

AYKUT EKEN, PhD

ADDRESS

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Personal web: <https://sites.google.com/view/aykuteken>
GitHub: <https://github.com/aykuteken>
Research Group: <https://sites.google.com/view/obrim>

RESEARCH INTERESTS

- Functional Neuroimaging using fNIRS, EEG and Diffuse Correlation Spectroscopy (DCS)
- Neural Decoding
- Neuromarker Detection using Machine Learning/Deep Learning approaches
- Wearable Bioelectronics
- Neural Signal Processing

EDUCATION

Ph.D. Medical Informatics, Middle East Technical University, Ankara, TR

September 2009 - October 2016

Research Topics : Neuroscience, Neuroimaging, Neural Signal Processing, Machine Learning Applications in Neuroscience

Member of Cognitive Neuroscience Research Group

Thesis Title : Investigating Pain Perception in Somatosensory Cortex for Healthy and Fibromyalgia Patient Populations by Using fNIRS

Thesis Advisor : Assist. Prof. Dr. Didem Gokcay, Co-Advisor: Assoc. Prof. Dr. Murat Kara

MSc. Biomedical Engineering, Baskent University, Ankara, TR

February 2007 - February 2009

Research Topics : Medical Imaging, Biomedical Image Processing

Thesis Title : Analyzing Echocardiographic Left Ventricle Images By Using Strain Rate Imaging Technique

Advisor : Dr. Kemal Serbetci, Co-Advisor : Prof. Dr. Bulent Yilmaz

BSc. Biomedical Engineering, Baskent University, Ankara, TR

September 2002 - July 2006

Research Topics : Biomedical Instrumentation, Medical Imaging, Biomedical Image and Signal Processing

Graduation Project : Peristaltic Heart Pump Design and Construction

Advisor : Prof. Dr. Mustafa Kocakulak

EXPERIENCE

Assistant Professor

TOBB Economy and Technology University - TOBB ETU

Biomedical Engineering Department

Given Courses

BMM 207 Electronic Circuits in Biomedical Engineering

BMM 504 Functional Neuroimaging

BMM 412 Biomedical Signal Processing

	Ankara, TR	January 2022 -
Part Time Instructor	TOBB Economy and Technology University - TOBB ETU Biomedical Engineering Department Given Courses BMM 412 Biomedical Signal Processing BMM 510 Advanced Topics in Medical Imaging BMM 560 Medical Informatics BMM 596 Special Topics Ankara, TR	May 2021 - January 2022
Post Doctoral Researcher	Universidad Pompeu Fabra - Speech Acquisition and Perception Group (PI: Prof. Dr. Nuria Sebastian-Galles) Institut Ciències de Fòniques (ICFO) - Medical Optics Group (PI: Prof. Dr. Turgut Durduran) Barcelona, ES	September 2018 - March 2020
Assistant Professor	Duzce University Faculty of Engineering Biomedical Engineering Department Duzce, TR	December 2017 - September 2018
Research Assistant	Duzce University Faculty of Engineering Biomedical Engineering Department Duzce, TR	January 2016 - November 2017
Research Assistant	Middle East Technical University Informatics Institute Medical Informatics Department Ankara, TR	July 2012- January 2016
Research Assistant	Duzce University Faculty of Engineering Biomedical Engineering Department Ankara, TR	September 2011- July 2012
Researcher	Middle East Technical University Ankara, TR	February 2010- December 2015
<p>Scientific Research Project in Event- Related Potentials in Turkish Language Processing , Advisor : Gulay Cedden (PhD), Co-Advisor : Suha Yagcioglu (MD,PhD)</p> <p>Duties : Installation of laboratory, analyzing of various ERP data by using EEGLAB (MATLAB based software), analyzing solutions with SPSS.</p>		
Sales Engineer	Penta Electronic Medical Systems Co. Ankara, TR	December 2007- March 2008
<p>Duties : Sales operations of Ultrasound, Echocardiography and Stress ECG devices. Operations of hospital projects.</p>		
Medical Lieutenant	Turkish Armed Forces Ankara, TR	January 2007- November 2007
<p>Duties : Preparing of technical specifications and controlling of medical devices bought by Turkish Armed Forces Health Commandership.</p>		
Product Specialist	GST Medical Co. Ankara, TR	November 2006- December 2006

