

## Prof. ADNAN YAZICI

### Personal Information

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### Biography

**Prof.Dr. Adnan YAZICI** [received the Ph.D. degree in Computer Science from the Department of EECS, Tulane University, LA, USA, in 1991. He has been a Full Professor in the Department of Computer Engineering, Middle East Technical University, Ankara, Turkey. He has published over 200 international technical papers and co-authored/edited three books entitled Fuzzy Database Modeling \(Springer\), Fuzzy Logic in its 50th Year: New Developments, Directions and Challenges \(Springer\), and Uncertainty Approaches for Spatial Data Modeling and Processing: A Decision Support Perspective \(Springer\). His current research interests include data science, multimedia databases and information retrieval, wireless multimedia sensor networks, and fuzzy database modeling. He was a recipient of the IBM Faculty Award in 2011 and the Parlar Foundation's Young Investigator Award in 2001. He was the Conference Co-Chair of the 23rd IEEE International Conference on Data Engineering in 2007, the 38th Very Large Data Bases in 2012, and the 23rd IEEE International Conference on Fuzzy Systems in 2015. He is currently an Associate Editor of the IEEE Transactions on Fuzzy Systems and a member of ACM, the IEEE Computational Intelligence Society and the Fuzzy Systems Technical Committee.](#)

### Education Information

Doctorate, Tulane University, Electrical Engineering And Computer Science, United States Of America 1987 - 1991

Undergraduate, Istanbul Technical University, Maden Fakültesi, Petrol Ve Doğalgaz Mühendisliği Bölümü, Turkey 1978 - 1982

### Foreign Languages

English, C1 Advanced

Russian, A2 Elementary

### Dissertations

Doctorate, Integrating Advanced Data Models for Large Knowledge-Based Applications, Tulane University, Engineering, Computer Science, 1991

### Research Areas

Engineering and Technology

### Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1999 - Continues

Associate Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1993 - 1999

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Computer Engineering, 1991 - 1993

## Academic and Administrative Experience

Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 2010 - Continues

## Advising Theses

YAZICI A., Multilevel object tracking on big graph data using interval type-2 fuzzy systems in wireless multimedia sensor networks, Doctorate, C.KÜÇÜKKEÇECİ(Student), 2020

YAZICI A., Fuzzified semantic WEB reasoning for activity detection in WMSN applications, Postgraduate, A.NAİL(Student), 2019

YAZICI A., BB-PLUS: an efficient approach for subgraph isomorphism problem in big graph databases, Postgraduate, E.TAŞKOMAZ(Student), 2019

YAZICI A., Indexing both content and concept for high-dimensional multimedia data, Doctorate, S.ARSLAN(Student), 2018

YAZICI A., An intelligent fuzzy clustering approach for energy-efficient data aggregation in wireless sensor networks, Doctorate, S.ALPER(Student), 2018

YAZICI A., A lightweight wireless multimedia sensor network architecture with object detection and classification capability, Doctorate, M.CİVELEK(Student), 2017

YAZICI A., A Lightweight wireless multimedia sensor network architecture with object detection and classification capabilities, Doctorate, M.Civelek(Student), 2017

YAZICI A., BB-Graph: A new subgraph isomorphism algorithm for querying big graph databases, Postgraduate, M.ASİLER(Student), 2016

YAZICI A., An adaptive, energy-aware and distributed fault-tolerant topology-control algorithm for heterogeneous wireless sensor networks, Doctorate, F.DENİZ(Student), 2016

BAYKAL N., YAZICI A., Database security in private database clouds, Postgraduate, O.ÇINAR(Student), 2015

COŞAR A., YAZICI A., An efficient fuzzy fusion-based framework for surveillance applications in wireless multimedia sensor networks, Postgraduate, S.ALPER(Student), 2014

YAZICI A., Fusion of multimodal information for multimedia information retrieval, Doctorate, T.YILMAZ(Student), 2014

YAZICI A., Doküman kategorizasyonu ve imza bölge analizi, Postgraduate, İ.CÜCELOĞLU(Student), 2014

YAZICI A., Design and implementation of a novel visual analysis system for image classification, Doctorate, Ü.LÜTFÜ(Student), 2013

YAZICI A., Design and implementation of a novel visual analysis system for image clasiffication, Doctorate, Ü.Lütfü(Student), 2013

