Asst. Prof. MEHMET SERKAN APAYDIN

Personal Information

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International Researcher IDs
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Education

Doctorate, Stanford University, Engineering, Electrical Engineering, United States Of America 1999 - 2004
Undergraduate, Ihsan Dogramaci Bilkent University, Faculty Of Engıneerıng, Department Of Electrıcal And Electronıcs
Engıneerıng, Turkey 1993 - 1997

Research Areas

Artificial Intelligence, Computer Learning and Pattern Recognition

Academic Positions

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 Engıneerıng, Department Of Electrıcal And Electronıcs
Engıneerıng, 2021 - 2023
Assistant Professor, Istanbul Medipol University, Mühendislik Ve Doğa Bilimleri Fakültesi, Bilgisayar Mühendisliği
Bölümü, 2020 - 2021

Courses

Undergraduate
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

Supervised Theses

Apaydın M. S., Yücesoy D. T., Machine-learning-assisted de novo design of molybdenum disulfide binding peptides,
Postgraduate, A.DENİZ(Student), 2024
Apaydın M. S., Hardware Acceleration with FPGA Based Electronic Boards for Machine Learning, Postgraduate,

B.AKKUŞ(Student), 2023

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

Jury Memberships

Doctoral Examination, Doctoral Examination, Acıbadem Mehmet Ali Aydınlar Üniversitesi, February, 2025

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

Journal articles indexed in 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)

Papers Presented at Peer-Reviewed Scientific Conferences

I. **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, (Full Text)

II. **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, (Full Text)

III. **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, (Full Text)

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, (Full Text)

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, (Full Text)

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, (Full Text)

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, (Full Text)

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, (Full Text)

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, (Full Text)

Funded Projects

Apaydın M. S., Doğan F., Yönder V. M., Çavka H. B., Project Supported by Higher Education Institutions, Anadolu ve Balkan Konutlarının Coğrafi Bilgi Sistemi ve Derin Yapay Sinir Ağları ile Sınıflandırılması ve Kümelendirilmesi, 2022 - 2025
Apaydın M. S., Çatay B., TUBITAK Project, NVR programlarının gerçek NMR verisi ile testi, 2013 - 2015
Apaydın M. S., FP1 Project, AUTOMATED NMR STRUCTURE BASED ASSIGNMENTS, 2011 - 2014
Apaydın M. S., Çatay B., TUBITAK Project, NMR YAPI TABANLI ATAMALAR ICIN YENI ALGORITMALAR, 2009 - 2011

Contractual Researches

Apaydın M. S., Tüseb, Beyaz Nokta Lezyonlarının Biyomimetik Tedavisine Yönelik Kimerik Peptit Temelli Diş Jeli Geliştirilmesi, 2025 - 2026

Peer Reviews in Scientific Publications

Sinyal İşleme Uygulamaları 2025, Conference Paper (Full Text), April 2025
Gazi University Journal of Science Part A: Engineering and Innovation, National Scientific Refreed Journal, November 2024
Acta Infologica, National Scientific Refreed Journal, August 2023

Scientific Project Refereeing

TUBITAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, December 2024
TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, March 2024
TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, December 2023

Metrics

Publication: 19
Citation (WoS): 172
Citation (Scopus): 209
H-Index (WoS): 6
H-Index (Scopus): 7

Congress and Symposium Activities

AI in architectural heritage, Attendee, Catania, Italy, 2023

Invited Talks

Seminar, Turkey, January 2025
yapay zeka ve sağlık, Seminar, toraks derneği, Turkey, October 2023