

## Asst. Prof. ZAFER İŞCAN

### Personal Information

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### International Researcher IDs

ScholarID: [xsFguFgAAAAJ](https://orcid.org/0000-0001-9832-6591)

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Publons / Web Of Science ResearcherID: G-8771-2015

ScopusID: 15757480800

Yoksis Researcher ID: 149111

### Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Electronics Engineering, Turkey 2006 - 2012

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Biomedical Engineering, Turkey 2002 - 2005

Undergraduate, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, Turkey 1998 - 2002

### Foreign Languages

English, C2 Mastery

Italian, A1 Beginner

Russian, B1 Intermediate

French, B1 Intermediate

### Dissertations

Doctorate, Development of classification methods for electroencephalogram based brain computer interfaces, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2012

Postgraduate, Segmentation of ultrasound images by using artificial neural networks, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2005

### Research Areas

Biomedical Image Processing, Biosignal Processing

### Academic Titles / Tasks

Assistant Professor, Istanbul Medipol University, Mühendislik Ve Doğa Bilimleri Fakültesi, Elektrik-Elektronik Mühendisliği Bölümü, 2023 - Continues

Assistant Professor, Bahcesehir University, Faculty of Engineering and Natural Sciences, Electrical and Electronics Engineering, 2018 - 2023

Researcher, INSERM, Neurospin, Cognitive Neuroimaging Unit, 2016 - 2018

Researcher, Higher School of Economics, Psychology, Center for Cognition and Decision Making, 2014 - 2016

Researcher, State University of New York at Stony Brook, Stony Brook Hospital, Psychiatry, 2013 - 2015

Research Assistant, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, 2005 - 2012

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

- I. **Oscillatory Source Tensor Discriminant Analysis (OSTDA): A regularized tensor pipeline for SSVEP-based BCI systems**  
Jorajuría T., Jamshidi Idaji M., İŞCAN Z., Gómez M., Nikulin V. V., Vidaurre C.  
Neurocomputing, vol.492, pp.664-675, 2022 (SCI-Expanded)
- II. **Pre-stimulus theta power is correlated with variation of motor evoked potential latency: a single-pulse TMS study**  
İŞCAN Z., Schurger A., Vernet M., Sitt J. D., Valero-Cabré A.  
Experimental Brain Research, vol.236, no.11, pp.3003-3014, 2018 (SCI-Expanded)
- III. **Steady state visual evoked potential (SSVEP) based brain-computer interface (BCI) performance under different perturbations**  
İŞCAN Z., Nikulin V. V.  
PLoS ONE, vol.13, no.1, 2018 (SCI-Expanded)
- IV. **A positron emission tomography study of the serotonergic system in relation to anxiety in depression**  
İŞCAN Z., Rakesh G., Rossano S., Yang J., Zhang M., Miller J., Sullivan G. M., Sharma P., McClure M., Oquendo M. A., et al.  
European Neuropsychopharmacology, vol.27, no.10, pp.1011-1021, 2017 (SCI-Expanded)
- V. **Pre-stimulus alpha oscillations and inter-subject variability of motor evoked potentials in single- and paired-pulse TMS paradigms**  
İŞCAN Z., Nazarova M., Fedele T., Blagovechtchenski E., Nikulin V.  
Frontiers in Human Neuroscience, vol.10, no.OCT2016, 2016 (SCI-Expanded)
- VI. **Long-Range Temporal Correlations in the amplitude of alpha oscillations predict and reflect strength of intracortical facilitation: Combined TMS and EEG study**  
Fedele T., Blagovechtchenski E., Nazarova M., İŞCAN Z., Moiseeva V., Nikulin V. V.  
Neuroscience, vol.331, pp.109-119, 2016 (SCI-Expanded)
- VII. **Test-retest reliability of freesurfer measurements within and between sites: Effects of visual approval process**  
İŞCAN Z., Jin T. B., Kendrick A., Szeglin B., Lu H., Trivedi M., Fava M., Mcgrath P. J., Weissman M., Kurian B. T., et al.  
Human Brain Mapping, vol.36, no.9, pp.3472-3485, 2015 (SCI-Expanded)
- VIII. **A novel steady-state visually evoked potential-based brain-computer interface design: Character Plotter**  
İŞCAN Z., Ölmez Z.  
Biomedical Signal Processing and Control, vol.10, no.1, pp.145-152, 2014 (SCI-Expanded)
- IX. **Classification of electroencephalogram signals with combined time and frequency features**  
İŞCAN Z., Ölmez Z., DEMİRALP T.  
Expert Systems with Applications, vol.38, no.8, pp.10499-10505, 2011 (SCI-Expanded)
- X. **Retrospective correction of near field effect of X-ray source in radiographic images by using genetic algorithms**  
Korürek M., Güvenilir F. Y., İŞCAN Z., Ölmez Z., Ölmez T.  
Expert Systems with Applications, vol.37, no.3, pp.1946-1954, 2010 (SCI-Expanded)

