

ATA AKIN

PROF.

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAF-2494-2019

ScopusID: 8302822700

Yoksis Researcher ID: 34071



Biography

Dr Ata Akin received his Ph.D. on Biomedical Engineering from Drexel University in 1998, his MS on Biomedical Engineering and BS on Electronics and Telecommunication Engineering both from Istanbul Technical University in 1995 and 1993, respectively. He joined the School of Biomedical Engineering in Drexel University as a Research Assistant Professor in 1999 and worked there till 2002. He received grants from NIH-SBIR, ONR and DARPA on the use of functional near-infrared spectroscopy (fNIRS) system for noninvasive tissue perfusion monitoring. He joined the Institute of Biomedical Engineering faculty in 2002 as an Assistant professor, and was promoted to Associate Professor in 2008. He founded the Neuro-Optical Imaging Laboratory during the same time. In 2013 he moved to Istanbul Bilgi University as the Dean of Faculty of Engineering and Natural Sciences. In 2015 he joined the Department of Medical Engineering at Acibadem University and serves as the Dean of Faculty of Engineering. Dr. Akin's research interests are in the fields of neuroimaging and systems biology. In the field of functional neuroimaging, he designs and develops customized fNIRS systems to monitor the brain and muscle oxygenation activity during health and disease. recently his research interest has focused on quantifying the physiological changes during cognition and decision making. In the field of systems biology, he develops algorithms in extracting and classifying the signals and images obtained from the body, mathematical models of neurobiological systems, metabolic diseases, cancer biology and muscle metabolism.

Education

Doctorate 1995 - 1998	Drexel University, School of Biomedical Engineering, Sciences and Health Systems, Biomedical Engineering, United States Of America
Postgraduate 1993 - 1995	Istanbul Technical University, Fen Bilimleri Enstitüsü, Biomedical Engineering, Turkey
Undergraduate 1988 - 1993	Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, Turkey

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Non-invasive detection of spike activity of the stomach from cutaneous EGG, Drexel University, School of Biomedical Engineering and Health Sciences, Biomedical Engineering, 1998

Postgraduate, Modeling the brain's electrical activity as dipole sources and determinin their potential distribution, Istanbul Technical University, Fen Bilimleri Enstitüsü, Biomedical Engineering, 1995

Academic Positions

Professor 2015 - Continues	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
Professor 2013 - 2015	Istanbul Bilgi University, Faculty Of Engineering, Department Of Genetics And Bioengineering
Associate Professor 2009 - 2013	Bogazici University, Institute Of Biomedical Engineering, Department Of Biomechanics And Biocybernetics
Assistant Professor 2002 - 2009	Bogazici University, Institute Of Biomedical Engineering, Department Of Biomechanics And Biocybernetics
Assistant Professor 1999 - 2001	Drexel University, School Of Biomedical Engineering And Health Systems, Biomedical Engineering
Research Assistant 1996 - 1998	Drexel University, School Of Biomedical Engineering And Health Systems, Biomedical Engineering
Instructor 1994 - 1995	Bogazici University, Vocational School, Elektronik Yüksek Teknisyenliği Pr. (İngilizce)

Funded Projects

- Akın A., TUBITAK Project, Aşırı Aktif Mesaneli Çocuklarda Frontal Lob Aktivitesinin Fonksiyonel Yakın-Kızılötesi Işın Spektroskopisi Ile Değerlendirilmesi, 2024 - 2025
- Hamamcı B., Akın A., Erdoğan S. B., Yukselen G., Demircan H. Ö., TUBITAK Project, The Mathematical Mind of Five-Year-Old Children: Mathematical Abilities in the Context of Home, School, and Hemodynamic Changes, 2024 - 2025
- Dumlu S. N., Tanoren B., Özyar E., Akın A., Project Supported by Other Official Institutions, Automatic Semantic Segmentation of Organs at Risk and Target Tumor Volume in Radiotherapy Planning CT Images of Nasopharyngeal Cancer, 2022 - 2024
- Akın A., European Science Foundation (ESF) Supported Project, International Interdisciplinary Network on Smart Healthy Age-friendly Environments, 2020 - 2024
- Akın A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Sağlık Girişimcilerinin Global Pazara Erişimi, 2018 - 2020
- Akın A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, İstanbul Biodesign Center, 2017 - 2018
- Akın A., TUBITAK Project, Functional connectivity measured by fNIRS during cognitive tasks, 2012 - 2014

Jury Memberships

Doctorate, Doctorate, İstanbul Üniversitesi, February, 2024

Appointment to Academic Staff - Associate Professorship, Appointment to Academic Staff - Associate Professorship, NUST, May, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, Boğaziçi Üniversitesi, January, 2021

Taught Courses and Trainings

Akın A., Sütçübaşı B., Bekçi B., Erdoğan S. B., Seckin M., Yükselen G., Engineering Based Neuroscience Internship 2022-2, 2023 - 2024

Tokcaer Keskin Z., Akın A., Süer Akman E., Keskin Toklu N., Timuçin A. C., Sütçübaşı B., Kenar H., Yücel D., Tahir Turanlı E., Kırımlı C. E., et al., Summer Science School for Highschool Students, 2023 - 2023

Akın A., Erdoğan S. B., Sütçübaşı B., Kurt M., Seckin M., Yükselen G., Ergen M., Cognitive Neuroscience Bootcamp, 2023 - 2023

Akın A., Sütçübaşı B., Erdoğan S. B., Bekçi B., Seckin M., Yükselen G., Cognitive Neuroscience Internship 2023-1, 2023 - 2023

Akın A., Bekçi B., Erdoğan S. B., Sütçübaşı B., Yükselen G., Kognitif Nörobilim stajı, 2022 - 2022

Akın A., Tokcaer Keskin Z., Timuçin A. C., Can Ö., Summer Science School for Highschool Students, 2022 - 2022

Akın A., Bekçi B., Erdoğan S. B., Sütçübaşı B., Yükselen G., Seckin M., Engineering Based Neuroscience Internship, 2022 - 2022

Akın A., Erdoğan S. B., Bekçi B., Seckin M., Yükselen G., Neuroscience Internship, 2021 - 2022

Akın A., Bayram M. S. B., Yükselen G., Öztürk C. O., Neuroscience Bootcamp, 2021 - 2021

Akın A., Argunşah H., Erdoğan S. B., Kitapçıoğlu D., Deniz E., Keskin Toklu N., Bayram M. S. B., Ünübol N., Gök Ö., Öktem Okullu S., et al., Winter Science Camp for Highschool Students, 2021 - 2021

Akın A., Young Scientist Development Program, 2020 - 2020

Öktem Okullu S., Mozioğlu E., Akın A., Çelebi A. R. C., Kitapçıoğlu D., Deniz E., Ekicioğlu G., Bayram M. S. B., Argunşah Bayram H., Keskin Toklu N., et al., Summer Science School for Highschool Students, 2019 - 2019

Journal articles indexed in SCI, SSCI, and AHCI

1. Awareness and level of digital literacy among students receiving health-based education

Aydımlar A., Mavi A., Kütükçü E., KIRIMLI E. E., ALİS D. C., AKIN A., ALTINTAŞ L.
BMC Medical Education, vol.24, no.1, 2024 (SCI-Expanded)

2. Small world properties of schizophrenia and OCD patients derived from fNIRS based functional brain network connectivity metrics

AKIN A., Yorgancıgil E., Öztürk O. C., SÜTÇÜBAŞI B., KIRIMLI C. E., Elgün Kırımlı E. E., DURLU S. N., YUKSELEN G., ERDOĞAN S. B.
SCIENTIFIC REPORTS, vol.14, no.1, 2024 (SCI-Expanded)

3. Sex based differences in functional connectivity during a working memory task: an fNIRS study

Shirzadi S., Dadgostar M., Einalou Z., Erdoğan S. B., Akın A.
FRONTIERS IN PSYCHOLOGY, 2024 (SSCI)

4. Identification of impulsive adolescents with a functional near infrared spectroscopy (fNIRS) based decision support system

ERDOĞAN S. B., YUKSELEN G., Yegül M. M., Usanmaz R., Kiran E., DERMAN O., AKIN A.
JOURNAL OF NEURAL ENGINEERING, vol.18, no.5, 2021 (SCI-Expanded)

5. fNIRS-derived neurocognitive ratio as a biomarker for neuropsychiatric diseases

AKIN A.

