Assoc. Prof. MUZAFFER KANAAN

Personal Information

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International Researcher IDs
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Education Information

Doctorate, Worcester Polytechnic Institute, Mühendislik Fakültesi, Elektrik Ve Bilgisayar Mühendisliği, United States Of America 2000 - 2008
Postgraduate, New Jersey Institute of Technology, Mühendislik Fakültesi, Elektrik Ve Bilgisayar Mühendisliği, United States Of America 1994 - 1996
Undergraduate, Eastern Meditarranean University, Faculty Of Engıneerıng, Department Of Electrıcal And Electronıcs Engıneerıng, Cyprus (Kktc) 1990 - 1994

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

IT, Certificate ofProfessional Achievement in Telecommunications Systems Technology, State-of-the-Art Program, Northeastern University, 2001

Dissertations

Doctorate, Node Density and Quality of Estimation for Infrastructure-based Indoor Geolocation Using Time of Arrival, Worcester Polytechnic Institute, Department Of Electrical And Computer Engineering, Wireless Communications, 2008
Postgraduate, A Simulation Environment for Code Division Multiple Access Wireless Communication Systems, New Jersey Institute Of Technology, Department Of Electrical And Computer Engineering, Wireless Communication, 1996

Research Areas

Technical Sciences, Information Systems, Communication and Control Engineering, Communication Engineering, Wireless Communication

Academic Titles / Tasks

Associate Professor, Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2019 - Continues
Assistant Professor, Erciyes University, Mühendislik Fakültesi, Mekatronik Müh., 2018 - Continues
Assistant Professor, Erciyes University, Mühendislik Fakültesi, Mekatronik Müh., 2009 - 2018

Academic and Administrative Experience

Erciyes Üniversitesi, Dış İlişkiler Ofisi, Erasmus Kurum Koordinatorlüğü, 2016 - Continues
Erciyes Üniversitesi, Mekatronik Mühendisliği Bölümü, 2012 - Continues
Erciyes Üniversitesi, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2010 - Continues
Erciyes University, 2010 - Continues

Courses

Kablosuz Vücut ve Şahıs Alan Ağları, Postgraduate, 2016 - 2017
Sayısal İşaret İşleme, Undergraduate, 2016 - 2017
Bilgisayar Ağları, Undergraduate, 2016 - 2017
İşaretler ve Sistemler II, Undergraduate, 2016 - 2017
Mobil Robotik Sistemlerde Lokalizasyon ve Navigasyon, Postgraduate, 2016 - 2017
Kablosuz Sensör Ağları, Undergraduate, 2016 - 2017
Mekatronik Tasarım Uygulamaları I, Undergraduate, 2016 - 2017

Advising Theses

Kanaan M., Ergonomik ems (elektro kas uyarım) sistemi ile diyabetik polinöropati ağrı etkilerinin azaltılması, Postgraduate, Ş.GÜZEL(Student), 2018
Kanaan M., Tahıl torbalama sistemlerinde (SILOBAG) kablosuz algılayıcı ağ (KAA) temelli tahıl durum izleme, Postgraduate, C.KOÇER(Student), 2018
KANAAN M., Ultra Geniş Bant (UGB) Kablosuz Sistemlerin Vücut İçi Ortamlarda Kullanımı ve Mesafe Ölçüm Hatalarının Modellenmesi, Postgraduate, M.Suveren(Student), 2015
KANAAN M., Mobil Robotların Bina İçi Koşullarda Ulaşma Zamanı Kullanılarak Kablosuz Konumlandırılması, Postgraduate, Z.Abidin(Student), 2012

