

## Asst. Prof. GÜRKAN KÜÇÜKYILDIZ

### Personal Information

**Email:** gurkan.kucukyildiz@usak.edu.tr

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### Education Information

Doctorate, Kocaeli University, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, Turkey 2011 - 2017

Postgraduate, Kocaeli University, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, Turkey 2009 - 2011

Undergraduate, Kocaeli University, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 2004 - 2009

### Dissertations

Doctorate, EEG Tabanlı Sensör Destekli bir İnsan Makine Arayüzünün Oluşturulması, Kocaeli University, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2017

Postgraduate, Mobil robot platformu üzerinde DSP tabanlı gerçek zamanlı çalışan şerit tespiti algoritmasının geliştirilmesi ve optimizasyonu, Kocaeli University, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2011

### Academic Titles / Tasks

Usak University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2019 - Continues

Research Assistant, Kocaeli University, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2009 - Continues

### Academic and Administrative Experience

Usak University, 2019 - Continues

### Courses

Bilgisayar Programlamaya Giriş, Undergraduate, 2019 - 2020

Bilgisayar Programlama, Undergraduate, 2019 - 2020

Bilgisayar Bilimleri, Undergraduate, 2018 - 2019

Bilgisayar Programlama, Undergraduate, 2018 - 2019

### Published journal articles indexed by SCI, SSCI, and AHCI

- Preparation and characterization of the phthalocyanine-zinc(II) complex-based nanothin films: optical and gas-sensing properties**  
AÇIKBAŞ Y., Erdogan M., Capan R., Ozkaya Erdogan C., Baygu Y., Kabay N., GÖK Y., KÜÇÜKYILDIZ G.  
Applied Nanoscience (Switzerland), vol.13, no.6, pp.4527-4540, 2023 (SCI-Expanded)

- II. **Valorization of Citrus unshiu biowastes to value-added products: an optimization of ultrasound-assisted extraction method using response surface methodology and particle swarm optimization**  
Poyraz Ç., KÜÇÜKYILDIZ G., KIRBAŞLAR Ş. İ., CİĞEROĞLU Z., ŞAHİN SEVGİLİ S.  
Biomass Conversion and Biorefinery, vol.13, no.5, pp.3719-3729, 2023 (SCI-Expanded)
- III. **Detection of Structural Magnet Defects for Permanent Magnet Synchronous Motors**  
KÜÇÜKYILDIZ G., Yolacan E., Ocak H., AYDIN M.  
IEEE Transactions on Energy Conversion, vol.37, no.1, pp.665-674, 2022 (SCI-Expanded)
- IV. **Boron removal from aqueous solutions by chitosan/functionalized-SWCNT-COOH: Development of optimization study using response surface methodology and simulated annealing**  
Taşçı T., KÜÇÜKYILDIZ G., HEPYALÇIN S., CİĞEROĞLU Z., ŞAHİN SEVGİLİ S., VASSEGHIAN Y.  
Chemosphere, vol.288, 2022 (SCI-Expanded)
- V. **A Multistage Cutting Tool Fault Diagnosis Algorithm for the Involute form Cutter Using Cutting Force and Vibration Signals Spectrum Imaging and Convolutional Neural Networks**  
KÜÇÜKYILDIZ G., Demir H. G.  
Arabian Journal for Science and Engineering, vol.46, no.12, pp.11819-11833, 2021 (SCI-Expanded)
- VI. **Easy preparation of magnetic nanoparticles-rGO-chitosan composite beads: Optimization study on cefixime removal based on RSM and ANN by using Genetic Algorithm Approach**  
CİĞEROĞLU Z., KÜÇÜKYILDIZ G., Erim B., ALP E.  
Journal of Molecular Structure, vol.1224, 2021 (SCI-Expanded)
- VII. **An Aminopyridine Bearing Pillar[5]arene-Based QCM Sensor for Chemical Sensing Applications: Design, Experimental Characterization, Data Modeling, and Prediction**  
AÇIKBAŞ Y., Kursunlu A. N., Ozmen M., Capan R., Erdogan M., KÜÇÜKYILDIZ G.  
IEEE Sensors Journal, vol.20, no.24, pp.14732-14739, 2020 (SCI-Expanded)
- VIII. **Fast and effective methylene blue adsorption onto graphene oxide/amberlite nanocomposite: Evaluation and comparison of optimization techniques**  
CİĞEROĞLU Z., KÜÇÜKYILDIZ G., Haşimoğlu A., Taktak F., Açısöz N.  
Korean Journal of Chemical Engineering, vol.37, no.11, pp.1975-1984, 2020 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Bottle counting system for a re-cycling facility based on processing of depth images**  
KÜÇÜKYILDIZ G., Ocak H.  
Sigma Journal of Engineering and Natural Sciences, vol.40, no.3, pp.464-474, 2022 (ESCI)
- II. **Image processing based package volume measurement system using kinect sensor**  
Ocak H., KÜÇÜKYILDIZ G., KARAKAYA S.  
Sigma Journal of Engineering and Natural Sciences, vol.37, no.4, pp.27-44, 2019 (Scopus)
- III. **Virtual-reality-based remote-controlled mobile robot platform**  
Akkaya U., Şekerci N., Karagöz A., Özay A. U., KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
Global Journal of Computer Sciences: Theory and Research, vol.7, no.3, pp.136, 2017 (Peer-Reviewed Journal)
- IV. **A Dynamic Path Planning Method for Wheeled Mobile Robots (Dyna-bug)**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
Global Journal of Computer Sciences: Theory and Research, vol.7, no.3, pp.123-128, 2017 (Peer-Reviewed Journal)
- V. **Classification of motor imaginary in EEG using random forest classifier**  
KÜÇÜKYILDIZ G., KARAKAYA S., OCAK H.  
Global Journal of Computer Sciences: Theory and Research, vol.7, no.3, pp.129, 2017 (Peer-Reviewed Journal)
- VI. **Point Stabilization Technique Using Model Predictive Control and Exact Euclidian Distance Transform Methods**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.35, no.3, pp.389-403, 2017 (ESCI)
- VII. **Point stabilization technique using model predictive control and exact Euclidean distance transform**