NEUROPHOTONICS, vol.8, no.3, 2021 (SCI-Expanded)

6. **The hemodynamic effects of occlusal splint therapy on the masseter muscle of patients with myofascial pain accompanied by bruxism**
İspirgil E., Erdoğan S. B., Akin A., Şakar O.
CRANIO-THE JOURNAL OF CRANIOMANDIBULAR & SLEEP PRACTICE, vol.38, no.2, pp.99-108, 2020 (SCI-Expanded)
7. **Classification of motor imagery and execution signals with population-level feature sets: implications for probe design in fNIRS based BCI**
ERDOĞAN S. B., Ozsarfati E., Dilek B., Kadak K. S., Hanoglu L., AKIN A.
JOURNAL OF NEURAL ENGINEERING, vol.16, no.2, 2019 (SCI-Expanded)
8. **Partial correlation-based functional connectivity analysis for functional near-infrared spectroscopy signals**
Akin A.
JOURNAL OF BIOMEDICAL OPTICS, vol.22, no.12, 2017 (SCI-Expanded)
9. **Graph theoretical approach to functional connectivity in prefrontal cortex via fNIRS**
Einalou Z., Maghooli K., Setarehdan S. K., Akin A.
NEUROPHOTONICS, vol.4, no.4, 2017 (SCI-Expanded)
10. **Joint state and parameter estimation of the hemodynamic model by particle smoother expectation maximization method**
Aslan S., CEMGİL A. T., Akin A.
JOURNAL OF NEURAL ENGINEERING, vol.13, no.4, 2016 (SCI-Expanded)
11. **Mutant SOD1 protein increases Na(v)1.3 channel excitability**
Oktem E. K., Mruk K., Chang J., Akin A., Kobertz W. R., Brown R. H.
JOURNAL OF BIOLOGICAL PHYSICS, vol.42, no.3, pp.351-370, 2016 (SCI-Expanded)
12. **Joint parameter and state estimation of the hemodynamic model by iterative extended Kalman smoother**
Aslan S., CEMGİL A. T., Aslan M. S., TÖREYİN B. U., Akin A.
BIOMEDICAL SIGNAL PROCESSING AND CONTROL, vol.24, pp.47-62, 2016 (SCI-Expanded)
13. **Functional connectivity of the PFC via partial correlation**
Dadgostar M., Setarehdan S. K., Shahzadi S., Akin A.
OPTIK, vol.127, no.11, pp.4748-4754, 2016 (SCI-Expanded)
14. **Effective channels in classification and functional connectivity pattern of prefrontal cortex by functional near infrared spectroscopy signals**
Einalou Z., Maghooli K., Setarehdan S. K., Akin A.
OPTIK, vol.127, no.6, pp.3271-3275, 2016 (SCI-Expanded)
15. **Similarity analysis of functional connectivity with functional near-infrared spectroscopy**
Dalmis M. U., Akin A.
JOURNAL OF BIOMEDICAL OPTICS, vol.20, no.8, 2015 (SCI-Expanded)
16. **Analysis of task-evoked systemic interference in fNIRS measurements: Insights from fMRI**
Erdogan S. B., Yucel M. A., Akin A.
NEUROIMAGE, vol.87, pp.490-504, 2014 (SCI-Expanded)
17. **Correlation analysis between surface electromyography and continuous-wave near-infrared spectroscopy parameters during isometric exercise to volitional fatigue**
Sayli O., Akin A., ÇOTUK H. B.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.22, no.3, pp.780-793, 2014 (SCI-Expanded)
18. **Association Among SNAP-25 Gene Ddel and MnlI Polymorphisms and Hemodynamic Changes During Methylphenidate Use: A Functional Near-Infrared Spectroscopy Study**
Oner O., Akin A., Herken H., Erdal M. E., Ciftci K., Ay M. E., Bicer D., Oncu B., Bozkurt O. H., Muenir K., et al.
JOURNAL OF ATTENTION DISORDERS, vol.15, no.8, pp.628-637, 2011 (SCI-Expanded)
19. **Localization of an absorber in a turbid semi-infinite medium by spatially resolved continuous-wave**

diffuse reflectance measurements

Aksel E. B., Turkoglu A. N., Ercan A. E., Akin A.

JOURNAL OF BIOMEDICAL OPTICS, vol.16, no.8, 2011 (SCI-Expanded)

20. **Intact neurovascular coupling during executive function in migraine without aura: Interictal near-infrared spectroscopy study**
Schytz H. W., Ciftci K., Akin A., Ashina M., Bolay H.
CEPHALALGIA, vol.30, no.4, pp.457-466, 2010 (SCI-Expanded)
21. **On Temporal Connectivity of PFC Via Gauss-Markov Modeling of fNIRS Signals**
Aydore S., Mihcak M. K., Ciftci K., Akin A.
IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol.57, no.3, pp.761-768, 2010 (SCI-Expanded)
22. **Effect of aerobic exercise training on oxygen uptake and kinetics in patients with fibromyalgia**
Dinler M., Diracoglu D., Kasikcioglu E., Sayli O., Akin A., Aksoy C., Oncel A., Berker E.
RHEUMATOLOGY INTERNATIONAL, vol.30, no.2, pp.281-284, 2009 (SCI-Expanded)
23. **Crosstalk and error analysis of fat layer on continuous wave near-infrared spectroscopy measurements**
Sayli O., Aksel E. B., Akin A.
JOURNAL OF BIOMEDICAL OPTICS, vol.13, no.6, 2008 (SCI-Expanded)
24. **Multilevel statistical inference from functional near-infrared spectroscopy data during Stroop interference**
Ciftci K., Sankur B., Kahya Y. P., Akin A.
IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, vol.55, no.9, pp.2212-2220, 2008 (SCI-Expanded)
25. **Constraining the general linear model for sensible hemodynamic response function waveforms**
Ciftci K., Sankur B., Kahya Y. P., Akin A.
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.46, no.8, pp.779-787, 2008 (SCI-Expanded)
26. **Multimodal investigation of fMRI and fNIRS derived breath hold BOLD signals with an expanded balloon model**
Emir U. E., Ozturk C., Akin A.
PHYSIOLOGICAL MEASUREMENT, vol.29, no.1, pp.49-63, 2008 (SCI-Expanded)
27. **Exercise capacity and oxygen recovery half times of skeletal muscle in patients with fibromyalgia**
Dinler M., Kasikcioglu E., Akin A., Sayli O., Aksoy C., Oncel A., Berker E.
RHEUMATOLOGY INTERNATIONAL, vol.27, no.3, pp.311-313, 2007 (SCI-Expanded)
28. **Reconstruction and flux analysis of coupling between metabolic pathways of astrocytes and neurons: application to cerebral hypoxia**
Cakir T., Alsan S., Saybasili H., Akin A., Ulgen K. O.
THEORETICAL BIOLOGY AND MEDICAL MODELLING, vol.4, 2007 (SCI-Expanded)
29. **Extraction of cognitive activity-related waveforms from functional near-infrared spectroscopy signals**
Akgul C. B., Akin A., Sankur B.
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.44, no.11, pp.945-958, 2006 (SCI-Expanded)
30. **Cerebrovascular reactivity to hypercapnia in migraine patients measured with near-infrared spectroscopy**
Akin A., Bilensoy D.
BRAIN RESEARCH, vol.1107, pp.206-214, 2006 (SCI-Expanded)
31. **Cerebrovascular dynamics in patients with migraine: Near-infrared spectroscopy study**
AKIN A., Bilensoy D., Emir U., Gulsoy M., Candansayar S., Bolay H. B.
NEUROSCIENCE LETTERS, vol.400, pp.86-91, 2006 (SCI-Expanded)
32. **Cardiac fatigue and oxygen kinetics after prolonged exercise**
Kasikcioglu E., Arslan A., Topcu B., Sayli O., Akhan H., Oflaz H., Akin A., Kayserilioglu A., Meric M.
INTERNATIONAL JOURNAL OF CARDIOLOGY, vol.108, no.2, pp.286-288, 2006 (SCI-Expanded)
33. **Modelling of calcium dynamics in brain energy metabolism and Alzheimer's disease**
Tiveci S., Akin A., Cakir T., Saybasili H., Ulgen K.