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Application of hybrid metaheuristic with Levenberg-Marquardt algorithm for 6-dimensional magnetic localization**
Suveren M., Akay R., Yıldırım M. Y., Kanaan M.
EVOLVING SYSTEMS, vol.13, no.6, pp.849-867, 2022 (SCI-Expanded)
II. **Multilevel thresholding segmentation of color plant disease images using metaheuristic optimization algorithms**
AKAY R., Saleh R. A. A., Farea S. M. O., KANAAN M.
NEURAL COMPUTING & APPLICATIONS, vol.34, no.2, pp.1161-1179, 2022 (SCI-Expanded)
III. **IN-BODY RANGING FOR ULTRA-WIDE BAND WIRELESS CAPSULE ENDOSCOPY USING NEURAL NETWORKS BASED ON PARTICLE SWARM OPTIMIZATION**
KANAAN M., AKAY R., SUVEREN M.
Selçuk Üniversitesi Mühendislik Bilim ve Teknoloji Dergisi, vol.6, no.2, pp.207-217, 2018 (SCI-Expanded)
IV. **A new propagation modeling technique for ultra-wideband implant body area networks based on a neural network architecture**

KANAAN M., SUVEREN M.
NEURAL COMPUTING & APPLICATIONS, vol.28, no.11, pp.3603-3615, 2017 (SCI-Expanded)

V. **In-Body Ranging with Ultra-Wideband Signals: Techniques and Modeling of the Ranging Error**
KANAAN M., SUVEREN M.
WIRELESS COMMUNICATIONS & MOBILE COMPUTING, 2017 (SCI-Expanded)

VI. **A novel frequency-dependent path loss model for ultra wideband implant body area networks**
KANAAN M., SUVEREN M.
MEASUREMENT, vol.68, pp.117-127, 2015 (SCI-Expanded)

VII. **"A New Algorithm for TOA-based Indoor Geolocation",**
KANAAN M.
IEE Electronics Letters, vol.1, no.2, pp.12-13, 2004 (SCI-Expanded)

Articles Published in Other Journals

I. **Localization of an Ultra Wide Band Wireless Endoscopy Capsule Inside the Human Body Using Received Signal Strength and Centroid Algorithm**
SUVEREN M., AKAY R., KANAAN M.
An International Journal of Optimization and Control: Theories & Applications , vol.12, no.2, pp.151-159, 2022 (Scopus)

II. **In-Body Ranging Usıng Ultra Wide Band Signals Using Neural Networks based on Particle Swarm Optimization**
Kanaan M., Akay R., Suveren M.
SELCUK UNIVERSITY JOURNAL OF ENGINEERING, SCIENCE AND TECHNOLOGY, vol.6, no.2, pp.207-217, 2018 (Peer-Reviewed Journal)

III. **Mobil robotların bina içi koşullarda ulaşma zamanı kullanılarak kablosuz lokalizasyonu**
KANAAN M., KUŞ Z. A.
ÖMER HALİSDEMİR ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ DERGİSİ, vol.7, no.1, pp.99-119, 2018 (Peer-Reviewed Journal)

IV. **Mobil Robotların Bina İçi Koşullarda Ulaşma Zamanı Kullanılarak Kablosuz Lokalizasyonu**
KANAAN M., KUŞ Z. A.
Niğde Üniversitesi Mühendislik Bilimleri Dergisi, vol.7, no.1, pp.99-119, 2018 (Peer-Reviewed Journal)

V. **"Technical Aspects of Localization in Indoor Wireless Networks ",**
KANAAN M.
Bechtel Telecommunications Technical Journal,, vol.1, no.1, pp.121-126, 2007 (Peer-Reviewed Journal)

VI. **A Comparative Performance Evaluation of Indoor Geolocation Technologies**
hatami a., bardia a., pahlavan k., KANAAN M.
Interdisciplinary Information Sciences, vol.12, no.2, pp.133-146, 2006 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **Performance Analysis of Localization System for Wireless Robotic Capsule Endoscopy Based on 5 DOF**
Suveren M., Kanaan M.
1st IFToMM for Sustainable Development Goals workshop (I4SDG), ELECTR NETWORK, 25 - 26 November 2021, vol.108, pp.335-344

II. **5D Magnetic Localization for Wireless Capsule Endoscopy Using the Levenberg-Marquardt Method and Artificial Bee Colony Algorithm**
Suveren M., Kanaan M.
2019 IEEE 30th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC

