

Asst. Prof. Mehmet Amaç GÜVENSAN

Personal Information

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Education Information

Doctorate, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği, Turkey 2006 - 2011

Post Graduate, Yıldız Teknik Üniversitesi, Faculty of Electrical & Electronics, Computer Engineering, Turkey 2003 - 2006

Under Graduate, Yıldız Teknik Üniversitesi, Faculty of Electrical & Electronics, Computer Engineering, Turkey 1997 - 2002

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, A Systematic Solution To The Coverage Problem in Directional Sensor Networks, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği, 2011

Post Graduate, Design and Implementation of a Cryptographic System Embedded in Linux Kernel, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Bilgisayar Mühendisliği, 2006

Research Areas

Information Systems, Communication and Control Engineering, Signal Processing, Pattern Recognition and Analysis, Computer Sciences, algorithms, Database and Data Structures, Data Structures, Artificial Intelligence, Computer Learning and Pattern Recognition, Knowledge Engineering, Computer Learning, Software, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Yıldız Teknik Üniversitesi, Elektrik Elektronik Fakültesi, Bilgisayar Mühendisliği, 2018 - Continues

Assistant Professor, Yıldız Teknik Üniversitesi, Elektrik Elektronik Fakültesi, Bilgisayar Mühendisliği, 2013 - 2018

Research Assistant PhD, Yıldız Teknik Üniversitesi, Elektrik Elektronik Fakültesi, Bilgisayar Mühendisliği, 2011 - 2013

Research Assistant, Yıldız Teknik Üniversitesi, Elektrik Elektronik Fakültesi, Bilgisayar Mühendisliği, 2003 - 2011

Professional Experience

Fakülte Kurulu Üyesi, Yıldız Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2016 -

Continues

Birim Tanıtım ve Mezunlarla İlişkiler Komisyonu Üyesi, Yıldız Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2006 - Continues

Deputy Head of Department, Yıldız Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2016 - 2017

Araştırma Görevlisi Üniversite Temsilcisi, Yıldız Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2008 - 2009

Araştırma Görevlisi Fakülte Temsilcisi, Yıldız Technical University, Faculty of Electrical & Electronics, Computer Engineering, 2007 - 2009

Courses

Data Structures and Algorithms, Under Graduate, 2019 - 2020

Mobil Teknolojiler ve Uygulamaları, Post Graduate, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2018 - 2019

Algoritma Analizi, Under Graduate, 2018 - 2019

Introduction to Mobile Programming, Under Graduate, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019

Bilgisayar Bilimlerine Giriş, Under Graduate, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019

Pervasive and Mobile Computing, Post Graduate, 2016 - 2017, 2017 - 2018, 2018 - 2019

İleri Programlama Teknikleri, Post Graduate, 2014 - 2015, 2015 - 2016, 2016 - 2017, 2017 - 2018, 2018 - 2019

Advising Theses

Güvensan M. A. , Bölgesel Trafik Yoğunluk Tahmini İçin Derin Öğrenme Teknikleri İle Model Oluşturulması, Post Graduate, F.YASLI(Student), 2020

Güvensan M. A. , Design and implementation of ride comfort evaluation system with using crowdsensing technique, Post Graduate, Y.FIRAT(Student), 2019

Güvensan M. A. , Derin Öğrenme ile Günlük Aktivite ve Seyahat Türlerini Birlikte Tanıma, Post Graduate, J.ISKANDEROV(Student), 2019