TECHNICAL SKILLS

Computer Skills

Operating Systems : Windows, OS X
Programming skills : Java, MATLAB, Python, R
Special Softwares : Psychtoolbox, Latex, git ()
fMRI/ MRI Toolboxes: AFNI, FSL
EEG/MEG Toolboxes : EEGLAB, Fieldtrip, MNE-Python
fNIRS Toolboxes : NIRS-SPM, NAP (NIRS Analysis Package), HomER
Python Toolboxes : scikit-learn, pandas, numpy, scipy, matplotlib, Tensorflow, Keras

Hardware Skills

fNIRS data acquisition (Hitachi ETG-4000, NIRx systems, Artinis Oxymon), EEG data acquisition (Micromed, Neuroscan, Philips EGI SensorNet), Custom made Diffuse Correlation Spectroscopy system data acquisition, Arduino based Biosignal acquisition using biosensors such as ECG, GSR, PPG, also accelerometer and touch sensors.

LANGUAGE

- Turkish (Native)
- English (TOEFL Score: 83, June 2011, E-YDS : 85.00, July 2020)
- Spanish (A1 + A2 + B1 Spanish Course Completed in Active English)

HONORS AND AWARDS

- 3rd Multidisciplinary Neuroscience Congress, Best Oral Presentation Award, 7-8 May 2022, Ankara University.
- METU Best Thesis Award, 2018
- Baskent University, Biomedical Engineering, Bachelor of Science, two times honour student (2003-2004, 2005-2006)
- Republic of Turkey Ministry of National Education, 2011 Graduate Education Scholarship for foreign countries (Not used to continue PhD education in METU)

Optical and electrophysiological BBrain IMaging (OBRIM) Research Group

- Nur Sena Ozdemir (MSc Student), Determination of Anaesthesia Level Under Surgery By Using Functional Near Infrared Spectroscopy and Artificial Intelligence Techniques
- Bora Mert Sahin (MSc Student), Identification of Neuro-Cognitive Markers of Sarcopenia Disease by Using Functional Near Infrared Spectroscopy and Artificial Intelligence

SEMINAR, PANELS, WORKSHOPS AND CONFERENCE TALKS

- **Aykut Eken**, Clinical Applications of Functional Near Infrared Spectroscopy and Functional Diffuse Correlation Spectroscopy, 1st National Neuroimaging Congress, NOROM, Ankara, Turkey, 8 September 2023 (Invited Panelist)
- **Aykut Eken**, Functional Near Infrared Spectroscopy - Fundamentals and Technical Details, 3rd Technology in Medicine Symposium, Ankara University, 25 March 2023 (Invited Speaker)
- **Aykut Eken**, Functional Near Infrared Spectroscopy - Fundamentals and Technical Details, Hacettepe University, Department of Psychology, 16 November 2022. (Invited Speaker)
- **Aykut Eken**, Current Approaches in fNIRS Data Analysis: Issues to be considered in data analysis, preprocessing steps, issues to be considered in statistical analysis, Mini Symposium in 20th National Neuroscience Congress, 19-23 October 2022, Acibadem University, Istanbul, Turkey. (Invited Panelist)

- **Aykut Eken**, Functional Near Infrared Spectroscopy, Fundamentals, Experimental Approaches, Data Analysis, Advanced Approaches, Current Approaches in Neuroimaging Techniques Workshop for Graduate Students, Bartin University, Department of Psychology, 15-16 October 2022 (Invited Trainer)
- **Aykut Eken**, Electrophysiological and Psychophysical Implementations with Arduino, CogSci-Days 2021 - From Low-level Information to High-level Cognition: Methodologies on Cognitive Mapping, Yeditepe University, 2-3 September 2021 (Invited Trainer)
- **Aykut Eken**, Sinem Burcu Erdogan, Functional Near Infrared Spectroscopy: Fundamentals and Technical Issues; Educational Course. National Neuroscience Congress 2018 (USK2018), 20 May 2018.
- **Aykut Eken**, Functional Near Infrared Spectroscopy, A General View and Applications, Yeditepe University, Istanbul, March 23rd 2018 (Invited Speaker)

