# Assoc. Prof. Ayşe Betül OKTAY

### **Personal Information**

Email: aoktay@yildiz.edu.tr

Web: https://avesis.yildiz.edu.tr/aoktay

#### **International Researcher IDs**

ScholarID: GBosm0sAAAAJ ORCID: 0000-0003-0827-173X ScopusID: 26022033900 Yoksis Researcher ID: 36603

## **Education Information**

Doctorate, Gebze Technical University, Institute Of Science, Turkey 2007 - 2011

Postgraduate, Fatih University, Institute Of Science, Turkey 2004 - 2006

Undergraduate, Fatih University, Faculty Of Engineering, Department Of Computer Engineering, Turkey 2000 - 2004

#### **Research Areas**

algorithms, Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition

# **Academic Titles / Tasks**

Associate Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 2021 - Continues

Assistant Professor, Istanbul Medeniyet University, Faculty Of Engineering And Natural Sciences , Computer Engineering, 2011 - 2021

# Academic and Administrative Experience

Head of Department, Istanbul Medeniyet University, Faculty Of Engineering And Natural Sciences , Computer Engineering, 2017 - 2020

 $Head\ of\ Department,\ Is tanbul\ Medeniyet\ University,\ Faculty\ Of\ Engineering\ And\ Natural\ Sciences\ ,\ Computer\ Engineering,\ 2014\ -\ 2015$ 

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

I. Stress recognition from facial images in children during physiotherapy with serious games[Formula presented]

Vural Ş. F., Yurdusever B., OKTAY A. B., Uzun I.

Expert Systems with Applications, vol.238, 2024 (SCI-Expanded)

II. Differentiation of lung and breast cancer brain metastases: Comparison of texture analysis and deep convolutional neural networks

GÜLTEKİN M. A., PEKER A. A., OKTAY A. B., TÜRK H. M., Cesme D. H., Shbair A. T. M., YILMAZ T. F., Kaya A., Yasin A. I., ŞEKER M., et al.

Journal of Clinical Ultrasound, vol.51, no.9, pp.1579-1586, 2023 (SCI-Expanded)

III. A physiological signal database of children with different special needs for stress recognition
 Coşkun B., Ay S., Erol Barkana D., Bostanci H., Uzun I., Oktay A. B., Tuncel B., Tarakci D.
 SCIENTIFIC DATA, vol.10, no.1, pp.382-396, 2023 (SCI-Expanded)

IV. Dental biometric systems: a comparative study of conventional descriptors and deep learning-based features

OKTAY A. B., Akhtar Z., Gurses A.

MULTIMEDIA TOOLS AND APPLICATIONS, vol.81, no.20, pp.28183-28206, 2022 (SCI-Expanded)

V. The validity of an objective measurement method using the Leap Motion Controller for fingers wrist, and forearm ranges of motion

ARMAN S. N., Oktay A. B., Tarakci D., Tarakci E., Akgul Y. S.

HAND SURGERY & REHABILITATION, vol.40, no.4, pp.394-399, 2021 (SCI-Expanded)

VI. Differential diagnosis of Parkinson and essential tremor with convolutional LSTM networks Oktay A. B., Kocer A.

BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.56, 2020 (SCI-Expanded)

VII. Automatic detection, localization and segmentation of nano-particles with deep learning in microscopy images

Oktay A. B., Gurses A.

MICRON, vol.120, pp.113-119, 2019 (SCI-Expanded)

VIII. Human identification with dental panoramic radiographic images

Oktay A. B.

IET BIOMETRICS, vol.7, no.4, pp.349-355, 2018 (SCI-Expanded)

IX. Nintendo Wii assessment of Hoehn and Yahr score with Parkinson's disease tremor Kocer A., Oktay A. B.

TECHNOLOGY AND HEALTH CARE, vol.24, no.2, pp.185-191, 2016 (SCI-Expanded)

X. Computer aided diagnosis of degenerative intervertebral disc diseases from lumbar MR images Oktay A. B., Albayrak N. B., Akgul Y. S.

COMPUTERIZED MEDICAL IMAGING AND GRAPHICS, vol.38, no.7, pp.613-619, 2014 (SCI-Expanded)

XI. Extraction of left ventricle borders with local and global priors from echocardiograms Oktay A. B., Akgul Y. S.

MACHINE VISION AND APPLICATIONS, vol.24, no.7, pp.1393-1403, 2013 (SCI-Expanded)

XII. Simultaneous Localization of Lumbar Vertebrae and Intervertebral Discs With SVM-Based MRF Oktay A. B., Akgul Y. S.

IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol.60, no.9, pp.2375-2383, 2013 (SCI-Expanded)

XIII. A Modular Framework for Shape- and Image-prior-based Anatomical Structure Contour Extraction Oktay A. B., Akgul Y. S.