YAZICI A., Fault-tolerant topology control in heterogeneous wireless sensor networks, Doctorate, H.BAĞCI(Student), 2013

YAZICI A., Integration of multimodal multimedia database system architecture with query level fusion, Postgraduate, S.SATTARI(Student), 2013

YAZICI A., Frequency-driven late fusion-based word decomposition approach on the phrase-based statistical machine translation systems, Postgraduate, M.TATLICIOĞLU(Student), 2013

YAZICI A., OĞUZTÜZÜN M. H. S. , Describing the software architecture of a multimedia data management system, Postgraduate, Ç.AVCI(Student), 2013

YAZICI A., Turkish large vocabulary continuous speech recognition by using limited audio corpus, Postgraduate,

D.SUSMAN(Student), 2012

YAZICI A., FMDBMS-a fuzzy MPEG-7 database management system, Postgraduate, N.İLKER(Student), 2012

YAZICI A., Algorithms for the weapon - target allocation problem, Postgraduate, A.TURAN(Student), 2012

TAŞKAYA TEMİZEL T., YAZICI A., Expert finding in domains with unclear topics, Postgraduate, G.HÜLYA(Student), 2012

YAZICI A., Fusing semantic information extracted from visual, auditory and textual data of videos, Postgraduate, E.GÜLEN(Student), 2012

YAZICI A., An energy-efficient and reactive remote surveillance framework using wireless multimedia sensor networks, Doctorate, H.ÖZTARAK(Student), 2012

YAZICI A., Semantic classification and retrieval system for environmental sounds, Postgraduate, Ç.OKUYUCU(Student), 2012

YAZICI A., Rule-based in-network processing for event-driven applications in wireless sensor networks, Doctorate, Ö.ŞANLI(Student), 2011

YAZICI A., Semi-automatic semantic video annotation tool, Postgraduate, M.AYDINLILAR(Student), 2011

YAZICI A., Named entity recognition in Turkish with Bayesian learning and hybrid approaches, Postgraduate, S.REHA(Student), 2011

YAZICI A., Exploiting information extraction techniques for automatic semantic annotation and retrieval of news videos in Turkish, Doctorate, D.KÜÇÜK(Student), 2011

YAZICI A., Design and implementation of spatiotemporal databases, Doctorate, A.SÖZER(Student), 2010

KARAGÖZ P., YAZICI A., Pattern extraction by using both spatial and temporal features on Turkish meteorological data, Postgraduate, I.GOLER(Student), 2010

YAZICI A., Static range assignment in wireless sensor networks, Postgraduate, E.UZUN(Student), 2010

YAZICI A., Implementation of X-tree with 3D spatial index and fuzzy secondary index, Postgraduate, S.KESKİN(Student), 2010

YAZICI A., Fuzzy unequal clustering in wireless sensor networks, Postgraduate, H.BAĞCI(Student), 2010

YAZICI A., Integration of fuzzy object-oriented multimedia database components, Postgraduate, U.DEMİR(Student), 2010

YAZICI A., COŞAR A., A web based GIS mashup for archaeology, Postgraduate, B.ÖZTÜRK(Student), 2010

YAZICI A., Fuzzy decision fusion for single target classification in wireless sensor networks, Postgraduate, S.GÖK(Student), 2009

YAZICI A., Automatic semantic content extraction in videos using a spatio-temporal ontology model, Doctorate, Y.YILDIRIM(Student), 2009

YAZICI A., Content-based audio management and retrieval system for news broadcasts, Postgraduate, E.DOĞAN(Student), 2009

YAZICI A., Efficient index structures for video databases, Postgraduate, E.AÇAR(Student), 2008

YAZICI A., Fuzzy association rule mining from spatio-temporal data: An analysis of meteorological data in Turkey, Postgraduate, S.ÜNAL(Student), 2008

YAZICI A., Object extraction from images/videos using a genetic algorithm based approach, Postgraduate, T.YILMAZ(Student), 2008

Yazıcı A., Ünlü K., Development of a decision support system for performance-based landfill design, Doctorate, B.ÇELİK(Student), 2008

YAZICI A., Coupling speech recognition and rule-based machine translation, Doctorate, S.KÖPRÜ(Student), 2008

YAZICI A., An intelligent fuzzy object-oriented database framework for video database applications, Postgraduate, N.BURCU(Student), 2007