PUBLICATIONS

Book Chapters

- **Aykut Eken**, Functional Near Infrared Spectroscopy: Fundamentals and Technical Issues. Biomedical Engineering Fundamentals and Applications (Turkish). Turkish Chambers of Electrical Engineers, ISBN:978-605-01-322-9, February 2019.

Journal Articles (International)

- Explainable fNIRS Based Pain Decoding Under Pharmacological Conditions via Deep Transfer Learning Approach, **Aykut Eken**, Sinem Burcu Erdogan, Gulnaz Yukselen, Murat Yuce (Under review)
- Relationship between overall right pre-frontal cortex activity and learning and retention of a visuo-motor adaptation task: a continuous analysis. Maria Angeles- Ramos, Albert Busquets Faciabén, Blau Ferrer-Uris, **Aykut Eken**, Faruk Beslija, Fen Zhang, Turgut Durduran, Rosa Angulo-Barroso (Under Review)
- Farhad Nassehi, **Aykut Eken**, Nart Bedin Atalay, Hikmet Firat, Osman Erogul, Diagnostic Machine Learning Based Severity Classification of Obstructive Sleep Apnea Patients Using Awake EEG (Under review)
- **Aykut Eken**, Farhad Nassehi, Osman Erogul, Diagnostic Machine Learning Applications on Clinical Populations using Functional Near Infrared Spectroscopy : A Review, Reviews in the Neurosciences, 2024, <https://doi.org/10.1515/revneuro-2023-0117>
- **Aykut Eken**, Damla Sayar-Akaslan, Bora Baskak, Kerim Munir, Diagnostic Classification of Schizophrenia and Bipolar Disorder by Using Dynamic Functional Connectivity: an fNIRS Study. Journal of neuroscience methods, 2022, 109596. <https://doi.org/10.1016/j.jneumeth.2022.109596>
- Gulay Cedden, **Aykut Eken**, Tuna Cakar, Extracting, computing, coordination: what does a triphasic ERP pattern say about language processing?, Language, Cognition and Neuroscience, 2021, DOI: 10.1080/23273798.2021.2006726
- **Aykut Eken**, Assessment of Flourishing Levels of Individuals by Using Resting State fNIRS with Different Functional Connectivity Measures Biomedical Signal Processing and Control, 68, 2021, 102645, <https://doi.org/10.1016/j.bspc.2021.102645>.
- Burcin Colak, **Aykut Eken**, Adnan Kusman, Damla Sayar Akaslan, Selma Cilem Kizilpınar, Isik Batuhan Cakmak, Nese Burcu Bal, Kerim Munir, Ozgur Oner, Bora Baskak, The Relationship of Cortical Activity Induced by Pain Stimulation With Clinical and Cognitive Features of Somatic Symptom Disorder: A Controlled Functional Near Infrared Spectroscopy Study, J Psychosom Res, 140, 110300. doi:<https://doi.org/10.1016/j.jpsychores.2020.110300>
- **Aykut Eken**, Burcin Colak, Burcu Bal, Adnan Kusman, Selma Cilem Kizilpınar, Damla Sayar Akaslan, Bora Baskak. Hyperparameter-tuned Prediction of Somatic Symptom Disorder By Using

fNIRS Based Dynamic Functional Connectivity, *J Neural Eng.* 17 (016012), 2020, doi:10.1088/1741-2552/ab50b2.