Workshops), İstanbul, Turkey, 08 September 2019

III. **On the Use of Human Body Models in Wireless Capsule Endoscopy Localization based on Ultra Wide Band Signaling**
SUVEREN M., KANAAN M.
5th International Conference on Engineering and Natural Sciences (ICENS), Prague, Czech Republic, 12 - 16 June 2019, pp.555-560

IV. **"Ultra Geniş Bant Kablosuz Endoskopi Kapsüllerinin Vücut İçi Lokalizasyonu için Yapay Sinir Ağları ile Mesafe Ölçümü",**
KANAAN M., SUVEREN M.
IEEE Sinyal İşleme ve İletişim Uygulamaları-2016 (SIU-2016) Kurultayı, Zonguldak, Turkey, 16 - 19 May 2016, pp.1-4

V. **"ZigBee Teknolojisinin Kömür Madeni Güvenliğinde Kullanımı Üzerine"**
KANAAN M., Şimşek E.
IEEE Sinyal İşleme ve İletişim Uygulamaları-2016 (SIU-2016) Kurultayı, Zonguldak, Turkey, 16 - 19 May 2016, pp.1-4

VI. **Ranging for in-body localization of ultra wide band wireless endoscopy capsules using neural networks Ultra Geniş Bant Kablosuz Endoskopi Kapsüllerinin Vücut Içi Lokalizasyonu için Yapay Sinir Ağlari ile Mesafe Ölçümü**
KANAAN M., SUVEREN M.
24th Signal Processing and Communication Application Conference, SIU 2016, Zonguldak, Turkey, 16 - 19 May 2016, pp.717-720

VII. **In-Body Ranging for Ultra-Wide Band Wireless Capsule Endoscopy Using A Neural Network Architecture**
KANAAN M., SUVEREN M.
10th International Symposium on Medical Information and Communication Technology (ISMICT), Massachusetts, United States Of America, 20 - 23 March 2016

VIII. **INVESTIGATION OF SHADOWING EFFECTS IN ULTRA WIDE BAND IMPLANT BODY AREA NETWORKS**
SUVEREN M., KANAAN M., KOCER C.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.874-877

IX. **"Ultra Geniş Bant İmplant Kablosuz Vücut Alan Ağlarında Gölgeleme Etkilerinin İncelenmesi"**
Suveren M., Kanaan M., Koçer C.
IEEE Sinyal İşleme ve İletişim Uygulamaları Sempozyumu, 2014 (SİU-2014)., Trabzon, Turkey, 21 - 23 April 2014, pp.1-4

X. **On the relationship between antenna parameters and near-field effects for UWB implant body area networks**
KANAAN M., Kocer C., SUVEREN M.
8th International Symposium on Medical Information and Communication Technology, ISMICT 2014, Florence, Italy, 2 - 04 April 2014

XI. **On The Bandwidth Dependency of Near-Field Effects in UWB Implant Body Area Networks**
KANAAN M., SUVEREN M., SARAÇOĞLU Ö. G.
UWBAN-2013, Boston, United States Of America, 30 September - 02 October 2013, pp.553-557

XII. **"Ranging Based on Maximum Likelihood Techniques for Ultra Wide Band Medical Implants",**
KANAAN M.
IEEE International Symposium on Personal, Indoor and Mobile Radio Communications 2011 (PIMRC'11)., Toronto, Canada, 11 - 13 September 2011, pp.123-128

XIII. **ROADM Deployment, Challenges and Applications**
bernhey r. s., KANAAN M.
Proceedings of the Optical Fiber Engineers Conference / National Fiber Optic Engineering Conference, 2007 (OFCNFOEC-2007), 25 - 29 March 2007

XIV. **Performance Benchmarking of TOA- based UWB Indoor Geolocation Systems Using MSE Profiling**

KANAAN M., akgül f. o., alavi b., pahlavan k.
Proceedings of the IEEE Vehicular Technology Conference 2006, fall (VTC2006-fall), 25 - 28 September 2006

XV. **A Study of the Effects of Reference Point Density On TOA- Based UWB Indoor Positioning Systems**
KANAAN M., akgül f. o., alavi b., pahlavan k.
Proceedings of the IEEE International Symposium on Personal, Indoor and Mobile Radio Communications 2006 (PIMRC'06), 11 - 14 September 2006

