

Mehmet Savasci

Kayseri, Türkiye • (+90) 539-872-1071 • mehmet.savasci@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 2025

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 2019–2025

- 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 for 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

R&D Department, TUBITAK National Observatory Summer Intern

Antalya, Türkiye
Aug 2014–Sept 2014

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

IT Department, TUBITAK National Metrology Institute Summer Intern

Kocaeli, Türkiye
Jun 2013–Jul 2013

- Developed a client-server application using Java.

Itelis Advanced Technology Volunteer

Kayseri, Türkiye
Jun 2012–Aug 2012

- 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
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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, IEEE Internet Computing.

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