– Didem Gokcay, **Aykut Eken**, Serdar Baltaci. Binary Classification Using Neural and Clinical Features: An Application in Fibromyalgia with Likelihood based Decision Level Fusion in *IEEE Journal of Biomedical and Health Informatics.* 23(4), 2019 doi: 10.1109/JBHI.2018.2844300

– **Aykut Eken**, Didem Gokcay, Cemre Yilmaz, Bora Baskak, Aysegul Baltaci, Murat Kara . Association of Fine Motor Loss and Allodynia in Fibromyalgia: An fNIRS Study. *J Mot Behav*, 50(6), 2018, 664-676. doi:10.1080/00222895.2017.1400947

– **Aykut Eken**, Murat Kara, Bora Baskak, Aysegul Baltaci, Didem Gokcay, Differential efficiency of transcutaneous electrical nerve stimulation in dominant versus nondominant hands in fibromyalgia : placebo-controlled functional near-infrared spectroscopy study, *Neurophoton.* 5(1), 011005 (2018), doi: 10.1117/1.NPh.5.1.011005.

Journal Articles (National)

– **Aykut Eken** Classification of Hand-Grip Movement Using Functional Near-Infrared Spectroscopy and Electromyography, *Dicle University Faculty of Engineering Journal of Engineering*, vol. 14, no 1, pp, 35-46, 2023

– **Aykut Eken**, Soner Civilibal, Sevket Caliskan, Pinar Deniz Tosun, Prediction of smoking status by using multi-physiological measures and machine learning techniques, *Dokuz Eylul University Faculty of Engineering Journal of Science and Engineering*, vol. 23, no. 67, pp. 55-69, Jan. 2021 (Turkish)

– **Aykut Eken**. Interdisiplinari Approaches to Understand "Social Brain", *PIVOLKA*, 7(25), (2017), ISSN: 2587-022X (Turkish).

International Conferences (Poster Presentations)

– Combined functional diffusion correlation spectroscopy and electroencephalography as a new tool in developmental neuroscience. Fen Zhang, Judit Ciarrusta Monzon, Konstantina Zacharaki, **Aykut Eken**, Chiara Santolin, Marco Pagliazzi, Marc Colomer, Nuria Sebastian Galles, Turgut Durduran, fNIRS 2022 Society for Functional Near Infrared Spectroscopy Conference, Boston, Massachusetts, USA, 9-12 October 2022

– Motor learning and memory retention: near-infrared spectroscopy study. Maria Angeles-Ramos, Albert Busquets Faciabén, Blai Ferrer-Uris, **Aykut Eken**, Faruk Beslija, Fen Zhang, Turgut Durduran, Rosa Angulo-Barroso, 22nd Conference of European Society for Cognitive Psychology, Lille, France, 29 August - 01 September 2022

– Non-invasive estimation of intracranial pressure by diffuse optics in traumatic brain injury patients. Jonas B. Fischer, Ameer Ghouse, Susanna Tagliabue, Federica Maruccia, **Aykut Eken**, Amelia Jimnez-Snchez, Joan Medina Mart, Anna Rey-Perez, Marcelino Bguena, Katuska Rosas, Riccardo Zucca, Udo Weigel, Ma Antonia Poca, Gemma Piella, Juan Sahuquillo, Turgut Durduran, fNIRS 2021 Society of Functional Near Infrared Spectroscopy Virtual Conference, 18-22 October 2021.

– Classification of Schizophrenia and Bipolar Disorder Patients by Using fNIRS Based Dynamic Functional Connectivity. **Aykut Eken**, Damla Sayar-Akaslan, Bora Baskak, Kerim Mnir, fNIRS 2021 Society of Functional Near Infrared Spectroscopy Virtual Conference, 18-22 October 2021.

– The P600 Potential Could Index Cognitive Costs in Sentence Processing. Gulay Cedden, **Aykut Eken**, Tuna Cakar, Organization of Human Brain Mapping 2017 Annual Meeting, 25-29 June 2017, Vancouver Convention Centre, Vancouver, Canada.

– Analyzing Hand Preference in Self-Guided Non-Painful Tactile Stimulation for FM patients: an fNIRS Study. **Aykut Eken**, Didem Gokcay, Cemre Topcu, Bora Baskak, Aysegul Baltaci, Murat Kara, Organization of Human Brain Mapping 2017 Annual Meeting, 25-29 June 2017, Vancouver Convention Centre, Vancouver, Canada.