Designed Lessons

Güvensan M. A. , Pervasive and Mobile Computing, Post Graduate, 2016 - 2017

Güvensan M. A. , Mobil Programlamaya Giriş, Under Graduate, 2015 - 2016

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

- I. **Breaking the Limits of Transportation Mode Detection: Applying Deep Learning Approach with Knowledge-based Features**
Iskanderov J., Güvensan M. A.
IEEE Sensors Journal, vol.11, pp.1, 2020 (Journal Indexed in SCI Expanded)
- II. **A Closer Look Into the Characteristics of Fraudulent Card Transactions**
Can B., YAVUZ A. G. , Karşilgil E. M. , GÜVENSAN M. A.
IEEE ACCESS, vol.8, pp.166095-166109, 2020 (Journal Indexed in SCI)
- III. **Towards Next-Generation Vehicles Featuring the Vehicle Intelligence**
Payalan Y. F. , Güvensan M. A.
IEEE Transactions On Intelligent Transportation Systems, vol.21, pp.30-47, 2020 (Journal Indexed in SCI Expanded)
- IV. **A Novel Segment-Based Approach for Improving Classification Performance of Transport Mode**

Detection

GÜVENSAN M. A. , DUSUN B., CAN B., TURKMEN H. İ.
SENSORS, vol.18, 2018 (Journal Indexed in SCI)

- V. **An Energy-Efficient Multi-Tier Architecture for Fall Detection on Smartphones**
GÜVENSAN M. A. , KANSIZ A. O. , Camgoz N. C. , TURKMEN H. İ. , YAVUZ A. G. , KARSLIGIL M. E.
SENSORS, vol.17, 2017 (Journal Indexed in SCI)
- VI. **Driver Behavior Analysis for Safe Driving: A Survey**
KAPLAN S., GÜVENSAN M. A. , YAVUZ A. G. , KARALURT Y.
IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, vol.16, 2015 (Journal Indexed in SCI)
- VII. **In situ image processing capabilities of ARM-based micro-controllers**
TAYŞI Z. C. , YAVUZ A. G. , GÜVENSAN M. A. , KARSLIGIL M. E.
JOURNAL OF REAL-TIME IMAGE PROCESSING, vol.9, pp.111-125, 2014 (Journal Indexed in SCI)
- VIII. **Energy monitoring in residential spaces with audio sensor nodes: TinyEARS**
GUVENSAN M. A. , Taysi Z. C. , MELODIA T.
AD HOC NETWORKS, vol.11, pp.1539-1555, 2013 (Journal Indexed in SCI)
- IX. **Hybrid movement strategy in self-orienting directional sensor networks**
GÜVENSAN M. A. , YAVUZ A. G.
AD HOC NETWORKS, vol.11, pp.1075-1090, 2013 (Journal Indexed in SCI)
- X. **On coverage issues in directional sensor networks: A survey**
AMAC GUVENSAN M., Yavuz A. G.
Ad Hoc Networks, vol.9, pp.1238-1255, 2011 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Akıllı telefon ve giyilebilir cihazlarla aktivite tanıma: Klasik yaklaşımlar, Yeni çözümler**
Iskanderov J., GÜVENSAN M. A.
Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, vol.1, pp.1-10, 2019 (National Refreed University Journal)
- II. **Ulaşım Türü Tanımadaki Enerji Kısıtlı Cihazlar için Ayırt Edici Özellikler**
Yasli F., GÜVENSAN M. A.
Mühendislik Bilimleri ve Tasarım Dergisi, vol.7, pp.90-102, 2019 (National Refreed University Journal)
- III. **Türkçe Kısa Mesajları Sınıflandıran Çok Katmanlı Süzgeçleme Mimarisi ve Akıllı SMS Kutusu**
BESTİL H. İ. , GÜVENSAN M. A.
Marmara Fen Bilimleri Dergisi, vol.2019, pp.17-28, 2019 (National Refreed University Journal)
- IV. **Activity recognition using smartphones and wearable devices: Traditional approaches, new solutions**
Iskanderov J., GÜVENSAN M. A.
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSITESI MUHENDISLIK BILIMLERI DERGISI, vol.25, pp.223-239, 2019 (Journal Indexed in ESCI)