- COMPUTATIONAL BIOLOGY AND CHEMISTRY, vol.29, no.2, pp.151-162, 2005 (SCI-Expanded)
34. **Spectral analysis of event-related hemodynamic responses in functional near infrared spectroscopy**
Akgul C., Sankur B., Akin A.
JOURNAL OF COMPUTATIONAL NEUROSCIENCE, vol.18, no.1, pp.67-83, 2005 (SCI-Expanded)
35. **Non-invasive gastric motility monitor: fast electrogastrogram (fEGG)**
Akin A., Sun H.
PHYSIOLOGICAL MEASUREMENT, vol.23, no.3, pp.505-519, 2002 (SCI-Expanded)
36. **Signal processing using Wavelet transforms.**
Akin A.
Aviation, space, and environmental medicine, vol.71, no.7, pp.770, 2000 (SCI-Expanded)
37. **Time-frequency methods for detecting spike activity of stomach**
Akin A., Sun H.
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING, vol.37, no.3, pp.381-390, 1999 (SCI-Expanded)

Articles Published in Other Journals

1. **CLASSIFICATION OF SCHIZOPHRENIA USING SVM VIA fNIRS**
Dadgostar M., Setarehdan S. K., Shahzadi S., Akin A.
BIOMEDICAL ENGINEERING-APPLICATIONS BASIS COMMUNICATIONS, vol.30, no.2, 2018 (Peer-Reviewed Journal)
2. **Muscle fatigue investigation studies using near-infrared spectroscopy and surface electromyography**
Sayli O., Bicer B., UZUN S., Pelvan O., Akin A., Cotuk B.
CLINICAL AND EXPERIMENTAL HEALTH SCIENCES, vol.1, no.1, pp.17-25, 2011 (Peer-Reviewed Journal)
3. **Comparison of methods to analyze the antropyloric electrical activity**
Akin A., Akgul T., Sun H. H., Chey W., Lee K.
Annual International Conference of the IEEE Engineering in Medicine and Biology - Proceedings, vol.4, pp.1602-1605, 1997 (Scopus)
4. **Comparison of QRS peak detection algorithms in extracting HRV signal**
Wan H., Cammarota J. P., Akin A., Sun H. H.
Annual International Conference of the IEEE Engineering in Medicine and Biology - Proceedings, vol.1, pp.302-305, 1997 (Scopus)

Books

1. **Ben Yapmadım Beynim mi Yaptırdı? Özgür iradeye nörofelsefi bir bakış**
Akin A.
Zoe Yayıncılık, İstanbul, 2024
2. **Clinical Innovation at Acibadem Biodesign Center**
Akin A., Dirilen E. G., Kurt K., Bal E.
in: Novel Innovation Design for the Future of Health, Michael Friebe, Editor, Springer Nature, Basel, pp.537-547, 2022
3. **Nanobiotechnology**
Akin A. (Editor)
Türkiye Klinikleri Yayınevi, İstanbul, 2021
4. **We Will Develop Artificial Intelligence in Health with Physicians**
Akin A.
in: Digital Transformation in Cardiology: Today and Future, Ali Serdar Fak, Editor, Türkiye Klinikleri Yayınevi, Ankara, pp.26-31, 2020
5. **Sağlıkta Yapay Zekanın Geleceği**
Bayram M. S. B., Akin A.

in: Sağlık Bilimlerinde Yapay Zeka, melih bulut,nevit dilmen,gökhan bora esmer,murat gezer,çiğdem selçukcan erol,leyla türker şener, Editor, Çağlayan Kitabevi, İstanbul, pp.280-292, 2019

6. **Sağlıkta Yapay Zekanın Geleceği**

BAYRAM M. S. B., AKIN A.

in: Sağlık Bilimlerinde Yapay Zeka, Melih Bulut, Editor, Çağlayan Kitabevi, pp.281-292, 2019

7. **Biooptical Signals**

Akın A.

in: Handbook of Biomedical Engineering, Metin Akay, Editor, John Wiley & Sons, West Sussex, UK , Pennsylvania, pp.1-12, 2004

Papers Presented at Peer-Reviewed Scientific Conferences

1. **Loss of small-worldness in psychiatric patients**

Akın A.

1. Nörogörüntüleme Kongresi, Ankara, Turkey, 7 - 09 September 2023, pp.1, (Summary Text)

2. **Assessment of Neurovascular Reactivity during Physiological Tasks with fNIRS**

Yorgancıgil E., Akın A., Erdoğan S. B., Yukselen G.

20. Ulusal Sinirbilim Kongresi, İstanbul, Turkey, 19 - 23 October 2022, pp.150, (Summary Text)

3. **Sağlıklı bireylerde duygusal yüz ifadelerinin yanıt inhibisyonu üzerindeki etkileri: pilot çalışma.**

Akın A., Sütçübaşı B.

21. Ulusal Psikoloji Kongresi Antik Psişeden Bilişsel Sinirbilime, İstanbul, Turkey, 13 - 16 October 2022, pp.1, (Summary Text)

4. **Sağlıklı Bireylerde Duygusal Yüz İfadelerinin Yanıt İnhibisyonu Üzerindeki Etkileri: Pilot Çalışma**

Urhan N., Altıntaş R., Üstün İ., Sağlar D., Çelebi N. E., SÜTÇÜBAŞI B., AKIN A.

21. Ulusal Psikoloji Kongresi Antik Psişeden Bilişsel Sinirbilime, İstanbul, Turkey, 13 - 16 October 2022, (Summary Text)

5. **An fNIRS-based BCI System for Identification of Impulsivity in Adolescents**

Yukselen G., Erdoğan S. B., Derman O., Akın A.