XVI. **Systems integration and testing challenges for Next Generation Optical Transport Networks (NGOTNs)**
KANAAN M., bernhey r. s.
Proceedings of the Optical Fiber Engineers Conference / National Fiber Optic Engineering Conference, 2006 (OFCNFOEC-2006), 5 - 09 March 2006

XVII. **CN TOAG: A new algorithm for indoor geolocation**
KANAAN M., pahlavan k.
Proceedings of the IEEE Personal Indoor Mobile Radio Communications Conference, 2004 (PIMRC'04), 5 - 08 September 2004

XVIII. **A Comparison of Wireless Geolocation Algorithms in the Indoor Environment**
KANAAN M., pahlavan k.
Proceedings of the IEEE Wireless Communications and Networking Conference, 2004 (WCNC-2004), 21 - 25 March 2004

Episodes in the Encyclopedia

I. **Encyclopedia of GIS**
KANAAN M., Bardia A., Hatami A., Pahlavan K.
Springer, pp.84-92, 2008

Supported Projects

KANAAN M., GÜZEL Ş., Project Supported by Higher Education Institutions, Ergonomik EMS Elektro Kas Uyarım Sistemi ile Diyabetik Polinöropati Ağrı Etkilerinin Azaltılması, 2017 - 2019
KANAAN M., KOÇER C., Project Supported by Higher Education Institutions, Tahıl Torbalama Sistemlerinde (Silobag) Kablosuz Algılayıcı Ağ (KAA) Temelli Tahıl Durum İzleme, 2017 - 2019
YILDIRIM Ş., ŞENEL S., KANAAN M., ERKAYA S., SAVAŞ S., YAMAÇLI S., Project Supported by Higher Education Institutions, Hastane Ortamında Hastalara Yardımcı Olacak Bir Mobil Robotun (HAYAMOR) Tasarlanması ve Gerçekleştirilmesi., 2013 - 2016
KANAAN M., SUVEREN M., Project Supported by Higher Education Institutions, Ultra geniş bant (UGB) kablosuz sistemlerin vücut içi ortamlarda kullanımı ve mesafe ölçüm hatalarının modellenmesi, 2014 - 2015
KANAAN M., SUVEREN M., Project Supported by Higher Education Institutions, Tıbbi İmplant Haberleşme Sistemleri İçin Ultra Geniş Bant Sinyal Propagasyonunun Modellenmesi, 2012 - 2014

Activities in Scientific Journals

International Journal of Wireless Information Networks, Special Issue Editor, 2016 - 2017

Memberships / Tasks in Scientific Organizations

IEEE, Member, 1992 - Continues

Scientific Refereeing

Journal on Progress in Electromagnetics Research, SCI Journal, July 2017
IEEE Global IoT Summit, 2017 (GIoTS'17), Other journals, June 2017
IEEE Access, SCI Journal, May 2017
The Journal of Engineering, Other journals, March 2017
IETE Journal of Research, SCI Journal, March 2017

Metrics

Publication: 38
Citation (WoS): 26
Citation (Scopus): 43
H-Index (WoS): 3
H-Index (Scopus): 4

Congress and Symposium Activities

IEEE Sinyal İşleme ve İletişim Uygulamaları Konferansı - 2016 (SIU-2016), Attendee, –Seçiniz–, Turkey, 2016
IEEE International Symposium on Medical Information and Communication Technology, 2016 (ISMICT-2016), Session Moderator, Massachusetts, United States Of America, 2016
IEEE International Symposium on Medical Information and Communication Technology, 2016 (ISMICT-2016), Attendee, Massachusetts, United States Of America, 2016
IEEE Sinyal İşleme ve İletişim Uygulamaları Konferansı, 2014 (SIU-2014), Attendee, Turkey, 2014

Non Academic Experience

Business Organization (private), Verizon Communications
Verizon Communications
Business Organization (private), Expert Wireless Solutions
eXpert Wireless Solutions