– The effect of typology on ERPs during sentence processing: Evidence from Turkish. Gulay Ced-

den, **Aykut Eken**, Organization of Human Brain Mapping 2016 Annual Meeting, 26-30 June 2016, Palexpo Exhibition and Congress Centre, Geneva, Switzerland.

– Support Vector Classification of Fibromyalgia Syndrome using Hemodynamic Responses: an fNIRS Study. **Aykut Eken**, Didem Gokcay, Bora Baskak, Aysegul Baltaci, Murat Kara, Organization of Human Brain Mapping 2016 Annual Meeting, 26-30 June 2016, Palexpo Exhibition and Congress Centre, Geneva, Switzerland.

– Identification rate of Schizophrenia based on local brain volumes and dichotic listening scores. Nuri Karabay, Didem Gokcay, **Aykut Eken**, Umut Orcun Turgut, Adile Oniz, Koksal Alptekin, Serhat Taslica, Kenneth Hugdahl, Murat Ozgoren, Organization of Human Brain Mapping 2014 Annual Meeting, 8-12 June 2014, Congress Center Hamburg, Hamburg.

– Semantic and syntactic interaction in a morpho-syntactically complex language: Evidence from event-related potentials. Gulay Cedden **Aykut Eken**, KogWis 2012, 11th Biannual Meeting of the German Cognitive Science Society, 30th September 3rd October 2012, University of Bamberg, Germany.

– Environmental Aesthetics and Human Prefrontal Cortex Activation Patterns During a Temporal Assessment Task : An fNIRS Study. Begum Erten, **Aykut Eken**, 8th FENS Forum of Neuroscience, 14-18 July 2012, Barcelona, Spain

International Conferences (Oral Presentations)

– Monitoring Neural Activity in Infants: Integration of Functional Diffuse Correlation Spectroscopy and Electroencephalography, Fen Zhang, Judit Ciarrusta, Ibtissam Ghailan, Judit Gervain, Chiara Santolin, Daniel Senciales, Konstantina Zacharaki, **Aykut Eken**, Marco Pagliazzi, Marc Colomer, Nuria Sebastian Galles, Turgut Durduran, European Conference of Biomedical Optics 25-29 June 2023, Munich, Germany.

– Microvascular Cerebral Blood Patterns Reveal Both The Absolute Values and Waves of Intracranial Pressure, Susanna Tagliabue, Veronika Parfentyeva, Jonas B. Fischer, Federica Maruccia, **Aykut Eken**, Katuska Rosas, Ignacio Delgado Alvarez, Anna Rey-Perez, Gemma Piella, Marcelino Bguena, Paola Cano, Mara Antonia Poca, Carolina Fajardo Vega, Turgut Durduran, European Conference of Biomedical Optics 25-29 June 2023, Munich, Germany.

– Integration of functional diffuse correlation spectroscopy and electroencephalography for measuring task-triggered brain activation in infants. Fen Zhang., Judit Ciarrusta Monzon, Konstantina Zacharaki, **Aykut Eken**, Chiara Santolin, Daniel Senciales, Marco Pagliazzi, Marc Colomer, Nuria Sebastian-Galles, Turgut Durduran, Physics in Biology and Medicine 2022, Menorca, Spain.

– Non-invasive estimation of intracranial pressure by fast diffuse correlation spectroscopy - a multicenter study, Jonas B. Fischer, Susanna Tagliabue, Federica Maruccia, Amelia Jimenez- Sanchez, Eashani Sathalingam, Wesley B. Baker, **Aykut Eken**, Ameer Ghouse, Anna Rey-Perez, Marcelino Baguena, Katuska Rosas, Ofer Sadan, Prem A. Kandiah, Owen B. Samuels, Ramani Balu, Ricardo Zucca, Udo M. Weigel, David R. Busch, Erin M. Buckley, Arjun G. Yodh, Daniel J. Licht, W. Andrew Kofke, Maria A. Poca, Gemma Piella, Juan Sahuquillo, Turgut Durduran. Photonics West 2021, BIOS (Optical Tomography and Spectroscopy of Tissue XIV). 6-11 March 2021. San Francisco, California, USA.

