

## Asst. Prof. MEHMET SERKAN APAYDIN

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Stanford University, Engineering, Electrical Engineering, United States Of America 1999 - 2004

Undergraduate, Ihsan Dogramaci Bilkent University, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1993 - 1997

### Research Areas

Artificial Intelligence, Computer Learning and Pattern Recognition

### Academic Titles / Tasks

Assistant Professor, Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering And Natural Sciences, Computer Engineering, 2023 - Continues

Assistant Professor, Izmir Institute Of Technology, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, 2021 - 2023

Assistant Professor, Istanbul Medipol University, Mühendislik Ve Doğa Bilimleri Fakültesi, Bilgisayar Mühendisliği Bölümü, 2020 - 2021

### Courses

OPERATING SYSTEMS, Undergraduate, 2023 - 2024

Programming Practice, Undergraduate, 2023 - 2024

INTRO TO PROGRAMMING, Undergraduate, 2024 - 2025, 2023 - 2024

COMPUTER NETWORKS AND SOCIAL NETWORKS, Undergraduate, 2023 - 2024

ARTIFICIAL INTELLIGENCE, Undergraduate, 2024 - 2025

ALGORITHMS AND DATA STRUCTURES, Undergraduate, 2023 - 2024

### Advising Theses

Apaydin M. S., Yücesoy D. T., Machine-learning-assisted de novo design of molybdenum disulfide binding peptides, Postgraduate, A.DENİZ(Student), 2024

Apaydin M. S., Hardware Acceleration with FPGA Based Electronic Boards for Machine Learning, Postgraduate, B.AKKUŞ(Student), 2023

Apaydn M. S., Özen H., Signalized intersection delay estimation for transportation demand modeling, Doctorate, A.SARAÇOĞLU(Student), 2022

## Jury Memberships

Academic Staff Examination, Academic Staff Examination, Acibadem Mehmet Ali Aydinlar University, November, 2024

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A New Approach to Determine Traffic Peak Periods to Utilize in Transportation Planning**  
Saracoglu A., Ozen H., APAYDIN M. S., Maltaş A.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.46, no.11, pp.10409-10418, 2021 (SCI-Expanded)
- II. **PROGRESS IN NUCLEAR VECTOR REPLACEMENT FOR NMR PROTEIN STRUCTURE-BASED ASSIGNMENTS**  
Cetinkaya S., Ekren S. N., APAYDIN M. S.  
RAIRO-OPERATIONS RESEARCH, vol.50, no.2, pp.341-349, 2016 (SCI-Expanded)
- III. **Automating unambiguous NOE data usage in NVR for NMR protein structure-based assignments**  
Akhmedov M., Catay B., APAYDIN M. S.  
JOURNAL OF BIOINFORMATICS AND COMPUTATIONAL BIOLOGY, vol.13, no.6, 2015 (SCI-Expanded)
- IV. **A Tabu Search Approach for the NMR Protein Structure-Based Assignment Problem**  
Cavuslar G., Catay B., APAYDIN M. S.  
IEEE-ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS, vol.9, no.6, pp.1621-1628, 2012 (SCI-Expanded)
- V. **NVR-BIP: Nuclear Vector Replacement using Binary Integer Programming for NMR Structure-Based Assignments**  
APAYDIN M. S., Catay B., Patrick N., Donald B. R.  
COMPUTER JOURNAL, vol.54, no.5, pp.708-716, 2011 (SCI-Expanded)
- VI. **Structure-based protein NMR assignments using native structural ensembles**  
APAYDIN M. S., Conitzer V., Donald B. R.  
JOURNAL OF BIOMOLECULAR NMR, vol.40, no.4, pp.263-276, 2008 (SCI-Expanded)
- VII. **Using Stochastic Roadmap Simulation to predict experimental quantities in protein folding kinetics: Folding rates and phi-values**  
Chiang T., APAYDIN M. S., Brutlag D. L., Hsu D., Latombe J.  
JOURNAL OF COMPUTATIONAL BIOLOGY, vol.14, no.5, pp.578-593, 2007 (SCI-Expanded)
- VIII. **Predicting experimental quantities in protein folding kinetics using Stochastic Roadmap Simulation**  
Chiang T., APAYDIN M. S., Brutlag D., Hsu D., Latombe J.  
RESEARCH IN COMPUTATIONAL MOLECULAR BIOLOGY, PROCEEDINGS, pp.410-424, 2006 (SCI-Expanded)
- IX. **Stochastic roadmap simulation: An efficient representation and algorithm for analyzing molecular motion**  
APAYDIN M. S., Brutlag D., Guestrin C., Hsu D., Latombe J., Varma C.  
JOURNAL OF COMPUTATIONAL BIOLOGY, vol.10, no.3-4, pp.257-281, 2003 (SCI-Expanded)
- X. **Stochastic roadmap simulation for the study of ligand-protein interactions**  
APAYDIN M. S., Guestrin C., Varma C., Brutlag D., Latombe J.  
BIOINFORMATICS, vol.18, 2002 (SCI-Expanded)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Traffic Speed Prediction with Neural Networks**