3rd International Webinar on Cognitive and Behavioral Neurosciences, 15 - 16 June 2022, pp.37, (Summary Text)

6. **Validity of fNIRS method in Assessing Cerebrovascular Reactivity in Prefrontal and Occipital Cortex of the Brain**

Yorgancıgil E., Erdoğan S. B., Yukselen G., Akın A.

3rd International Webinar on Cognitive and Behavioral Neurosciences, 15 - 16 June 2022, pp.35, (Summary Text)

7. **An fNIRS-based BCI System for Identification of Impulsivity in Adolescents**

YÜKSELEN G., ERDOĞAN S. B., DERMAN O., AKIN A.

3rd Edition of International Webinar on Cognitive and Behavioral Neurosciences, 15 - 16 June 2022, pp.37, (Summary Text)

8. **Machine Learning Applications in Healthcare**

Bayram M. S. B., Akın A.

24th Biomedical Science and Technology Symposium (BIOMED2019), İzmir, Turkey, 17 - 20 October 2019, pp.1, (Summary Text)

9. **Eğitimde Disiplinler Arası Uygulamalar: Sağlıkta İnovasyon Metodolojisi "Biyotasarım"**

Argunşah Bayram H., Bayram M. S. B., Şahiner A. M., Altıntaş L., Akın A.

Ulusal Tıp Eğitimi Sempozyumu 2019, Eskişehir, Turkey, 10 - 12 April 2019, vol.1, no.981335, pp.1-2, (Summary Text)

10. **Assessing Alterations in Functional Activation and Connectivity Metrics in Schizophrenia with fNIRS**

ERDOĞAN S. B., AKIN A.

The fNIRS2018 conference, Tokyo, Japan, 5 - 08 October 2018, (Summary Text)

11. **Subband Analysis of fNIRS Signals**

ŞAUL C. J., ERDOĞAN S. B., AKIN A.

The fNIRS2018 conference, Tokyo, Japan, 5 - 08 October 2018, (Summary Text)

12. **VEGA-Vision: Wireless fNIRS with Spatially Resolved Short Separation Approach for Improved SNR**
Yoner S. I., Ertas G., Akin A.
fNIRS2018, Tokyo, Japan, 5 - 08 October 2018, pp.78, (Summary Text)
13. **Design of a digital current source with temperature feedback for fNIRS devices**
YONER S. I., Ertas G., AKIN A.
21st National Biomedical Engineering Meeting, BIYOMUT 2017, İstanbul, Turkey, 24 - 26 November 2017, (Full Text)
14. **Bruksizme eşlik eden miyofasyal ağrılı bireylerde splint tedavisinin massater kasındaki hemodinamik değişiklikler üzerine etkilerinin İYKAS ile incelenmesi**
İspirgil E., ERDOĞAN S. B., ŞAKAR O., AKIN A.
Biyomut 2017, Turkey, 24 - 26 November 2017, (Summary Text)
15. **Monitoring of Diffuse Reflectance Spectra of Erythrocyte Suspensions during Storage**
Can O. M., Ulgen A. Y., Akin A.
21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017, (Full Text)
16. **Use of the Color Spaces in Determining the Level of Hemolysis in Blood under Storage**
Can O. M., Ulgen Y., Akin A.
6th European Conference of the International-Federation-for-Medical-and-Biological-Engineering (MBEC), Dubrovnik, Croatia, 7 - 11 September 2014, vol.45, pp.290-293, (Full Text)
17. **Frontal Brain Activation During A Go/NoGo Response Inhibition Task: An fNIRS Study**
Sansal F., Gokdag Y. E., Sahin D., Keskin Y., Yilmaz O., Akin A.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.2047-2049, (Full Text)
18. **DETECTING LATERIZATION OF HAEMODYNAMIC RESPONSE DURING EXECUTIVE MOTOR TASK AND MOTOR IMAGERY WITH FNIRS**
Gokdag Y. E., Sansal F., Dumlu S. N., Erdogan S. B., Yilmaz O., Akin A.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.2118-2121, (Full Text)
19. **Detecting the Functionality of Executive Motor Task and Motor Imagery Through Electroencephalography (EEG)**
Dumlu S. N., Sahin D., Vardar B., Akin A., DURU A. D.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.2126-2129, (Full Text)
20. **Translating fMRI to fNIRS**
Tumer A., Erdogan S. B., Akin A.
6th International IEEE EMBS Conference on Neural Engineering (NER), California, United States Of America, 6 - 08 November 2013, pp.493-496, (Full Text)
21. **Detection of motion artifacts in fNIRS via the continuous wavelet transform**
Dadgostar M., Setarehdan S., Akin A.
2013 20th Iranian Conference on Biomedical Engineering, ICBME 2013, Tehran, Iran, 18 - 20 December 2013, pp.243-246, (Full Text)
22. **Brain connectivity via traffic engineering approach**
Aslan S., Keskin-Ergen Y., Akin A.
Biomedical Optics, BIOMED 2012, Miami, FL, United States Of America, 28 April - 02 May 2012, (Full Text)
23. **An fMRI based method for characterizing superficial layer contribution to fNIRS signals**
Erdogan S. B., Nevsehirli T. D., Ergen Y. K., Akin A.
Biomedical Optics, BIOMED 2012, Miami, FL, United States Of America, 28 April - 02 May 2012, (Full Text)
24. **Elimination of disruptive effect of extracerebral biological tissues in near infrared spectroscopy**
Yakin kızılaltı spektroskopisinde beyin dışı biyolojik dokulardan gelen bozucu etkilerin giderilmesi
Tok R. U., Ölmez T., Akin A.