YAZICI A., A constraint based real-time license plate recognition system, Postgraduate, A.GÖKAY(Student), 2007

YAZICI A., Web sayfaları için anlamsal erişim sistemi, Doctorate, E.SEZER(Student), 2006

YAZICI A., Veri ambarı ve OLAP teknolojilerinden yararlanılarak karar destek amaçlı raporlama aracı gerçekleştirimi, Postgraduate, S.DÜZGÜNOĞLU(Student), 2006

YAZICI A., Structural and event based multimodal video data modeling, Postgraduate, H.ÖZTARAK(Student), 2005

YAZICI A., A fuzzy petri net model for intelligent databases, Doctorate, B.BOSTAN(Student), 2005

YAZICI A., Fuzzy spatial data cube construction and its use in association rule mining, Postgraduate, N.İŞİK(Student), 2005

YAZICI A., An XML based content-based image retrieval system with MPEG-7 descriptors, Postgraduate,

S.ARSLAN(Student), 2004

YAZICI A., Fuzzy querying in XML databases, Postgraduate, E.Üstünkaya(Student), 2004

YAZICI A., A new technique: Replace algorithm to retrieve a version from a repository instead of delta application, Postgraduate, S.ONUR(Student), 2004

YAZICI A., Fuzzy querying in XML databases, Postgraduate, E.ÜSTÜNKAYA(Student), 2004

YAZICI A., Semantik video modeling and retrieval with visual, auditory, textual sources, Postgraduate, N.Durak(Student), 2004

YAZICI A., An XML based content-based image retrieval system with MPRG-7 descriptors, Postgraduate, S.Arslan(Student), 2004

YAZICI A., Semantic video modeling and retrieval with visual, auditory, textual sources, Postgraduate, N.DURAK(Student), 2004

YAZICI A., An indexing technique for similarity-based fuzzy object-oriented data model (food index), Postgraduate, Ç.İNCE(Student), 2003

YAZICI A., A Video database management system based on MPEG-7 standard, Postgraduate, Ö.YAVUZ(Student), 2002

YAZICI A., A video database management system based on MPEG-7 standard., Postgraduate, Ö.Yavuz(Student), 2002

YAZICI A., Fuzzy functional dependency and fuzzy normal forms in fuzzy relational databases, Postgraduate, Ö.BAHAR(Student), 2002

YAZICI A., Implementation of index structures for fuzzy spatial querying, Postgraduate, A.SÖZER(Student), 2001

ÇİÇEKLİ F. N. , YAZICI A., Spatio-temporal querying in video databases, Postgraduate, M.KÖPRÜLÜ(Student), 2001

YAZICI A., An Intelligent fuzzy object-oriented database system, Doctorate, M.KOYUNCU(Student), 2001

YAZICI A., Uncertainty management in spatial database applications, Postgraduate, K.AKKAYA(Student), 1999

YAZICI A., Uncertainty management in spatial database application, Postgraduate, K.Akkaya(Student), 1999

YAZICI A., Design and implementation of multimedia database applications, Postgraduate, R.SAVAŞ(Student), 1998

YAZICI A., Implementation of the extended complex values for uncertain data., Postgraduate, A.SOYSAL(Student), 1998

YAZICI A., Fuzzy functional and fuzzy multivalued dependencies in fuzzy relational databases, Postgraduate, M.İlker(Student), 1997

YAZICI A., Computerised aircraft maintenance management system, Postgraduate, A.Şenol(Student), 1997

YAZICI A., Fuzzy Functional and fuzzy multivalued dependencies fuzzy relational databases, Postgraduate, M.İLKER(Student), 1997

YAZICI A., Computerized aircraft maintenance management, Postgraduate, A.ŞENOL(Student), 1997

YAZICI A., An implementation of fuzzy control algorithms for controlling the crane arm of multi-barreled rocket launcher ammunition transport vehicles, Postgraduate, A.Bostan(Student), 1997

YAZICI A., An Implementation of fuzzy control algorithms for controlling the crane arm of multi barreled rocket louncher ammunition transport vehicles, Postgraduate, A.BOSTAN(Student), 1997

YAZICI A., Ensuring multilevel database security using fuzzy logic, Postgraduate, H.KÖKSAL(Student), 1997

YAZICI A., A Formal conceptual approach for fuzzy object-oriented database design, Postgraduate, A.ÇINAR(Student), 1997