## methods

KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.

Sigma Journal of Engineering and Natural Sciences, vol.35, no.3, pp.389-403, 2017 (ESCI)

### VIII. **Detection of Obstacle Free Gaps for Mobile Robot Applications Using 2 D LIDAR Data**

KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.

International Journal of Natural and Engineering Sciences, vol.10, no.2, pp.40-44, 2016 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Experimental Comparison of GaN-Fet Based Motor Drives for High Switching Frequencies**  
KILIÇ C., KÜÇÜKYILDIZ G., Mese E.  
3rd IEEE Global Power, Energy and Communication Conference, GPECOM 2021, Virtual, Online, Turkey, 5 - 08 October 2021, pp.91-96
- II. **Image Processing Based Pupil Tracking System for a Wheel Chair System**  
KÜÇÜKYILDIZ G., OCAK H.  
iwv 2019, Kocaeli, Turkey, 18 - 20 October 2019
- III. **One dimensional moving obstacle detection method for mobile robotics applications Mobil Robot Uygulamaları İçin Bir Boyutlu Hareketli Engel Algılama Yöntemi**  
KARAKAYA S., KÜÇÜKYILDIZ G., Ocak H.  
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- IV. **Virtual-reality-based remote-controlled mobile robot platform**  
AKKAYA U., ŞEKERCİ N., KARAGÖZ A., ÖZAY A. U., KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
4th World Conference on Computer Engineering, COMENG-2017, 28 - 30 August 2017
- V. **Classification of Motor Imaginary in EEG Using Random Forest Classifier**  
KÜÇÜKYILDIZ G., KARAKAYA S., OCAK H.  
4th Global Conference on Computer Engineering, COMENG 2017, İstanbul, Turkey, 28 - 30 August 2017, pp.15
- VI. **Classification of motor imaginary in EEG using random forest classifier**  
KÜÇÜKYILDIZ G., KARAKAYA S., OCAK H.  
4th World Conference on Computer Engineering, COMENG-2017, 28 - 30 August 2017
- VII. **A dynamic path planning method for wheeled mobile robots (Dyna-bug)**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
4th World Conference on Computer Engineering, COMENG-2017, 28 - 30 August 2017
- VIII. **A Hybrid Posture Stabilization Method for Mobile Robots**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
INES2016, 3 - 05 November 2016
- IX. **Detection of Obstacle Free Gaps for Mobile Robot Applications Using 2 D LIDAR Data**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
ICNES2016, 1 - 05 September 2016
- X. **Real Time Control of a Wheel Chair based on EMG and Kinect for the Disabled People**  
KÜÇÜKYILDIZ G., KARAKAYA S., OCAK H., ŞAYLI Ö.  
TIPTEKNO15, 15 - 18 October 2015
- XI. **A Hybrid Indoor Localization System Based on Infra red Imaging and Odometry**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H., Kılmcı O.  
The 19th International Conference on Image Processing, Computer Vision, & Pattern Recognition, Las Vegas, United States Of America, 27 - 30 July 2015
- XII. **A Bug Based Local Path Planning Method for Static and Dynamic Environments**  
KARAKAYA S., KÜÇÜKYILDIZ G., OCAK H.  
ISITES2015, Valencia, Spain, 3 - 05 June 2015
- XIII. **Brain Computer Interface with Low Cost Commercial EEG Device**

KÜÇÜKYILDIZ G., KARAKAYA S., OCAK H., ŞAYLI Ö.

ISITES2015, Valencia, Spain, 3 - 05 June 2015

**XIV. Development of a human tracking indoor mobile robot platform**

KARAKAYA S., KÜÇÜKYILDIZ G., toprak c., OCAK H.

Proceedings of the 16th International Conference on Mechatronics - Mechatronika 2014, Brno, Czech Republic, 3 - 05 December 2014, pp.683-687

**XV. Image processing based indoor localization system**

Kılınç O., KÜÇÜKYILDIZ G., KARAKAYA S., OCAK H.

2014 22nd Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, Turkey, 23 - 25 April 2014

## **Metrics**

Publication: 31

Citation (Scopus): 107

H-Index (Scopus): 5

## **Non Academic Experience**

ROMIOT A.Ş.

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ROMEDA BİLGİ TEKNOLOJİLERİ LTD. ŞTİ.