- 2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010, (Full Text)
25. **Evaluation of brain hemodynamics with functional near infrared spectroscopy during head-down tilt on young and healthy subjects** Genç ve sağlıklı denekler üzerinde kafa eğme protokolü sırasında beyin hemodinamiklerinin işlevsel yakın kızılaltı spektroskopisi yöntemiyle incelenmesi
Alptekin M., Akin A.
2010 15th National Biomedical Engineering Meeting, BIYOMUT2010, Antalya, Turkey, 21 - 24 April 2010, (Full Text)
26. **Serbest dalgalarda iYKAS ile serebrovasküler reaktivite ölçümü**
Nevşehirli D., Akin A.
2009 14th National Biomedical Engineering Meeting, BIYOMUT 2009, Balçova, İzmir, Turkey, 20 - 22 May 2009, (Full Text)
27. **Intact neurovascular coupling during executive function in migraine without aura: interictal near-infrared spectroscopy study**
Bolay H. B., Schytza H. W., Ciftci K., AKIN A., Ashina M.
14th Congress of the International-Headache-Society, Pennsylvania, United States Of America, 10 - 13 September 2009, vol.29, pp.117, (Summary Text)
28. **A Monte Carlo Simulation for Photon Migration in Non-Homogeneous Medium**
Tok R. Ş., Ölmez T., Akin A.
14th National Biomedical Engineering Meeting, İzmir, Turkey, 20 - 22 May 2009, pp.207-208, (Full Text)
29. **Investigation of the Effect of Playing Video Games on Visual Attention and Brain Hemodynamics with Functional Near Infrared Spectroscopy**
Erdogan S. B., Bilgin C., Turan B., Akin A.
22nd Annual Meeting of the IEEE-Photonics-Society, Belek, Turkey, 4 - 08 October 2009, pp.272-273, (Full Text)
30. **Investigating Brain Hemodynamics of ADHD Patients by Functional Near Infrared Spectroscopy**
Serap S., Tapsin M., Akin A.
Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, Minnesota, United States Of America, 3 - 06 September 2009, pp.3028-3030, (Full Text)
31. **Projection of the Steady State Visual Evoked Potentials on Prefrontal Cortex**
Ozker M., Bayraktaroglu Z., Kasikci I., Erdogan B., Akin A., DEMİRALP T.
14th National Biomedical Engineering Meeting, İzmir, Turkey, 20 - 22 May 2009, pp.470-471, (Full Text)
32. **Hemodynamic Correlates of Mental Arithmetic Task In Migraine**
Unlu E., Bolay H. B., Akin A.
14th National Biomedical Engineering Meeting, İzmir, Turkey, 20 - 22 May 2009, pp.320-321, (Full Text)
33. **Response Inhibition in Schizophrenia-an event-related related fNIRS study**
Serap S., Akin A.
4th International IEEE/EMBS Conference on Neural Engineering, Antalya, Turkey, 29 April - 02 May 2009, pp.231-232, (Full Text)
34. **Hypofrontality in schizophrenics evaluated by near infrared spectroscopy**
Serap S., Herken H., Akin A.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
35. **Evaluation of co-activation of antagonistic muscles using near infrared spectroscopy**
Erdoğan S. B., Yucesoy C. A., Huijing P. A., Akin A.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
36. **The spatial sensitivity profile for various source detector separations in NIR to eliminate skin effect in brain imaging**
Turkoglu A. N., Ece Ercan A., Sayli O., Nevşehirli D., Akin A.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
37. **Functional clusters in the prefrontal cortex during mental arithmetic**
Çiftçi K., Sankur B., Kahya Y. P., Akin A.
16th European Signal Processing Conference, EUSIPCO 2008, Lausanne, Switzerland, 25 - 29 August 2008, (Full Text)

Text)

38. **System identification of prefrontal cortex in the presence of cognitive tasks**
Aydöre S., Kivanç Mihçak M., Akin A.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
39. **The effect of methylphenidate on brain hemodynamics of attentiondeficit/hyperactivity disorder measured by functional near infrared spectroscopy**
Topaloğlu N., Kara E., Karahan E., ERDOĞAN S. B., Serap S., Öner Ö., ÖNCÜ ÇETİNKAYA B., Münir K., Çiftçi K., AKIN A.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
40. **ARX model approach to data acquired from healthy and migraine subjects**
Karahan E., AKIN A., BELEN H. B.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
41. **Complexity and functional clusters of the brain during mental arithmetic**
Ciftci K., Sankur B., Kahya Y., Akin A.
IEEE 16th Signal Processing and Communications Applications Conference, Aydın, Turkey, 20 - 22 April 2008, pp.673-674, (Full Text)
42. **Activation of lateral prefrontal cortex during a complex cognitive task**
Kirimli C. E., Sumer S., Erdogan S. B., Topaloglu N., Akin A.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
43. **Can functional near infrared spectroscopy fNIRS be used for the estimation of the numbers and types of muscle fibres in sheep**
ŞİRİN E., SAYLI Ö., ULUTAŞ Z., ŞEN U., ERDOĞAN S. B., AKSOY Y., AKIN A., KURAN M.
Arch. Tierz., Dummerstorf, 01 January 2008, (Summary Text)
44. **Investigating neurovascular coupling in rat brain with optical imaging and physiological modeling**
Mesquita R., Yucel M., Akin A., Devor A., Huppert T., Boas D.
Biomedical Optics, BIOMED 2008, St. Petersburg, FL, United States Of America, 16 - 19 March 2008, (Full Text)
45. **Multilevel statistical inference from functional near infrared spectroscopy signals**
Ciftci K., Sankur B., Kahya Y. P., Akin A.
15th European Signal Processing Conference, EUSIPCO 2007, Poznan, Poland, 3 - 07 September 2007, pp.1575-1579, (Full Text)
46. **High frequency oscillations in brain hemodynamic response**
AKIN A., Bolay H. B.
Conference on Diffuse Optical Imaging of Tissue, Munich, Germany, 19 - 21 June 2007, vol.6629, (Full Text)
47. **Depth resolution by continuous-wave imaging**
Aksel E. B., Akin A.
Conference on Diffuse Optical Imaging of Tissue, Munich, Germany, 19 - 21 June 2007, vol.6629, (Full Text)
48. **Bayesian group activation analysis for functional neuroimaging**
Ciftci K., Sankur B., Kahya Y. P., Akin A.
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.873-874, (Full Text)
49. **Extraction of cognitive activity related waveforms from functional near infrared signals**
Akgül C. B., Sankur B., Akin A.
14th European Signal Processing Conference, EUSIPCO 2006, Florence, Italy, 4 - 08 September 2006, (Full Text)
50. **Measurement of quadriceps endurance by fNIRS - art. no. 608102**
Erdem D., Sayli O., Karahan M., Akm A.
Conference on Multimodal Biomedical Imaging, San-Jose, Costa Rica, 21 January 2003 - 24 January 2006, vol.6081, pp.8102, (Full Text)
51. **Effect of tissue heterogeneity on detectability of optical signals**
Fidan M., Akin A.
Conference on Optical Interactions with Tissue and Cells XVII, San-Jose, Costa Rica, 23 - 25 January 2006, vol.6084, (Full Text)
52. **Two-distance partial pathlength method for accurate measurement of muscle oxidative metabolism**

using fNIRS

Sayli O., Akin A.

Conference on Optical Interactions with Tissue and Cells XVII, San-Jose, Costa Rica, 23 - 25 January 2006, vol.6084, (Full Text)

53. **Measurement of oxidative metabolism of the working human muscles by near infrared spectroscopy - art. no. 608103**

Yuecetas A., Sayli O., Karahan M., Akm A.

Conference on Multimodal Biomedical Imaging, San-Jose, Costa Rica, 21 January 2003 - 24 January 2006, vol.6081, pp.8103, (Full Text)

54. **Processing near infrared Spectroscopy signals using canonical correlation analysis**

Ciftci K., Sankur B., Akin A., Kahya Y. P.

IEEE 14th Signal Processing and Communications Applications, Antalya, Turkey, 16 - 19 April 2006, pp.778-779, (Full Text)

55. **The effect of Anisotropy constant on Distribution of weight of diffuse-reflected photon packets on a hypothetical hemisphere-shaped detector**

Aksel E. B., Akin A.

Conference on Optical Interactions with Tissue and Cells XVII, San-Jose, Costa Rica, 23 - 25 January 2006, vol.6084, (Full Text)

56. **Inspection of separability of normal and migraine fNIRS data using LDA and PCA**

Sen I., Akin A.

IEEE 14th Signal Processing and Communications Applications, Antalya, Turkey, 16 - 19 April 2006, pp.643-644, (Full Text)

57. **Complexity analysis of functional near-infrared spectroscopy signals**

Çiftçi K., Kahya Y. P., Sankur B., Akin A.

