

Mehmet Savasci

Amherst, MA • (401) 218-2185 • mehmet.savascii@gmail.com

RESEARCH FOCUS

Distributed Systems, Cloud Computing, Datacenter Power Management, Application Resource Auto Scaling.

EDUCATION

University of Massachusetts Amherst, Amherst, MA

Ph.D. in Computer Science 2019-present

University of Rhode Island, Kingston, RI

MS in Electrical Engineering 2019

Erciyes University, Kayseri, Türkiye

BS in Computer Engineering 2015

RESEARCH EXPERIENCE

SLO-Aware Power Management for Elastic Cloud Applications

PhD Research, University of Massachusetts Amherst 2019-present

- Investigated the relationship between power consumption of servers and application performance.
- Designed controllers for managing the power usage of servers while respecting application SLOs.
- Integrated power cap and vertical scaler techniques to increase the effectiveness of both approaches in managing power consumption and application performance.
- Leveraged operating system native techniques to keep server power consumption below the power cap while giving application performance guarantees.

Latency analysis of (2,1) and (4,2) MDS coding methods in terms of partial updates

Master's Thesis Project, University of Rhode Island 2018-2019

- Performed latency analysis of coding techniques both theoretically and practically.
- Employed Poisson process, exponential distribution, Markov chain, and shortest queue load balancing for theoretical analysis.
- Measured download, upload, and partial update speed on AWS S3 for practical analysis.

Real-time quality analysis of wet sugar

Researcher at Erciyes University 2015-2017

- Captured images of wet sugar flowing along the production line to create image dataset.
- Performed statistical operations and curve fitting for modeling purposes.
- Designed an interface for the operator to show the quality of sugar in real time.

Real-time object detection application

Bachelor's Degree Final Project, Erciyes University 2015

- Processed video frames and detected objects in real time with SURF detector and descriptor.
- Utilized the OpenCV library in C++.

Pharmacy scheduler

2013–2014

- Designed a scheduler to schedule pharmacies on duty.
- Developed Android application as a client side.
- Collaborated with the company for market research and marketing.

INDUSTRY EXPERIENCE

IT Department, Meliksah University

Kayseri, Türkiye
Aug 2014–Apr 2015

Part-time

- Developed online trainee registration system using ASP.NET, Microsoft SQL, and Telerik UI.
- Provided technical support to students.
- Worked on adapting Bologna Process website to the university requirements.

R&D Department, TUBITAK National Observatory

Antalya, Türkiye
Aug 2014–Sept 2014

Summer Intern

- Worked on developing inventory system.
- Used Java JSF framework and MySQL.

IT Department, TUBITAK National Metrology Institute

Kocaeli, Türkiye
Jun 2013–Jul 2013

Summer Intern

- Developed a client-server application using Java.

Iitelis Advanced Technology

Kayseri, Türkiye
Jun 2012–Aug 2012

Volunteer

- Learned and practiced C# and SQL.
- Developed applications from basic to advanced using C# and Microsoft SQL.

TEACHING EXPERIENCE

Teaching Assistant (TA), University of Massachusetts Amherst

COMPSCI 230 - Computer Systems Principles Fall 24

COMPSCI 461/661 - Secure Distributed Systems Fall 23

COMPSCI 677 - Distributed and Operating Systems Spring 23, Spring 24

COMPSCI 879 - Teaching Assistants as Tomorrow's Faculty Fall 21

COMPSCI 186 - Using Data Structures Fall 19, Spring 20, Fall 20, Spring 21, Spring 22

Teaching Associate (TO), University of Massachusetts Amherst

COMPSCI 186 - Using Data Structures Fall 22

AWARDS

Graduate Research Fellowship, Türkiye's Ministry of Industry and Technology Feb 2016

Postgraduate Scholarship, Türkiye's Ministry of National Education Oct 2015

High Honors Degree, Erciyes University Jun 2015, Jan 2015, Jan 2013

PUBLICATIONS

- **Mehmet Savasci**, Ahmed Ali-Eldin, Johan Eker, Anders Robertsson, and Prashant Shenoy. [*DDPC: Automated Data-Driven Power-Performance Controller Design on-the-fly for Latency-sensitive Web Services*](#). In: *ACM the Web Conference (formerly WWW)*. 2023.
- **Mehmet Savasci**, Abel Souza, Li Wu, David Irwin, Ahmed Ali-Eldin, and Prashant Shenoy. [*SLO-Power: SLO and Power-aware Elastic Scaling for Web Services*](#). In: *The 24th IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGrid)*. 2024.
- **Mehmet Savasci**, Abel Souza, David Irwin, Ahmed Ali-Eldin, and Prashant Shenoy. *PADS: Power Budgeting with Diagonal Scaling for Performance-Aware Cloud Workloads*. In: *The 15th International Green and Sustainable Computing Conference (IGSC)*. 2024.

TECHNICAL SKILLS

- Programming Languages: Python, Java, C, Solidity, JavaScript, SQL, C++, MATLAB, C#.
- DevOps: Docker, LXD, LXC, KVM, Incus, Terraform.
- API: OpenGL, Amazon AWS S3 Java/Python API.

CERTIFICATIONS

- University of Rhode Island (Kingston, RI) 2018
Embedded Systems Certificate
- Indiana University Bloomington (Bloomington, IN) 2017
English training
- Middle East Technical University (Ankara, Türkiye) 2016-2017
English training

PROFESSIONAL SERVICE

Journal Reviewer: Future Generation Computer Systems (2024).

Chair: Computer Science Education Chair at IEEE/ACM CCGrid (2024).

Moderator: PhD Student Panel at UMass Amherst College of Inf & Computer Sciences (2024).

EXTRACURRICULAR ACTIVITIES

- President of the Graduate Muslim Student Association at UMass Amherst 2021-2024
- Media coordinator of the ACM Club at the Erciyes University 2012-2013