YAZICI A., Modeling uncertainty in a deductive object-oriented database, Postgraduate, B.BOSTAN(Student), 1997

YAZICI A., Fuzzy indexing with multi level grid file, Postgraduate, D.CİBİCELİ(Student), 1996

YAZICI A., Extended relational database management systems for document retrieval, Postgraduate, D.ARIKAN(Student), 1995

YAZICI A., Fuzzy object-oriented database modelling incorporated with logic, Postgraduate, M.KOYUNCU(Student), 1995

YAZICI A., Fuzzy object-oriented database modeling incorporated with logic, Postgraduate, M.Koyuncu(Student), 1995

YAZICI A., Data model for the representation of complex and uncertain information, Postgraduate, O.MERDAN(Student), 1995

YAZICI A., Data models for the representation of complex and uncertain information, Postgraduate, O.Merdan(Student), 1995

YAZICI A., Computer-based automation of the material requirements planning (MRP), Postgraduate, H.ERYÜKSEL(Student), 1994

YAZICI A., Fuzzy object modelling in object-oriented environment, Postgraduate, D.AKSOY(Student), 1994

YAZICI A., Study of transitive closure algorithms in deductive databases, Postgraduate, L.YAVUZ(Student), 1994

YAZICI A., Study of transitive closure algorithms in deductive database, Postgraduate, L.Yavuz(Student), 1994  
YAZICI A., Handling fuzzy complex objects in knowledge-based systems, Postgraduate, M.TURHAN(Student), 1994  
YAZICI A., Design and analysis of lot sizing techniques for an MRP system, Postgraduate, S.Zencirci(Student), 1994  
YAZICI A., Design and analysis of lot sizing techniques for an mrp systems, Postgraduate, S.ZENCİRCİ(Student), 1994  
YAZICI A., Fuzzy object modeling in object-oriented environment, Postgraduate, D.Aksoy(Student), 1994

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **An Effective Forest Fire Detection Framework Using Heterogeneous Wireless Multimedia Sensor Networks**  
Kizilkaya B., Ever E., Yatbaz H. Y. , Yazici A.  
ACM TRANSACTIONS ON MULTIMEDIA COMPUTING COMMUNICATIONS AND APPLICATIONS, vol.18, no.2, 2022  
(Journal Indexed in SCI)
- II. **HyGraph: a subgraph isomorphism algorithm for efficiently querying big graph databases**  
ASİLER M., YAZICI A., George R.  
JOURNAL OF BIG DATA, vol.9, no.1, 2022 (Journal Indexed in SCI)
- III. **Hand-crafted versus learned representations for audio event detection**  
Kucukbay S. E. , YAZICI A., KALKAN S.  
MULTIMEDIA TOOLS AND APPLICATIONS, 2022 (Journal Indexed in SCI)
- IV. **Modeling and Querying Fuzzy SOLAP-Based Framework**  
Keskin S., YAZICI A.  
ISPRS INTERNATIONAL JOURNAL OF GEO-INFORMATION, vol.11, no.3, 2022 (Journal Indexed in SCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Management of Complex and Fuzzy Queries Using a Fuzzy SOLAP-Based Framework**  
Keskin S., YAZICI A.  
14th International Conference on Flexible Query Answering Systems (FQAS), Bratislava, Slovakia, 19 - 24  
September 2021, vol.12871, pp.109-126
- II. **Optimizing the Performance of Rule-Based Fuzzy Routing Algorithms in Wireless Sensor Networks**  
Sert S. A. , YAZICI A.  
2019 IEEE International Conference on Fuzzy Systems, FUZZ 2019, Louisiana, United States Of America, 23 - 26  
June 2019, vol.2019-June
- III. **Effects of Selective Forwarding Attacks on Wireless Sensor Network Efficiency**  
Sert S. A. , YAZICI A., Cosar A.  
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- IV. **Spatio-temporal pattern and trend extraction on Turkish meteorological data**  
Goler I., KARAGÖZ P., YAZICI A.  
26th Annual International Symposium on Computer and Information Science, ISCIS 2011, London, England, 26 - 28  
September 2011, pp.505-510

## Activities in Scientific Journals

IEEE Transaction on Fuzzy Systems, Assistant Editor, 2017 - Continues

## Citations

Total Citations (WOS):916

h-index (WOS):14