Books & Book Chapters

- I. **Multiple base station positioning for sensor applications**
Güvensan M. A. , Tayşi Z. C. , Yavuz A. G.
in: Proceedings of European Computing Conference Volume 1, Mastorakis N.,Mladenov V.,Kontargyri V., Editor,
Springer-Verlag , Berlin, pp.619-629, 2009
- II. **A New Coverage Improvement Algorithm Based on Motility Capability of Directional Sensor Nodes**
GÜVENSAN M. A. , YAVUZ A. G.
in: Ad Hoc Mobile and Wireless Networks, , Editor, Springer, pp.206-219, 1900

Refereed Congress / Symposium Publications in Proceedings

- I. **A Novel Input Set for LSTM-based Transport Mode Detection**
ASCI G., GÜVENSAN M. A.
IEEE 4th International Workshop on Pervasive Context-Aware Smart Cities and Intelligent Transport Systems in conjunction with 17th Intl. Conf. on Pervasive Computing and Communication (PerCom2019), Kyoto, Japan, 11 March 2019, pp.1-6
- II. **A new cloud service for interpreting taxi trajectories via crowdsensing approach**
ŞEKER A., GÜVENSAN M. A.
2018 26th Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- III. **Network Intrusion Detection Using Machine Learning Anomaly Detection Algorithms**
HANIFI K., BANK H., KARSLIGIL M. E. , YAVUZ A. G. , GÜVENSAN M. A.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- IV. **Application Identification via Network Traffic Classification**
YAMANSAVASCILAR B., GÜVENSAN M. A. , YAVUZ A. G. , Karsligil M. E.
International Conference on Computing, Networking and Communications (ICNC), California, United States Of America, 26 - 29 January 2017, pp.843-848
- V. **Activity Recognition on Smartphones: Efficient Sampling Rates and Window Sizes**
YAMANSAVASCILAR B., GÜVENSAN M. A.
IEEE International Conference on Pervasive Computing and Communication Workshops (PerCom Workshops), Sydney, Australia, 14 - 19 March 2016
- VI. **Discriminative Time-Domain Features for Activity Recognition on a Mobile Phone**
BUBER E., Guvensan A. M.
9th IEEE International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), Singapore, Singapore, 21 - 24 April 2014
- VII. **3-TIER HYBRID APPROACH FOR SMS FILTERING**
KILIC E., ARSLAN S. N. , GÜVENSAN M. A.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1950-1953
- VIII. **Selection of Time Domain Features for Fall Detection Based on Supervised Learning**
KANSIZ A. O. , GÜVENSAN M. A. , TÜRKMEN ÇİLİNGİR H. İ.
Proceedings of the World Congress on Engineering and Computer Science, San Francisco, CA, USA. 2013, San-Francisco, United States Of America, 23 - 25 October 2013, vol.2, pp.23-25
- IX. **Mobil telefon ile kaza tespiti accident recognition using mobile phone Mobil telefon ile kaza tespiti accident recognition using mobile phone**
Oguz Kansiz A., Amaç Güvensan M. A.
2013 21st Signal Processing and Communications Applications Conference, SIU 2013, Haspolat, Turkey, 24 - 26 April 2013
- X. **Accident recognition using mobile phone**
GÜVENSAN M. A. , KANSIZ A. O.
21st Signal Processing and Communications Applications Conference (SIU), Girne, Turkey, 24 April 2013, pp.1-4
- XI. **A Fast and Accurate Motion Detection Algorithm for Embedded Systems**
CAMGOZ N. C. , TAYŞI Z. C. , GÜVENSAN M. A. , Karsligil M. E. , YAVUZ A. G.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XII. **simDSN: A Simulation Platform for the Sensing Coverage Problem in Directional Sensor Networks**
Ozturk R., GÜVENSAN M. A. , YAVUZ A. G.
17th IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications (DS-RT), Delft, Netherlands, 30 October - 01 November 2013, pp.41-46
- XIII. **Image processing capabilities of new generation arm cores for WMSNs Yeni nesil arm çekirdeklerin çokluortam algılayıcı ağlar için görüntü işleme yetenekleri**
Cihan Camgöz N., Öztürk R., Amaç Güvensan M. A. , Cihan Tayşi Z., Gökhan Yavuz A.

