamic replication strategies in data grid systems: a survey*, The Journal of Supercomputing, vol. 71, no. 11, pp. 4116–4140, 2015 [\[Link\]](#)

INTERNATIONAL CONFERENCE

- 2016 **Tos U.**, Mokadem R., Hameurlain A., Ayav T., and Bora S., *A Performance and Profit Oriented Data Replication Strategy for Cloud Systems*, The IEEE International Conference on Cloud and Big Data Computing (CBDCom 2016), Toulouse, France, July 18-21, 2016 [\[Link\]](#)
- 2013 Belli F., Kilinceker O., Padberg S., and **Tos U.**, “*Extension of Sequential Circuits for Self-Detection and Correction of Faults*”, 25. GI/GMM/ITG-Workshop: Testmethoden und Zuverlässigkeit von Schaltungen und Systemen (TuZ 2013), Dresden, Germany, February 24-26, 2013 [\[Link\]](#)
- 2012 Belli F., Kilinceker O., and **Tos U.**, “*Some Reflections on Fault Tolerance Issues - Application in Digital Circuits*”, Diskussionskreis Fehlertoleranz (DFT 2012), Nuremberg, Germany, November 22-23, 2012 [\[Link\]](#)
- 2011 **Tos U.**, and Ayav T., “*Adaptive RTP Rate Control Method*”, 35th Annual IEEE Computer Software and Applications Conference Workshops (COMPSACW 2011), Munich, Germany, July 18-21, 2011 [\[Link\]](#)

NATIONAL CONFERENCE

- 2010b Tuğlular T., Gerçek G., and **Tos U.**, “*İnternet Üzerinde Özellik Tabanlı Şifreleme Kullanan Bir Dosya Saklama Ortamı Önerisi (A Proposed Internet Based Storage Medium Using Attribute Based Encryption)*”, XV. Türkiye’de İnternet Konferansı (INET-TR 2010), İstanbul, Turkey, December 2-4, 2010 [\[Link\]](#)
- 2010a Kumova, B.I., Takan S., **Tos U.**, Gecer E.C., and Aytar A., “*Türkçeleştirilmiş bir robot işletim yazılımı ile robot üzerinde uygulama geliştirme (On-brick robot programming via a Turkish robot operating system)*”, Ulusal Otomatik Kontrol Toplantısı (TOK 2010), Gebze, Turkey, September 21-23, 2010

Honors & awards

2016

Best paper award by the 2016 IEEE International Conference on Cloud and Big Data Computing

2014

Fellowship for joint PhD abroad by the Scientific and Technological Research Council of Turkey (TÜBİTAK)

Teaching

TEACHING ASSISTANT

Behavioral robotics • Computer architecture • Computer networks • Embedded computer systems • Microprocessors • Mobile application development • Numerical computation • Programming basics • Real-time systems • Web programming

Technical skills

Many skills including: ASP.NET • Assembly • AWS • C/C++ • C# • CloudSim • CSS • FPGA Development • HTML • Java • ~~LaTeX~~ • Linux & Windows Server Administration • MSSQL • MySQL • NS2/3 Network Simulation • Office Applications • Photoshop • Python • VHDL • Windows.Forms • XML

Language skills

Turkish (native) • English (fluent, TOEFL 111/120, KPDS 94/100) • French (beginner)