– Investigating the Effect of Tens in Pain Perception: An fNIRS Study in Somatosensory Cortex. **Aykut Eken**, Didem Gokcay, Bora Baskak, Murat Kara. Mind, Brain and Body Symposium. 19-20 March 2015. Humboldt Graduate School. Berlin / Germany.

– A Neurolinguistic exploitation of receptive language processing. Reactions from Azerian's understanding of Turkish : An Event Related Brain Potential (ERP) Study, Gulay Cedden, **Aykut Eken**, 16th International Conference on Turkish Linguistics, September 18-21, 2012 - Ankara, Turkey.

National Conferences (Oral Presentations)

– Determination of the Optimal EEG-based Features to Detect ADHD by Machine Learning Algorithms, Yagmur Can, Irem Bigat, Farhad Nassehi, **Aykut Eken**, Osman Eroglu, Medical Technolo-

- gies Congress (TIP TEKNO), 10-12 November 2023, Famagusta, Northern Cyprus.
- Pain Decoding Under Analgesic Conditions Using Functional Near Infrared Spectroscopy and Transfer Learning, **Aykut Eken**, Sinem Burcu Erdogan, Gulnaz Ykselen, Murat Yuce, Suveyda Sanli, Hasan Eren Yardimci, Ilayda Ozger, 1st National Neuroimaging Congress, 7-9 September 2023, Ankara, Turkey
 - Determination of Electrophysiological Biomarkers to Diagnose Depression from Alpha Band Using Machine Learning Methods, Farhad Nassehi, **Aykut Eken**, Asuhan Par, Sinan Yetkin, Osman Erogul, 1st National Neuroimaging Congress, 7-9 September 2023, Ankara, Turkey
 - Investigation of decision making strategy in obsessive-compulsive disorder patients using fNIRS, Adnan Kusman, **Aykut Eken**, Bora Baskak, 20th National Neuroscience Congress, 19-23 October 2022, Acibadem University, Istanbul, Turkey.
 - Resting-state fNIRS and Machine Learning Based Assessment of Vitality, Bora Mert Sahin, **Aykut Eken**, 20th National Neuroscience Congress, 19-23 October 2022, Acibadem University, Istanbul, Turkey.
 - Does item format (open-ended vs. multiple-choice questions) make difference in ERP?, Gulay Cedden, **Aykut Eken**, Giray Berberoglu, 3rd Multidisciplinary Neuroscience Congress, 7-8 May 2022, Ankara, Turkey.
 - Classification of Somatic Symptom Disorder Using fNIRS Based Dynamic Functional Connectivity, **Aykut Eken**, Burcin Colak, Nese Burcu Bal, Adnan Kusman, Selma Cilem Kizilpinar, Damla Sayar Akaslan, Bora Baskak, 18th National Neuroscience Congress, 6-9 November 2020, Ankara, Turkey.
 - The Utility of fNIRS Signals versus Self-Report for Classification of Fibromyalgia Syndrome, **Aykut Eken**, Didem Gokcay, Bora Baskak, Aysegul Baltaci, Murat Kara, XXV. Signal Processing and Communications Applications Conference, 15-18 May 2017, Antalya, Turkey.
 - Classification of Fibromyalgia Syndrome by Using NIRS Signals, **Aykut Eken**, Didem Gokcay, Cemre Topcu, Aysegul Baltaci, Bora Baskak, Murat Kara, 2015 Medical Technologies National Conference, 15-18 October 2015, Bodrum, Turkey.
 - Does language typology have an impact on Event-related Brain Potentials in sentence processing? Evidence from Turkish, Gulay Cedden, **Aykut Eken**, 2nd International Symposium on Brain and Cognitive Science (ISBCS), 19 April 2015. Middle East Technical University, Ankara, Turkey.
 - Filtering of Functional Near Infrared Spectroscopy Signals By Eigenvalue Based Methods, **Aykut Eken**, XXII. IEEE Signal Processing and Communications Applications Conference, Karadeniz Technical University, Trabzon, 23-25 April 2014.
 - Representation of Pain in Somatosensory Cortex: Preliminary Results from fNIRS, Didem Gokcay, **Aykut Eken**, Igor Mapelli, Oyku Cobanoglu, Gulhan Saracaydin, Alper Kayalar, Ekin Kantar, XXI. IEEE Signal Processing and Communications Applications Conference, Kyrenia, Northern Cyprus, 24-26 April 2013.
 - Is there any difference in Event Related Brain Potentials between monolinguals and bilinguals during native language processing? Gulay Cedden, **Aykut Eken**, 25th National Linguistic Conference, 5-7 May 2011, Cukurova University, Adana, Turkey.
 - Measurement of Event Related Brain Potentials in Turkish Sentence Comprehension, Gulay Cedden, **Aykut Eken**, Suha Yagcioglu, 24th National Linguistics Conference, 17-18 May 2010, Middle East Technical University Ankara / Turkey