13th European Signal Processing Conference, EUSIPCO 2005, Antalya, Turkey, 4 - 08 September 2005, pp.1854-1857, (Full Text)

58. **Determining hemodynamic response of the brain in the prefrontal region by near-infrared spectroscopy Prefrontal beyin bölgesindeki hemodinamik tepkinin yakm-kizilötesi spektroskopî yardimiyla belirlenmesi**

Çiftçi K., Kahya Y. P., Akin A., Sankur B.

IEEE 13th Signal Processing and Communications Applications Conference, SIU 2005, Kayseri, Turkey, 16 - 18 May 2005, vol.2005, pp.514-517, (Full Text)

59. **Design of an MR compatible fNIRS instrument**

Emir U., Ademoglu A., Ozturk C., Aydin K., Demiralp T., Kurt A., Dincer A., Akin A.

Conference on Photonic Therapeutics and Diagnostics, San-Jose, Costa Rica, 22 - 25 January 2005, vol.5686, pp.473-476, (Full Text)

60. **Distribution of exit angles of diffuse-reflected photons**

Aksel E., Akin A.

Conference on Optical Tomography and Spectroscopy of Tissue VI, California, United States Of America, 23 - 26 January 2005, vol.5693, pp.102-110, (Full Text)

61. **Cerebral hemodynamic reactivity measured by near-infrared spectroscopy in migraineurs**

AKIN A., Emir U. E., Bolay H. B.

27th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, Shanghai, China, 31 August - 03 September 2005, pp.1484-1487, (Full Text)

62. **Frequency components in breath holding experiments**

Akin A., Emir U., Kalsm S., Sayli O.

Conference on Optical Tomography and Spectroscopy of Tissue VI, California, United States Of America, 23 - 26 January 2005, vol.5693, pp.172-178, (Full Text)

63. **fNIRS Measurements in migraine**

AKIN A., Emir U., Bilensoy D., Erdogan G., Candansyar S., Bolay H. B.

Conference on Optical Tomography and Spectroscopy of Tissue VI, California, United States Of America, 23 - 26

January 2005, vol.5693, pp.417-423, (Full Text)

64. **Behavioral reaction times are correlated with frequency shift in optical imaging signals**
Akin A., Bunce S.
Conference on Photonic Therapeutics and Diagnostics, San-Jose, Costa Rica, 22 - 25 January 2005, vol.5686, pp.573-580, (Full Text)
65. **Coregistration of fNIRS data on to the realistic head model**
Emir U. E., Duru A. D., Ademoglu A., Akin A.
27th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, Shanghai, China, 31 August - 03 September 2005, pp.3184-3187, (Full Text)
66. **Evidence of cognitive activity in functional optical signals**
Akgul C., Sankur B., Akin A.
IEEE 12th Signal Processing and Communications Applications Conference, Kusadasi, Turkey, 28 - 30 April 2004, pp.95-98, (Full Text)
67. **Extraction of cognitive activity related waveforms from functional optical signals**
Akgul C., Sankur B., Akin A.
IEEE 12th Signal Processing and Communications Applications Conference, Kusadasi, Turkey, 28 - 30 April 2004, pp.160-163, (Full Text)
68. **Evidence of cognitive activity in functional near infrared spectroscopy signal**
Akgil C. B., Sankur B., AKIN A.
Biomedical Topical Meeting, BIOMED 2004, Florida, United States Of America, 14 - 17 April 2004, (Full Text)
69. **Breast tumor imaging using NIR led-based handheld continuous-wave imager**
Sao V., Pourrezaei K., Akin A., Ayaz H.
IEEE 29th Annual Northeast Bioengineering Conference, New-Jersey, United States Of America, 22 - 23 March 2003, pp.55-56, (Full Text)
70. **Wavelet Denoising vs ICA denoising for functional optical imaging**
Emir U., Akgul C., Akin A., Ertuzun A., Sankur B., Harmanci K.
1st International IEEE/EMBS Conference on Neural Engineering, CAPRI, Italy, 20 - 22 March 2003, pp.384-387, (Full Text)
71. **Quantifying brain hemodynamic response measured by functional optical imaging**
Akin A., Bunce S.
1st International IEEE/EMBS Conference on Neural Engineering, CAPRI, Italy, 20 - 22 March 2003, pp.503-506, (Full Text)
72. **Classification of heart rate variability (HRV) parameters by receiver operating characteristics (ROC)**
Rao A., Ryoo H., Akin A., Sun H.
IEEE 28th Annual Northeast Bioengineering Conference, Pennsylvania, United States Of America, 20 - 21 April 2002, pp.167-168, (Full Text)
73. **Non-Invasive Characterization of Human Neck-Tumors with Near-Infrared Light Spectroscopy**
Sunar U., Nioka S., Intes X., Ripoll J., Loevner L., Rosenthal D., Kilger A., Tao T., Zhang J., AKIN A., et al.
Biomedical Topical Meeting, BIOMED 2002, Florida, United States Of America, 7 - 10 April 2002, pp.542-545, (Full Text)
74. **Design parameters for wearable optical imagers**
Akin A., Kim S., Pourrezaei K., Chance B., Nioka S.
Conference on Optical Tomography and Spectroscopy of Tissue IV, San-Jose, Costa Rica, 21 - 23 January 2001, vol.4250, pp.251-257, (Full Text)
75. **Non-invasive gastric motility monitor: fast Electrogastragram (fEGG)**
Akin A., Sun H.
23rd Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, İstanbul, Turkey, 25 - 28 October 2001, vol.23, pp.3341-3344, (Full Text)
76. **Characterization of two-layer diffuse media by reflection of gigahertz photon density waves**
Sunar U., Ripoll J., Akin A., Pourrezaei K.
23rd Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, İstanbul, Turkey,

25 - 28 October 2001, vol.23, pp.3064-3065, (Full Text)

77. Variability of the antropyloric spike activity

Akin A., Sun H. H.

Proceedings of the 1999 IEEE Engineering in Medicine and Biology 21st Annual Conference and the 1999 Fall Meeting of the Biomedical Engineering Society (1st Joint BMES / EMBS), Atlanta, GA, USA, 13 - 16 October 1999, vol.2, pp.948, (Full Text)

78. Detection of sleep spindles by discrete wavelet transform

Akin A., Akgul T.

IEEE 24th Annual Northeast Bioengineering Conference, Pennsylvania, United States Of America, 9 - 10 April 1998, pp.15-17, (Full Text)

79. Comparison of QRS peak detection algorithms in extracting HRV signal

Wan H., Cammarota J., Akin A., Sun H.

International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society, Illinois, United States Of America, 30 October - 02 November 1997, vol.19, pp.302-305, (Full Text)

80. Comparison of methods to analyze the antropyloric electrical activity

Akin A., Akgul T., Sun H., Chey W., Lee K.

International Conference of the IEEE Engineering-in-Medicine-and-Biology-Society, Illinois, United States Of America, 30 October - 02 November 1997, vol.19, pp.1602-1605, (Full Text)

81. 1/fa component of heart rate variability

Sisli G., Akin A., Onaral B., Tazebay M. V.

Proceedings of the 1996 18th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Part 4 (of 5), Amsterdam, Netherlands, 31 October - 03 November 1996, vol.4, pp.1652-1653, (Full Text)

82. Multi-scale analysis of HRV data

Sisli G., Akin A., Onaral B.

IEEE-SP International Symposium on Time-Frequency and Time-Scale Analysis, Paris, France, 18 - 21 June 1996, pp.101-104, (Full Text)

Other Publications

1. Investigating the Relationship Between Hemodynamic and Behavioral Responses during a Stroop Task using fNIRS

Şansal F., Dumlu S. N., Erdoğan S. B., Noyan H., Üçok A., Akin A.

