



MEMDUH SUVEREN

RES. ASST. PHD

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International Researcher IDs

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Learning Knowledge

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| Doctorate 2015 - 2022 | Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, Turkey |
| Postgraduate 2012 - 2015 | Erciyes University, Fen Bilimleri Enstitüsü, Mekatronik Mühendisliği, Turkey |
| Undergraduate 2007 - 2011 | Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği, Turkey |

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Robotik Kapsül Endoskopide Lokalizasyon Tekniklerinin İyileştirilmesi , Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2022

Postgraduate, Ultra Geniş Bant (UGB) Kablosuz Sistemlerin Vücut İçi Ortamlarda Kullanımı Ve Mesafe Ölçüm Hatalarının Modellenmesi, Erciyes Üniversitesi, Mühendislik Fakültesi, Mekatronik Mühendisliği, 2015

Academic Titles / Tasks

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| Research Assistant PhD 2022 - Continues | Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği |
| Research Assistant 2011 - Continues | Erciyes University, Mühendislik Fakültesi, Mekatronik Mühendisliği |

Supported Projects

1. Esim E., Suveren M., TUBITAK Project, İLETKEN TEL KUSURLARININ TESPİTİ İÇİN EDDY AKIM SENSÖRÜ ÜRETİM CİHAZININ TASARIMI VE GERÇEKLEŞTİRİLMESİ, 2023 - 2025
2. KANAAN M., SUVEREN M., Project Supported by Higher Education Institutions, Robotik Kapsül Endoskopide Lokalizasyon Tekniklerinin İyileştirilmesi, 2018 - 2022
3. 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
4. KANAAN M., SUVEREN M., Project Supported by Higher Education Institutions, Tıbbi İmplant Haberleşme Sistemleri İçin Ultra Geniş Bant Sinyal Propagasyonunun Modellenmesi, 2012 - 2014

Awards

1. SUVEREN M., 2010-2011 Mühendislik Fakültesi Fakülte Birinciliği, Erciyes Üniversitesi Mühendislik Fakültesi Dekanlığı, June 2011
2. SUVEREN M., 2010-2011 Elektrik-Elektronik Mühendisliği Bölüm Birinciliği, Erciyes Üniversitesi Mühendislik Fakültesi Dekanlığı, June 2011

Scholarships

2211-A Yurtiçi Doktora Bursu, TUBITAK, 2015 - 2022

2210-C Öncelikli Alanlara Yönelik Yüksek Lisans Bursu, TUBITAK, 2013 - 2015

Taught Courses And Trainings

Suveren M., PLC Eğitimi, 2019 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

1. **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)
2. **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)
3. **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)
4. **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)

Articles Published in Other Journals

1. **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)

2. **In-Body Ranging Using 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)

Refereed Congress / Symposium Publications in Proceedings

1. **ROS Gazebo and MATLAB/Simulink Co-simulation for Cart-Pole System: A Framework for Design Optimization**

Arslan E., Suveren M., Moghaddam S. T. H.

7th International Symposium on Innovative Approaches in Smart Technologies, ISAS 2023, İstanbul, Turkey, 23 - 25 November 2023

2. **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

3. **Wireless Capsule Localization Inside the Human Small Intestine Using a Permanent Cube-Shaped Magnet with Analytical Magnetic Model**

Kanaan M., Suveren M.

6th International Conference on Engineering and Natural Sciences (ICENS), Belgrade, Serbia, 21 - 25 October 2020, pp.56-63

4. **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

5. **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

6. **Gear Fault Modelling by Using Acoustic Measurements and Artificial Neural Networks**

Ulus Ş., Suveren M.

5th. International Conference on Engineering and Natural Sciences (ICENS 2019), Praha, Czech Republic, 12 - 16 June 2019, pp.318-324

7. **"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

8. **A Vibration Based Fault Model of Gear Systems Using Neural Predictor**

ULUS Ş., SUVEREN M., ERKAYA S.

International Conference on Advances in Mechanical Engineering ICAME 2016, İstanbul, Turkey, 10 - 13 May 2016, pp.426-431

9. **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

10. **“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

11. **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

12. **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

Academic and Administrative Experience

Courses

Lojik Devreler, Undergraduate, 2022 - 2023

Lojik Devreler, Undergraduate, 2022 - 2023

PLC Programlama ve Uygulamaları, Undergraduate, 2022 - 2023

İşaretler ve Sistemler II, Undergraduate, 2022 - 2023

Mikrodenetleyiciler ile Gömülü Sistem Tasarımı, Undergraduate, 2022 - 2023

İşaretler ve Sistemler II, Undergraduate, 2022 - 2023

Elektronik Sistemler Laboratuvarı, Undergraduate, 2012 - 2013

Mekatronik Laboratuvarı, Undergraduate, 2012 - 2013

Patent

Suveren M., Kanaan M., KALICI MIKNATISLI ROBOTİK KAPSÜL ENDOSKOBUNUN VÜCUT İÇİNDEKİ POZİSYONUN TESPİTİ İÇİN BİR SİSTEM VE YÖNTEM, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2021/022301 , Standard Registration, 2021

Metrics

Publication: 18

Citation (WoS): 21

Citation (Scopus): 36

H-Index (WoS): 2

H-Index (Scopus): 4

Research Areas

Geotechnical Engineering, Remote sensing, Lidar, Information Systems, Communication and Control Engineering, Control

and System Engineering, Control Systems and Instrumentation, Biomedical Engineering, Bioengineering and MEMS, Bioinstrumentation and Microelectromechanical Systems (MEMS), Electrical and Electronics Engineering, Electronic, Electronic Circuits, Electromagnetic, Electric and Magnetic Fields, Engineering and Technology