National Conferences (Poster Presentations)

- Non-invasive Optical Brain Imaging of Sarcopenia Disease: Preliminary Results, Bora Mert Sahin, Suveyda Sanli, Mahmud Esad Durmus, Ozgur Kara, Bayram Kaymak, Murat Kara, **Aykut Eken**, 1st National Neuroimaging Congress, 7-9 September 2023, Ankara, Turkey
- Multiple Choice vs. Open-Ended Questions: Does it make a difference? An ERP study. Gulay Cedden, **Aykut Eken**, Giray Berberoglu, 18th National Neuroscience Congress, 6-9 November 2020, Ankara, Turkey.
- Anlamsal ve Sozdizimsel bozulmalarda beyin tepkileri : Turckce'de farklilik nerede?, Gulay Cedden, **Aykut Eken**, Tuna Cakar, Anatomy, 10 (1) 2016. Special Issue for abstracts for the 14th National Congress of Neuroscience, 26-29 May 2016, Ankara, Turkey.

- Analyzing Strain Rate in Echocardiographic Images by Using MATLAB, **Aykut Eken**, Kemal Serbetci, Omac Tufekcioglu, Bulent Yilmaz, IEEE Explore Conference Proceedings, BIYOMUT 2009 ,14th National Biomedical Engineering Conference, Digital Object Identifier: 10.1109 / BIYOMUT. 2009. 5130359, pp 1-4 20-23 May 2009 Izmir / Turkey.
- Peristaltic Heart Pump Design and Construction Onur Kocak, **Aykut Eken**, Cengiz Kocum, Mustafa Kocakulak BIYOMUT 2006 National Biomedical Engineering Conference 25-27 May 2006 Bosphorus University / Istanbul / Turkey

REVIEWER

- Neurophotonics
- IEEE Journal of Biomedical and Health Informatics
- Journal of Alzheimer’s Disease
- Developmental Cognitive Neuroscience
- JoVE (Journal of Visualized Experiments)
- Frontiers in Human Neuroscience
- Frontiers in Neuroergonomics
- Turkish Journal of Electrical Engineering and Computer Science
- Applied Soft Computing
- Computational Intelligence and Neuroscience
- Journal of Neural Engineering
- Journal of Neuroscience Methods
- Organization for Human Brain Mapping (OHBM) Conference
- Signal Processing and Communications Applications Conference

EDITORIAL BOARD

- Frontiers in Human Neuroscience
- Frontiers in Neuroergonomics
- Frontiers in Neuroimaging

