+18575408435ates@bu.edu

Research Interests

Monitoring and Management of Large Scale Systems and Software, Data Analysis,

Cloud Computing, HPC

Education **Boston University** 2015 - Present

PhD in Computer Engineering

GPA: 3.93

Advisor: Prof. Ayşe Kıvılcım Coşkun · Electrical and Computer Engineering Dept.

Coursework: Advanced Data Structures, Computer Architecture, Advanced Digital Design with Verilog and FPGA, Introduction to Embedded Systems, Data Mining, Operating Systems,

Cybersecurity, Advanced Computer Systems

Middle East Technical University (METU)

2010 - 2015

B.S. in Electrical and Electronics Engineering

GPA: 3.23, Ranking: 37th among 353

Minor in History of Philosophy

GPA: 3.50

Research Experience Peac Lab Research Group

Boston, MA

September 2015 - present Researched on data center monitoring and analytics, interference in HPC and cloud systems,

end to end tracing of distributed applications

Ankara, TURKEY **BioMEMS** Research Group

June 2014 - June 2015

Improved sensing circuity of a MEMS based Coulter counter.

Qualifications

Programming Languages: Verilog, C, C++, Java, Python, Perl, R, Shell Software Tools: OpenStack, Scikit-learn, Vowpal Wabbit, autotools, LATEX

Publications

Ozan Tuncer, Emre Ates, Yijia Zhang, Ata Turk, Jim Brandt, Vitus Leung, Manuel Egele, Ayse K. Coskun, "Online Diagnosis of Performance Variation in HPC Systems Using Machine Learning," under review in Transactions on Parallel and Distributed Computing (TPDS), 2018. Qingqing Xiong, Emre Ates, Martin C. Herbordt, Ayse K. Coskun, "Tangram: Colocating HPC Applications with Oversubscription," to appear in IEEE High Performance Extreme Computing

Conf. (HPEC), Boston, 2018.

Emre Ates, Ozan Tuncer, Ata Turk, Jim Brandt, Vitus Leung, Manuel Egele, Ayse K. Coskun, "Taxonomist: Application Detection through Rich Monitoring Data," to appear in European Conf. on Parallel and Distributed Systems (Euro-Par), Torino, 2018.

Ozan Tuncer, Emre Ates, Yijia Zhang, Ata Turk, Jim Brandt, Vitus Leung, Manuel Egele, Ayse K. Coskun, "Diagnosing Performance Variations in HPC Applications using Machine Learning," in Int. Supercomputing Conf. (ISC-HPC), Frankfurt, 2017.

Internships

Lawrence Livermore National Laboratory Livermore, CA Summer 2017 Investigated the effect of power, network QoS, external traffic, number of processes, etc. on different supercomputing benchmarks, used machine learning to model the performance.

Albuquerque, NM Sandia National Laboratories Analyzed system monitoring data to automatically detect and classify anomalies in HPC clusters. Investigated allocation and task mapping algorithms for dragonfly systems.

ASELSAN AŞ (Military Electronic Industries) Ankara, TURKEY Summer 2013 Improved the performance of an existing 2D radar simulation, to make 3D simulations feasible.

Teaching Experience Applied Algorithms and Data Stuctures Boston University Spring 2016, Fall 2016 Weekly discussion session, checking exams and homeworks, coordinating the graders.

Awards and **Scholarships** Gauss Award ISC-HPC

June 2017

Research paper award given by German Gauss Center for Supercomputing

Bülent Kerim Altay Award METU

Spring 2011

For achieving 4.0 GPA

Invited Talks

Diagnosing Performance Variations in HPC Applications Using Machine Learning, Lawrence Berkeley National Laboratory, July 2017.