Cakmak U. C., APAYDIN M. S., Catay B.

Annual International Conference of the German-Operations-Research-Society (GOR), Berlin, Germany, 6 - 08 September 2017, pp.737-743

**II. A Deep Learning Approach to Sentiment Analysis in Turkish**

Ciftci B., APAYDIN M. S.

International Conference on Artificial Intelligence and Data Processing (IDAP), Malatya, Turkey, 28 - 30 September 2018

**III. A Neural Network Approach for Predicting Speeds on Road Networks**

Cakmak U. C., Catay B., APAYDIN M. S.

26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

**IV. Incorporating Triple Resonance Experiment Data Into NVR For NMR Protein Structure-Based Assignments**

Ekren S. N., APAYDIN M. S.

22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1926-1929

**V. Distinguishing the type of NOE for NMR Protein Structure-Based Assignments**

Akhmedov M., Catay B., APAYDIN M. S.

21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013

**VI. Incorporating HADAMAC experiment into NMR Structure-Based Assignments**

Erdogan H., APAYDIN M. S.

6th International Symposium on Health Informatics and Bioinformatics (HIBIT), İzmir, Turkey, 2 - 05 May 2011, pp.80-85

**VII. NVR-BIP: Nuclear Vector Replacement using Binary Integer Programming for NMR Structure-Based Assignments**

APAYDIN M. S., Catay B., Patrick N., Donald B. R.

24th International Symposium on Computer and Information Sciences, Güzelyurt, Cyprus (Kktc), 14 - 16 September 2009, pp.177-178

**VIII. Stochastic conformational roadmaps for computing ensemble properties of molecular motion**

APAYDIN M. S., Brutlag D., Guestrin C., Hsu D., Latombe J.

5th International Workshop on Algorithmic Foundations of Robotics, Nice, France, 15 - 17 December 2002, pp.131-147

**IX. Capturing molecular energy landscapes with probabilistic conformational roadmaps**

APAYDIN M. S., Singh A., Brutlag D., Latombe J.

IEEE International Conference on Robotics and Automation, Seoul, South Korea, 21 - 26 May 2001, pp.932-939

## Scientific Refereeing

TUBITAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, Acibadem Mehmet Ali Aydınlar University, Turkey, December 2024

Gazi University Journal of Science Part A: Engineering and Innovation, National Scientific Refreed Journal, November 2024

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Acibadem Mehmet Ali Aydınlar University, Turkey, March 2024

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Acibadem Mehmet Ali Aydınlar University, Turkey, December 2023

Acta Infologica, National Scientific Refreed Journal, August 2023

## Metrics

Publication: 19

Citation (WoS): 172

Citation (Scopus): 209

H-Index (WoS): 6

H-Index (Scopus): 7