PROJECTS

- Development of Transcutaneous Near Infrared Spectroscopy Prototype for Tissue Oxygen Measurement, The Scientific and Technological Research Council of Turkey (TUBITAK) 1501 Industrial R & D Support Program, Project Number: 3210722, Position: **Scientific Consultant**
- Identification of Neuro-Cognitive Markers of Sarcopenia Disease by Using Functional Near Infrared Spectroscopy and Artificial Intelligence, The Scientific and Technological Research Council of Turkey (TUBITAK) 1001 Scientific Research Projects. Project Number : EEEAG 122E210. Position : **Project Supervisor**
- UNDER CONTROL : Neuro-cognitive development in infants using Functional Diffuse Correlation Spectroscopy (fDCS) with EEG recording ERC Research Project FP7-IDEAS-ERC - 323961. Project Supervisors : Prof. Dr. Nuria Sebastian-Galles (UPF), Prof. Dr. Turgut Durduran (ICFO). Position : **Post Doctoral Researcher**
- Prediction of Smoking Addiction Using Physiological Measures and Machine Learning Techniques, Duzce University Scientific Research Project, Project Number: 2018.06.07.810. Project Budget : 41.901,80 TL. Position : **Project Supervisor**
- Comparison Brain Responses of Speakers in Turkey and Germany during Turkish Language Processing by using Event - Related Potentials. Project Supervisor : Assoc. Prof. Dr. Gulay Cedden, Middle East Technical University, Scientific Research Project, Project Number : BAP-05-03-2017-002, Position : **Researcher**
- Determination of Relationship Between Neural Activations and Thinking Processes During Reading and Answering Questions Period : An Interdisciplinary Study, Project Supervisor : Assoc. Prof. Dr. Gulay Cedden, Middle East Technical University, Scientific Research Project, Project Number : BAP-05-03-2015-002, Position : **Researcher**
- Investigating Compheresion Processes of Semantic and World Knowledge in English and Turkish, Project Supervisor : Assoc. Prof. Dr. Gulay Cedden, Middle East Technical University, Scientific

Research Project, Project Number : BAP-05-03-2014-002, Position : **Researcher**

– Normal ve major depresyonlu hasta populasyonlarında duygusal celiski cozumlemenin beyindeki fonksiyonel lokalizasyonu ve etken noroanatomik morfolojik faktorlerin incelenmesi, TUBITAK EEEAG Proje No: 109E081, 2012: 1-65, Position : **Scholar**

– Processing of Turkish as Native Language and Event-Related Potentials Processing of English as Foreign Language in Turkish Native Speakers, Project Supervisor : Assoc. Prof. Dr. Gulay Cedden, Middle East Technical University, Scientific Research Project, Project Number : BAP-05-03-2011-002, Position : **Researcher**

– Electrophysiological Measurement of Language Functions, Project Supervisor : Assoc. Prof. Dr. Gulay Cedden, Middle East Technical University, Scientific Research Project, Project Number : BAP-05-03-2010-004, Position : **Researcher**

– Language Comprehension Processes in Our Brain, Project Supervisor : Assoc. Prof. Dr. Gulay Cedden, Middle East Technical University, Scientific Research Project, Project Number : BAP-05-03-2009-001, Position : **Researcher**

REFERENCES

- Prof. Dr. Turgut Durduran, Medical Optics Research Group, The Institute of Photonic Sciences (ICFO), Barcelona, Spain (turgut.durduran@icfo.eu)
- Prof. Dr. Murat Kara, Hacettepe University, Faculty of Medicine, Physical Treatment and Rehabilitation Department, Ankara, Turkey (mkarafr@yahoo.com)
- Assoc. Prof. Dr. Bora Baskak, Ankara University, Faculty of Medicine, Department of Psychiatry, Ankara, Turkey (bbaskak@gmail.com)
- Assoc. Prof. Dr. Gulay Cedden, University of Heidelberg, Heidelberg, Germany (gucedden@metu.edu.tr)
- Assoc. Prof. Dr. Didem Gokcay, Istanbul Technical University, Computer Engineering Department, Istanbul, Turkey. (didemgokcay@gmail.com)

MEMBERSHIP

- Member of Organization for Human Brain Mapping 2014 -
- Member of Society for Functional Near Infrared Spectroscopy 2016-