- XI. **Tumor detection by using Zernike moments on segmented magnetic resonance brain images**  
İŞCAN Z., Ölmez Z., Ölmez T.  
Expert Systems with Applications, vol.37, no.3, pp.2540-2549, 2010 (SCI-Expanded)
- XII. **Medical image segmentation with transform and moment based features and incremental supervised neural network**  
İŞCAN Z., Güvenilir F. Y., Ölmez Z., Korürek M., Ölmez T.  
Digital Signal Processing: A Review Journal, vol.19, no.5, pp.890-901, 2009 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Depth estimation for surface-breaking cracks in steel-fiber reinforced concrete using ultrasonic surface waves**  
Kirlangic A. S., İŞCAN Z.  
Structural Monitoring and Maintenance, vol.9, no.4, pp.373-388, 2022 (Scopus)
- II. **Classification of steady state visual evoked potentials by Multi-Class T-Weight Method**  
İŞCAN Z., Ölmez Z.  
Pattern Recognition and Image Analysis, vol.25, no.2, pp.321-326, 2015 (Scopus)
- III. **Detection of P300 wave from EEG data for brain-computer interface applications**  
İŞCAN Z.  
Pattern Recognition and Image Analysis, vol.21, no.3, pp.481-485, 2011 (Scopus)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Classification using angle and radius of feature vector**  
İŞCAN Z.  
2015 International Conference on Image Processing, Computer Vision, and Pattern Recognition, IPCV 2015, at WORLDCOMP 2015, Nevada, United States Of America, 27 - 30 July 2015, pp.258-264
- II. **Improved T-weight method in classification of slow cortical potentials**  
İŞCAN Z., Ölmez Z.  
4th International Symposium on Applied Sciences in Biomedical and Communication Technologies, ISABEL'11, Barcelona, Spain, 26 - 29 October 2011
- III. **Classification of EEG in a steady state visual evoked potential based brain computer interface experiment**  
İŞCAN Z., Özkaya Ö., Ölmez Z.  
10th International Conference on Adaptive and Natural Computing Algorithms, ICANNGA 2011, Ljubljana, Slovenia, 14 - 16 April 2011, vol.6594 LNCS, pp.81-88
- IV. **Survey evaluation by character recognition Karakter tanima ile anket değerlendirme**  
İŞCAN Z.  
18th IEEE Signal Processing and Communications Applications Conference, SIU 2010, Diyarbakır, Turkey, 22 - 24 April 2010, pp.491-494
- V. **MLSP 2010 EEG classification competition and the used method MLSP 2010 EEG sınıflama yarışması ve kullanılan yöntem**  
İŞCAN Z.  
2010 7th National Conference on Electrical, Electronics and Computer Engineering, ELECO 2010, Bursa, Turkey, 2 - 05 December 2010, pp.526-530
- VI. **MLSP competition, 2010: Description of second place method**  
İŞCAN Z.  
2010 IEEE 20th International Workshop on Machine Learning for Signal Processing, MLSP 2010, Kittila, Finland, 29 August - 01 September 2010, pp.114-115

- VII. **Discrimination between different art types: marbled paper, watercolor and tile images**  
İŞCAN Z.  
IEEE EUROCON 2009, EUROCON 2009, St. Petersburg, Russia, 18 - 23 May 2009, pp.296-301
- VIII. **Segmentation of medical images by using wavelet transform and incremental self-organizing map**  
Ölmez Z., İŞCAN Z., Ölmez T.  
5th Mexican International Conference on Artificial Intelligence, MICAI 2006: Advances in Artificial Intelligence, Apizaco, Mexico, 13 - 17 November 2006, vol.4293 LNAI, pp.800-809

## **Metrics**

Publication: 23

Citation (Scopus): 588

H-Index (Scopus): 8

## **Awards**

İşcan Z., Mind Reading Competition Second Prize, Ieee Machine Learning For Signal Processing Workshop, August 2010