- 2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Mugla, Turkey, 18 - 20 April 2012
- XIV. **Motility-based coverage enhancement in directional sensor networks Yönlü algılayıcı ağlarda dönme yeteneği ile kapsama alanı iyileştirme**
GÜVENSAN M. A. , YAVUZ A. G.
2012 20th Signal Processing and Communications Applications Conference, SIU 2012, Fethiye, Mugla, Turkey, 18 - 20 April 2012
- XV. **Image processing capabilities of new generation arm cores for WMSNs**
CAMGÖZ N. C. , ÖZTÜRK R., Güvensan A., TAYŞI Z. C. , YAVUZ A. G.
Signal Processing and Communications Applications Conference (SIU), 2012 20th, Muğla, Turkey, 18 April 2012, pp.1-4
- XVI. **Image Processing Capabilities of ARM-based Micro-controllers for Visual Sensor Networks**
TAYŞI Z. C. , YAVUZ A. G. , Çelik E., GÜVENSAN M. A. , KARSLIĞİL YAVUZ M. E.
Embedded and Ubiquitous Computing (EUC), 2011 IFIP 9th International Conference on, Melbourne, Australia, 24 November 2011, pp.243-248
- XVII. **A Hybrid Solution For Coverage Enhancement in Directional Sensor Networks**
GÜVENSAN M. A. , YAVUZ A. G.
7th Intl. Conf. on Wireless and Mobile Communications (ICWMC 2011), Luxembourg, Luxembourg, 19 June 2011, pp.134-138
- XVIII. **A New Coverage Improvement Algorithm Based on Motility Capability of Directional Sensor Nodes**
GÜVENSAN M. A. , YAVUZ A. G.
10th International Conference on Ad-Hoc Networks and Wireless (ADHOC-NOW), Paderborn, Germany, 18 - 20 July 2011, vol.6811, pp.206-219
- XIX. **TinyEARS: Spying on house appliances with audio sensor nodes**
Cihan Taysi Z., Amac Guvensan M. A. , Melodia T.
2nd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings, BuildSys'10, Zürich, Switzerland, 02 November 2010, pp.31-36
- XX. **Environmental sound classification for recognition of house appliances Ev aletlerinin taninmasi için çevresel seslerin siniflandırılması**
GÜVENSAN M. A. , TAYŞI Z. C.
18th IEEE Signal Processing and Communications Applications Conference, SIU 2010, Diyarbakır, Turkey, 22 - 24 April 2010, pp.431-434
- XXI. **Multiple Base Station Placement with k-means Local**
TAYŞI Z. C. , GÜVENSAN M. A. , YAVUZ A. G.
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.178-181
- XXII. **Detection and tracking of face and facial features for Recognition of Turkish Sign Language**
GÜVENSAN M. A. , HABERDAR H.
2007 IEEE 15th Signal Processing and Communications Applications, Eskişehir, Turkey, 11 June 2007, pp.1-4
- XXIII. **A Database of Non Manual Signs in Turkish Sign Language**
ARAN O., ARI İ., GÜVENSAN M. A. , Haberdar H., KURT YAVUZ Z., TÜRKMEN ÇİLİNGİR H. İ. , UYAR A., AKARUN ERSOY L.
Signal Processing and Communications Applications, 2007. SIU 2007. IEEE 15th, Turkey, 11 - 13 June 2007
- XXIV. **Protocol-Independent Lightweight Secure Communication**
GÜVENSAN M. A. , YAVUZ A. G.
ICETE Intl. Conf. on Security and Cryptography (SECURITY'06), Setubal, Portugal, 07 August 2006, pp.211-217

Supported Projects

GÜVENSAN M. A. , Iskanderov J., Project Supported by Higher Education Institutions, Derin Öğrenme Yöntemlerini

