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International Researcher IDs

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Education Information

Doctorate, The University of Houston, United States Of America 2012 - 2017

Undergraduate, Ihsan Dogramaci Bilkent University, Fen Fakültesi, Matematik Bölümü, Turkey 2007 - 2012

Dissertations

Doctorate, Geometric Multi scale Analysis and Applications to Neuroscience Imaging, The University of Houston, 2017

Courses

lineer cebir ve diferansiyel denklemler, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020

Medikal Görüntü Analizi, Postgraduate, 2021 - 2022

Ayrık Matematik, Undergraduate, 2021 - 2022

Formal Dillere Giriş ve Otomata Teorisi, Undergraduate, 2020 - 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Advances in quantitative analysis of astrocytes using machine learning**
Labate D., Kayasandik C. B.
Neural Regeneration Research, vol.18, no.2, pp.313-314, 2023 (SCI-Expanded)
- II. **Automated detection of GFAP-labeled astrocytes in micrographs using YOLOv5**
Huang Y., Kruyer A., Syed S., KAYASANDIK C. B., Papadakis M., Labate D.
Scientific Reports, vol.12, no.1, 2022 (SCI-Expanded)
- III. **Predicting the Effects of Repetitive Transcranial Magnetic Stimulation on Cognitive Functions in Patients With Alzheimer's Disease by Automated EEG Analysis**
KAYASANDIK C. B., Velioglu H. A., HANOĞLU L.
Frontiers in Cellular Neuroscience, vol.16, 2022 (SCI-Expanded)
- IV. **Inhibition of AKT Signaling Alters β IV Spectrin Distribution at the AIS and Increases Neuronal Excitability**
Di Re J., Hsu W. J., Kayasandik C. B., Fularczyk N., James T., Nenov M. N., Negi P., Marosi M., Scala F., Prasad S., et al.
Frontiers in Molecular Neuroscience, vol.14, 2021 (SCI-Expanded)
- V. **A multistep deep learning framework for the automated detection and segmentation of astrocytes in fluorescent images of brain tissue**
KAYASANDIK C. B., Ru W., Labate D.

Scientific Reports, vol.10, no.1, 2020 (SCI-Expanded)

- VI. **Directional multiscale representations and applications in digital neuron reconstruction**
Kayasandik C. B., Guo K., Labate D.
Journal of Computational and Applied Mathematics, vol.349, pp.482-493, 2019 (SCI-Expanded)
- VII. **Automated sorting of neuronal trees in fluorescent images of neuronal networks using NeuroTreeTracer**
Kayasandik C. B., Negi P., Laezza F., Papadakis M., Labate D.
Scientific Reports, vol.8, no.1, 2018 (SCI-Expanded)
- VIII. **Improved detection of soma location and morphology in fluorescence microscopy images of neurons**
Kayasandik C. B., Labate D.
Journal of Neuroscience Methods, vol.274, pp.61-70, 2016 (SCI-Expanded)

Articles Published in Other Journals

- I. **Automated Detection of Collagen Bundles in Second Harmonic Generation Microscopy Images**
KAYASANDIK C. B.
Balkan Journal of Electrical and Computer Engineering, vol.11, no.4, pp.352-363, 2023 (Peer-Reviewed Journal)
- II. **Imaging of the Axon Initial Segment**
Di Re J., Kayasandik C. B., Botello-Lins G., Labate D., Laezza F.
Current Protocols in Neuroscience, vol.89, no.1, 2019 (Scopus)

Books & Book Chapters

- I. **Enhancing Collagen Bundle Structure Analysis: A Robust Approach through Crossing Density Analysis with Orientable Filters**
wheba a., KAYASANDIK C. B.
in: New Discussions in Biosystems Engineering, Hikmet Yeter Çoğun, Editor, BIDGE Publications, İstanbul, pp.43-58, 2023
- II. **Konjenital Diyafragma Hernisinde Görüntü İşleme Yöntemleri ile Fetal Akciğer Karakterizasyonu**
AYDIN E., KAYASANDIK C. B., AKSAN A., ERAKIN M. E.
in: Sağlıkta Yapay Zeka Uygulamaları, Can Özlü, Mehmet Ali Gedik, Nilüfer Köylüoğlu, Hilmi Sefa Yangal, Aysun Özlü, Editor, Akademisyen Yayınevi, Ankara, pp.163-173, 2021

Refereed Congress / Symposium Publications in Proceedings

- I. **rs-fMRI Analysis Using Spatio-Temporal Sparse Convolutional Neural Networks**
Yener F. M., YILDIZ S., Hafeez M. A., KAYASANDIK C. B., DOĞAN M. Y.
30th Signal Processing and Communications Applications Conference, SIU 2022, Safranbolu, Turkey, 15 - 18 May 2022
- II. **Brain Tumor Classification Using MRI Images and Convolutional Neural Networks**
Hafeez M. A., KAYASANDIK C. B., DOĞAN M. Y.
30th Signal Processing and Communications Applications Conference, SIU 2022, Safranbolu, Turkey, 15 - 18 May 2022
- III. **Automated Analysis of the EEG signals for Prediction of Possible Effectiveness of rTMS Treatment in Alzheimer's Patient**
Duzman H., Torlak M., Hindi O. A., KAYASANDIK C. B.
30th Signal Processing and Communications Applications Conference, SIU 2022, Safranbolu, Turkey, 15 - 18 May 2022

IV. Can the possible effect of Transcranial Magnetic Stimulation on cognitive functions in Alzheimer's patients be predicted by EEG classification?

KAYASANDIK C. B., VELİOĞLU H. A., HANOĞLU L.

7th International Conference on Non-Invasive Brain Stimulation (NIBS), Germany, 24 March 2020