Other, 2014

2. Detecting Hemodynamic Response during Executive Motor Task and Motor Imagery using fNIRS

Dumlu S. N., Şansal F., Gökdağ Y. E., Erdoğan S. B., Yılmaz Ö., Keskin Ergen H. Y., Akin A.

Other, 2014

AVESİS Data

1. fNIRS Data on CyberQ Rehab

Erdoğan S. B., Yukselen G., Akin A.

Data collected from a patient before and after rehabilitation session with the CyberQ system.

2. fNIRS Data from Controls

Akin A.

This data has been collected from controls, migraine, OCD and schizophrenia patients.

Academic and Administrative Experience

2019 - Continues	Performance Evaluation Commission Member	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2017 - Continues	Member of University Quality Commission	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2017 - Continues	Kuluçka Merkezi Danışma Kurulu	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2017 - Continues	Member of University Strategic Planning Commission	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2015 - Continues	University Executive Board Member	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2015 - Continues	Member of the Senate	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2015 - Continues	Dean	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2018 - 2025	Applied Research Center Board Member	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2020 - 2024	Ethics Committee Member	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2016 - 2024	Director of The Institution	Acibadem Mehmet Ali Aydinlar University, Graduate School Of Natural And Applied Sciences, Biomedical Engineering With Thesis
2019 - 2021	Head of Department	Acibadem Mehmet Ali Aydinlar University, Graduate School Of Natural And Applied Sciences, Biomedical Engineering With Thesis
2015 - 2021	Head of Department	Acibadem Mehmet Ali Aydinlar University, Faculty Of Engineering and Natural Sciences, Biomedical Engineering
2013 - 2015	Head of Department	Istanbul Bilgi University, Faculty Of Engineering And Natural Sciences, Department Of Genetics And Bioengineering
2013 - 2015	Dean	Istanbul Bilgi University, Faculty Of Engineering And Natural Sciences
2010 - 2013	Head of Department	Bogazici University, Institute Of Science, Medical Informatics and Systems
2006 - 2008	Head of Department	Bogazici University, Rectorate, Department Of Physical Education And Sports

Courses

Postgraduate

Biomedical Signal Processing, Postgraduate, 2024 - 2025

Advanced Radiological Imaging, Postgraduate, 2022 - 2023, 2021 - 2022

Radiological Techniques, Postgraduate, 2022 - 2023, 2021 - 2022

Undergraduate

Biodesign, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2019 - 2020, 2018 - 2019
Medical Devices, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2019 - 2020, 2018 - 2019
Medical Technologies, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
Clinical Innovation and Biodesign, Undergraduate, 2024 - 2025
Employability Skills, Undergraduate, 2023 - 2024
Biomedical Test Methodologies, Undergraduate, 2023 - 2024
Systems Physiology, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2018 - 2019, 2017 - 2018
MEDICAL ELECTRONICS, Undergraduate, 2021 - 2022, 2017 - 2018, 2016 - 2017
Clinical and Biomedical Engineering, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021
Introduction to Medical Engineering, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016

Supervised Theses

Akın A., Task Induced Brain Activation Analysis Based On fNIRS Data During Stroop Task, Postgraduate, B.TATLİEŞME(Student), 2020
Akın A., Depth assesment of an absorber in a semi-infinite medium by continuous wave diffuse reflectance, Doctorate, E.BURTEÇİN(Student), 2018
Akın A., WIRELESS fNIRS WITH SPATIALLY RESOLVED SHORT SEPARATION APPROACH FOR IMPROVED SNR, Postgraduate, S.ILGAZ(Student), 2018
Akın A., SOD1 A4V mutation increases Nav1.3 channel excitability on xenopus laevis oocyte, Doctorate, E.KUBAT(Student), 2016
Akın A., Functional connectivity during rest and task: A study based on graph theoretical metrics, Postgraduate, H.NEŞE(Student), 2015
Akın A., Nonlinear state and parameter estimation of the hemodynamic model using fMRI bold signal, Doctorate, S.ASLAN(Student), 2015
Akın A., Predictability of cognitive performance based on functional neuroimaging via FNIRS, Postgraduate, F.ŞANSAL(Student), 2014
Akın A., Optimization of FNIRS probe geometry to eliminate non-brain tissue contamination, Postgraduate, A.TÜMER(Student), 2014
Akın A., Similarity and consistency analysis of functional connectivity maps, Postgraduate, M.UFUK(Student), 2013
Akın A., Sensitivity and specificity of the multi-channel CW-fNIRS for medical purposes, Postgraduate, A.ÖZDEMİR(Student), 2013
Akın A., An fmri based method for characterizing superficial layer contamination in fnirs signals, Doctorate, S.BURCU(Student), 2013
Akın A., An information theoretical approach to functional connectivity in brain, Postgraduate, E.BUDUR(Student), 2011
Akın A., Yakın kızılaltı spektroskopisinde beyin dışı biyolojik dokulardan gelen bozucu etkilerin giderilmesi, Postgraduate, R.UMUT(Student), 2010
Akın A., Effect of diabetes mellitus on gastric motility: An EGG study, Postgraduate, A.DUYGU(Student), 2010
Akın A., A mathematical model for cerebrovascular dynamics, Postgraduate, M.ALPT EKİN(Student), 2010
Akın A., A neurovascular coupling model based on nitric oxide and carbon dioxide and its validation with two-photon microscopy imaging, Doctorate, M.YÜCEL(Student), 2010
Akın A., Accuracy improvements of NIRS and investigation of muscle oxidative metabolism, Doctorate, Ö.ŞAYLI(Student), 2009
Akın A., Optical probe design for continuous wave near-infrared spectroscopy, Postgraduate, K.EVCİL(Student), 2009
Akın A., Investigation of neurovascular coupling by synchronous EEG and FNIRS measurements during steady-state visual stimuli, Postgraduate, M.ÖZKER(Student), 2009
Akın A., Hemodynamic correlates of mental arithmetic task in migraine, Postgraduate, E.ÜNLÜ(Student), 2009
Akın A., Multimodal investigation of fMRI and fNIRS derived Breath Hold BOLD signals with an expanded balloon model, Doctorate, U.EMRAH(Student), 2008
Akın A., Cerebrovascular reactivity of free divers measured with fnirs, Postgraduate, T.DENİZ(Student), 2008

Akın A., Evaluation of the effect of aging on brain assymetry with functional near infrared spectroscopy, Postgraduate, E.KUBAT(Student), 2008

Akın A., Working memory performance assessment while monitoring the prefrontal cortex hemodynamics by means of functional near infrared spectroscopy, Postgraduate, C.EKREM(Student), 2008

Akın A., Statistical analysis of cognitive signals measured by fNIRS, Doctorate, R.KORAY(Student), 2008

Akın A., Fiber optic based continuous wave functional near infrared spectroscopy system, Postgraduate, B.ÖZKERİM(Student), 2008

Akın A., Subband filtering of fnirs data from schizophrenic subjects, Postgraduate, E.KARA(Student), 2008

Akın A., Evaluation of local oxygen consumption in human flexor digitorum superficialis muscle by near infrared spectroscopy, Postgraduate, S.BURCU(Student), 2007