JOURNAL OF MEDICAL AND BIOLOGICAL ENGINEERING, vol.31, no.6, pp.413-420, 2011 (SCI-Expanded)

XIV. Forecasting air pollutant indicator levels with geographic models 3 days in advance using neural networks

Kurt A., Oktay A. B.

EXPERT SYSTEMS WITH APPLICATIONS, vol.37, no.12, pp.7986-7992, 2010 (SCI-Expanded)

XV. An online air pollution forecasting system using neural networks

Kurt A., Gulbagci B., Karaca F., Alagha O.

ENVIRONMENT INTERNATIONAL, vol.34, no.5, pp.592-598, 2008 (SCI-Expanded)

# Refereed Congress / Symposium Publications in Proceedings

I. Human Identification with Panoramic Dental Images using Mask R-CNN and SURF

Guises A., Oktay A. B.

5th International Conference on Computer Science and Engineering (UBMK), Diyarbakır, Turkey, 9 - 11 September 2020, pp.232-237

# II. Tooth Restoration and Dental Work Detection on Panoramic Dental Images via CNN

Gurses A., Oktay A. B.

2020 Medical Technologies Congress (TIPTEKNO), ELECTR NETWORK, 19 - 20 November 2020

#### III. Diagnosis of COVID-19 with a Deep Learning Approach on Chest CT Slices

Yener F. M., Oktay A. B.

2020 Medical Technologies Congress (TIPTEKNO), ELECTR NETWORK, 19 - 20 November 2020

# IV. Air Pollution Forecasting with Random Forest Time Series Analysis

Altincop H., Oktay A. B.

International Conference on Artificial Intelligence and Data Processing (IDAP), Malatya, Turkey, 28 - 30 September 2018

# V. Nanoparticle Detection from TEM Images with Deep Learning

Guven G., Oktay A. B.

26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

### VI. Forecasting CO2 Emission with Machine Learning Methods

Garip E., Oktay A. B.

International Conference on Artificial Intelligence and Data Processing (IDAP), Malatya, Turkey, 28 - 30 September 2018

#### VII. Tooth Detection with Convolutional Neural Networks

Oktay A. B.

Medical Technologies National Congress (TIPTEKNO), Trabzon, Turkey, 12 - 14 October 2017

# VIII. Prostate Localization from Abdominal Ultrasound Images by Using a Two-Level Approach

Albayrak N. B., Oktay A. B., Akgul Y. S.

25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017

# $IX. \quad \textbf{Diagnosis of Degenerative Intervertebral Disc Disease with Deep Networks and SVM}$

Oktay A. B., Akgul Y. S.

31st International Symposium on Computer and Information Sciences (ISCIS), Krakow, Poland, 27 - 28 October 2016, vol.659, pp.253-261

#### X. PROSTATE DETECTION FROM ABDOMINAL ULTRASOUND IMAGES: A PART BASED APPROACH

Albayrak N. B., Oktay A. B., Akgul Y. S.

IEEE International Conference on Image Processing (ICIP), Quebec City, Canada, 27 - 30 September 2015, pp.1955-1959

# XI. SEGMENTATION OF Fe304 NANO PARTICLES IN TEM IMAGES

Vural U., Oktay A. B.

22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.1849-1852

# XII. Desiccation Detection from Lumbar MR Images

Oktay A. B., Albayrak N. B., Akgul Y. S.

21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013

# XIII. Localization of the Lumbar Discs Using Machine Learning and Exact Probabilistic Inference

Oktay A. B., Akgul Y. S.

14th International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2011), Toronto, Canada, 18 - 22 September 2011, vol.6893, pp.158-165

## XIV. Artificial Neural Networks based modelling of CO Effects of spatial parameters

KURT A., OKTAY A. B., KARACA F., alagha O.

Information Technologies in Environmental Engineering, 1 - 03 May 2009, pp.345-356

# XV. Echocardiographic Contour Extraction with Local and Global Priors through Boosting and Level Sets Oktay A. B., Akgul Y. S.

IEEE-Computer-Society Conference on Computer Vision and Pattern Recognition Workshops, Florida, United States

Of America, 20 - 25 June 2009, pp.109-114

# XVI. A Novel Level Set Based Echocardiographic Contour Extraction Method with Prior Knowledge OKTAY A. B., AKGÜL Y. S.

Procedings of the British Machine Vision Conference 2008, Leeds, United Kingdom, 1 - 04 September 2008, pp.1-10

# XVII. Prior Information Based Segmentation: A 3D Level Set Surface Matching Approach

Oktay A. B., Akgul Y. S.

23rd International Symposium on Computer and Information Sciences (ISCIS), İstanbul, Turkey, 27 - 29 October 2008, pp.419-424

# **Metrics**

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