Kullanarak Kişilerin Günlük Aktivite ve Yolculuk Türlerinin Akıllı Telefon Yardımı ile Tespit Edilmesi, 2018 - 2019
GÜVENSAN M. A. , TUBITAK Project, Türkçe Kısa Mesaj Asistanı, 2018 - 2019
GÜVENSAN M. A. , TUBITAK Project, Akıllı Telefon Yardımı ile Ulaşım Türü Tanıma, 2017 - 2018
GÜVENSAN M. A. , Project Supported by Higher Education Institutions, Akıllı Telefon Yardımı İle Günlük Aktivitelerin Takip Edilmesi Ve Kaza Tespiti Yapılması, 2013 - 2016
GÜVENSAN M. A. , TUBITAK Project, Bina Enerji Performans Uygulaması için Metodolojinin İyileştirilmesi, 2012 - 2013
GÜVENSAN M. A. , Project Supported by Higher Education Institutions, Yönlü Algılayıcı Ağlarda Dönme ve Hareket Yetenekleri ile Kapsama Alanının İyileştirilmesi, 2011 - 2012

Scientific Refereeing

JOURNAL OF NETWORK AND COMPUTER APPLICATIONS, Journal Indexed in SCI-E, June 2019
IEEE Transactions on Intelligent Transportation Systems, SCI Journal, April 2019
TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES , SCI Journal, December 2013
IEEE Transactions on Multimedia, SCI Journal, October 2013
IEEE Sensors, SCI Journal, May 2013
2013 IEEE Wireless Communications and Networking Conference (WCNC\ '13), SCI Journal, November 2012
Springer Wireless Networks, SCI Journal, March 2012
IEEE Design & Test of Computers, SCI Journal, March 2012
8th Intl. Conf. on Wireless and Mobile Communications, SCI Journal, March 2012
Elsevier Computer Networks, SCI Journal, April 2011
IEEE/IFIP Intl. Conf. on Embedded and Ubiquitous Computing (EUC 2011), SCI Journal, April 2011
Intl. Workshop on Mobility in Wireless Sensor Networks (MobiSensor\ '11), SCI Journal, March 2011
Elsevier Ad Hoc Networks, SCI Journal, April 2010
Intl. Journal on Simulation Transactions of the Society for Modeling and Simulation, SCI Journal, January 2010
IEEE Globecom 2009, SCI Journal, May 2009

Scientific Consultations

Bankalararası Kart Merkezi, Scientific Consultancy, Yildiz Technical University, Faculty of Electrical & Electronics, Computer Engineering, Turkey, 2018 - Continues
Bankalararası Kart Merkezi, Scientific Consultancy, Yildiz Technical University, Faculty of Electrical & Electronics, Computer Engineering, Turkey, 2017 - 2018
Crypttech, Scientific Consultancy, Yildiz Technical University, Faculty of Electrical & Electronics, Computer Engineering, Turkey, 2015 - 2016
Asseco, Scientific Consultancy, Yildiz Technical University, Faculty of Electrical & Electronics, Computer Engineering, Turkey, 2014 - 2015

Scientific Research / Working Group Memberships

Akıllı Sistemler Laboratuvarı, Yildiz Technical University, Türkiye, <http://isl.ce.yildiz.edu.tr>, 2011 - Continues

Mobility Activity

Erasmus Programme, Lecturing, Universidad de Granada, Spain, 2014 - 2014
Research Scholarship Program, Scientific Research, State University of New York at Buffalo, United States Of America, 2009 - 2010

Citations

Total Citations (WOS):286

h-index (WOS):6

Scholarships

YÖK Doktora Araştırma Bursu, YOK, 2009 - 2010

Awards

Güvensan M. A. , TÜBİTAK Lisans Yazılım Projeleri Yarışması - Türkiye 3.lüğü, Tübitak, November 2017

Güvensan M. A. , TÜBİTAK Lisans Yazılım Projeleri Yarışması - Türkiye 1.liği, Tübitak, November 2017

GÜVENSAN M. A. , Certificate of Merit, World Congress on Engineering and Computer Science 2013, October 2013