Akın A., The effect of methylphenidate on brain hemodynamics of attention-deficit/hyperactivity disorder measured by functional near infrared spectroscopy, Postgraduate, N.TOPALOĞLU(Student), 2007

AKIN A., Zeytinden yağ elde etme sistemlerinin zeytinyağının kalitesi ile acılığı üzerine etkileri, Postgraduate, O.KÖSEOĞLU(Student), 2006

AKIN A., Susam yağının antioksidan özellikteki başlıca bileşenlerinin nitelik ve nicelikleri üzerine araştırmalar, Postgraduate, G.BOZKURT(Student), 2006

AKIN A., İzmir yöresinde yetiştirilen ceviz çeşitleri ile yağlarının bileşimleri üzerinde araştırmalar, Postgraduate, G.ÖLÇER(Student), 2004

Akın A., Functional near infrared spectroscopy as a tool for neuroimaging studies, Postgraduate, M.ÇAKIROĞLU(Student), 2003

Patent

Akın A., Dirilen E. G., Kurt K., Narcotic Drug Box, Trademark, CHAPTER A Human Needs, The Invention Registration Number: 2020 09615 , Standard Registration, 2021

Akın A., Dirilen E. G., Kurt K., Akın Ö., UV Disinfection Device (AUVD-201), Industrial Design, CHAPTER D Textile; Paper, The Invention Registration Number: 2020 06206 , Standard Registration, 2020

Akın A., Time-frequency method for detecting spike activity of the stomach, Patent, CHAPTER A Human Needs, The Invention Registration Number: WO2001070107A1 , 2001

Activities in Scientific Journals

JOURNAL OF UROLOGICAL SURGERY, Committee Member, 2024 - Continues

Memberships and Roles in Scientific Organizations

TESİD, Member of Advisory Board, 2020 - Continues, Turkey

Peer Reviews in Scientific Publications

FRONTIERS IN NEUROSCIENCE, Journal Indexed in SCI-E, June 2023

SCIENTIFIC REPORTS, Journal Indexed in SCI-E, April 2023

Roles in Event Organizations

Akın A., Kognitif Nörobilim Kampı, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Temmuz 2024

Akın A., Tahir Turanlı E., Onat F., Erdoğan S. B., Sütçübaşı B., Workshop on AI in Neurosciences, Workshop Organization,

İstanbul, Turkey, January 2023

Akın A., Yukselen G., Lise Kış Bilim Kampı, Science / Art Camp or Summer School Organization, Turkey, Şubat 2022

Yukselen G., Akın A., Bekçi B., Erdoğan S. B., Mühendislik Yaklaşımı ile Nörobilim Stajı 2021-2, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Ocak 2022

Yukselen G., Akın A., Yalçın B., Lise Yaz Bilim Kampı, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Temmuz 2021

Yukselen G., Akın A., Bayram M. S. B., Mühendislik Yaklaşımı ile Nörobilim Stajı 2021-1, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Nisan 2021

Yukselen G., Akın A., Yalçın B., Lise Kış Bilim Kampı, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Şubat 2021

Akın A., Örsçelik Balkan Yapay Zeka Yarışması, Social Activities, İstanbul, Turkey, Haziran 2020

Akın A., Summer Science Camp for Highschool Students, Science / Art Camp or Summer School Organization, İstanbul, Turkey, Temmuz 2019

Scientific Research / Working Group Memberships

Adalab, Acibadem Mehmet Ali Aydınlar University, Turkey, <https://avesis.acibadem.edu.tr/arastirma-grubu/adalab>, 2019

- Continues

Metrics

Publication: 134

Citation (WoS): 665

Citation (Scopus): 810

H-Index (WoS): 17

H-Index (Scopus): 19

Congress and Symposium Activities

Sağlıkta Yapay Zeka ve Teknoloji Zirvesi, Invited Speaker, İstanbul, Turkey, 2025

1. Neuroscience Symposium, Panelists, Ankara, Turkey, 2024

Workshop on Artificial Intelligence, Blockchain, Metaverse and Data Sciences in Breast Diseases, Panelists, İstanbul, Turkey, 2023

1st Neuroimaging Congress, Panelists, Ankara, Turkey, 2023

Neurogenetics and Neurometabolic Diseases Symposium, Invited Speaker, İstanbul, Turkey, 2023

18th National Neurology Days, Invited Speaker, Bursa, Turkey, 2023

20. Ulusal Sinirbilim Kongresi, Session Moderator, İstanbul, Turkey, 2022

annual external Innovation Think Tank exhibition (eITT) 2022, Invited Speaker, Erlangen, Germany, 2022

Invited Talks

Workshop on Ethics of AI in healthcare/ Role of AI in Healthcare, Workshop, Acibadem Mehmet Ali Aydınlar University, Turkey, December 2024

Should I study Medicine or Engineering?, Seminar, Kabataş Erkek Lisesi Meslek Günleri, Turkey, December 2024

Clinical Innovation in ACU, Workshop, Siemens Healthineers, Turkey, September 2024

AI in Neuropsychiatry, Workshop, Networking Event: Empowering Healthcare with Automated Analysis, Turkey, June 2024

AI Applications in Psychiatry, Seminar, Association of Psychiatry Nurses, Turkey, May 2024

AI Applications in Urology, Conference, Association of Minimally Invasive Urology, Turkey, March 2024
Tıp mı Mühendislik mi Okuyayım?, Seminar, Kabataş Erkek Lisesi, Turkey, December 2023
What is AI, Machine Learning and Deep Learning?, Conference, 14th National Hepatology Congress, Turkey, May 2023
AI in Medicine, Conference, 58th National Neurology Congress, Turkey, November 2022
Innovation at ACU, Seminar, Drexel University, United States Of America, October 2022
fNIRS-derived neurocognitive ratio as a biomarker for neuropsychiatric diseases, Workshop, Imperial College London, England, July 2022
Biodesign as a method of Clinical Innovation, Seminar, Akdeniz Üniversitesi, Turkey, March 2022
Biyotasarım, Conference, SciGether, Turkey, February 2022
fNIRS in psychiatry, Conference, Biyomühendislik Kulübü Yıldız Teknik Üniversitesi, Turkey, February 2022
Nöropsikiyatride Yapay Zeka, Conference, Yıldız Teknik Üniversitesi, Turkey, December 2021
Nöropsikiyatride Yapay Zeka, Conference, Ankara Üniversitesi, Turkey, December 2021
Future of Biomedical Engineering, Seminar, Işık Üniversitesi, Turkey, February 2021
Yeni Nesil Mühendis, Conference, FMV Işık Erenköy Lisesi, Turkey, February 2021
fNIRS in psychiatry, Seminar, Hacettepe Üniversitesi, Turkey, March 2020
Biodesign as a method of Clinical Innovation, Seminar, Biruni Üniversitesi, Turkey, May 2019
Klinik inovasyon yöntemi olarak biyotasarım , Seminar, Bahçeşehir Üniversitesi, Turkey, April 2019
İTÜ Kariyer Günleri: Yeni Dünya Mühendisi, Conference, İstanbul Teknik Üniversitesi, Turkey, February 2019

Research Areas

Knowledge Engineering, Human Computer Interaction, Neural Networks, Biomedical Engineering, bioPhotonic, Biomedical Optics, Biomedical Image Processing, Biomedical Image Processing, Biosignal Processing, Neurobiology, Neurophysiology, Neurosystems, Numerical Neuroscience