

## Res. Asst. SERKAN USLU

### Personal Information

**Email:** serkanuslu@akdeniz.edu.tr

**Web:** <https://avesis.akdeniz.edu.tr/serkanuslu>

### International Researcher IDs

ORCID: 0000-0002-0875-5905

Yoksis Researcher ID: 285781

### Education Information

Doctorate, Akdeniz University, Faculty Of Medicine, Department of Basic Medical Sciences, Turkey 2018 - Continues

Postgraduate, Akdeniz University, Faculty Of Medicine, Department of Basic Medical Sciences, Turkey 2015 - 2018

Undergraduate, Akdeniz University, Faculty Of Engineering, Department of Electrical and Electronics Engineering, Turkey 2009 - 2013

### Foreign Languages

English, C1 Advanced

### Research Areas

Life Sciences, Biophysics, Natural Sciences

### Academic Titles / Tasks

Research Assistant, Akdeniz University, Faculty of Medicine, Department of Basic Medical Sciences, 2018 - Continues

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

- I. **Application of diffuse optical back reflection spectroscopy for determining articular cartilage thickness in a clinical setting**  
ÜNCÜ Y. A., Unlu Ö., Gumus B., USLU S., Turgut C., Soyuncu Y., BİLGE U., Ustunel I., CANPOLAT M.  
INTERNATIONAL ORTHOPAEDICS, vol.47, no.10, pp.2515-2521, 2023 (SCI-Expanded)
- II. **Left atrial overload detection in ECG using frequency domain features with machine learning and deep learning algorithms**  
USLU S., Ozturk N., Kucukseymen S., ÖZDEMİR S.  
Biomedical Signal Processing and Control, vol.85, 2023 (SCI-Expanded)
- III. **Evaluation of Executive Functions With Functional Near-Infrared Spectroscopy in Euthymic Bipolar and Borderline Personality Disorders**  
Zeybek G., USLU S., metin ö., Nüzket T., CİNEMRE B., CANPOLAT M., BAYSAL Ö.  
Nöropsikiyatri Arşivi, vol.60, no.2, pp.110-116, 2023 (SCI-Expanded)
- IV. **Role of adenosine triphosphate and protein kinase A in the force-frequency relationship in isolated**

## rat cardiomyocytes

Ozturk N., ERKAN O., USLU S., ÖZDEMİR S.

Archives of Biological Sciences, vol.75, no.1, pp.47-56, 2023 (SCI-Expanded)

- V. **The effect of the horizontal vs. vertical PAPE protocol on the swim start performance in adolescent male**  
Oğul B., USLU S., HİNDİSTAN İ. E., Akdağ E., ÇETİN ÖZDOĞAN E.  
Sports Biomechanics, 2023 (SCI-Expanded)
- VI. **External Focus Reduces Accuracy and Increases Antagonist Muscle Activation in Novice Adolescent Soccer Players.**  
Uslu S., Çetin Özdoğan E.  
Motor control, vol.27, no.2, pp.228-241, 2022 (SCI-Expanded)
- VII. **Electrophysiological and kinesiological analysis of deep tendon reflex responses, importance of angular velocity**  
USLU S., Nüzket T., Gürbüz M., UYSAL H.  
Medical and Biological Engineering and Computing, vol.60, no.10, pp.2917-2929, 2022 (SCI-Expanded)
- VIII. **Amplitude and velocity dependence of patellar pendulum triggered by T reflex in Parkinson's rigidity**  
USLU S., Gurbuz M., KIZILAY F., Ozkaynak S., Nuzket T., UYSAL H.  
NEUROLOGICAL SCIENCES, vol.42, no.8, pp.3257-3266, 2021 (SCI-Expanded)
- IX. **Rosuvastatin Reduces L-Type Ca<sup>2+</sup> Current and Alters Contractile Function in Cardiac Myocytes via Modulation of beta-Adrenergic Receptor Signaling**  
Ozturk N., USLU S., Mercan T., ERKAN O., ÖZDEMİR S.  
CARDIOVASCULAR TOXICOLOGY, vol.21, no.5, pp.422-431, 2021 (SCI-Expanded)
- X. **Diabetes-induced changes in cardiac voltage-gated ion channels**  
Ozturk N., USLU S., ÖZDEMİR S.  
WORLD JOURNAL OF DIABETES, vol.12, no.1, pp.1-18, 2021 (SCI-Expanded)
- XI. **Mathematical model of patella T-reflex and clinical evaluation with Ashworth scales**  
BİLGİN S., CARLAK H. F., POLAT Ö., Nuzket T., USLU S., UYSAL H.  
BIOMEDICAL ENGINEERING-BIOMEDIZINISCHE TECHNIK, vol.65, no.5, pp.587-594, 2020 (SCI-Expanded)
- XII. **O121 Alpha motor neuron excitability and force generation in spasticity**  
Uslu S., Nüzket T., Ozcan C., Yagcioglu S., Uysal H.  
CLINICAL NEUROPHYSIOLOGY, vol.128, pp.1-2, 2017 (SCI-Expanded)
- XIII. **Evaluation of The Patellar Tendon Reflex With Reflex Hammer That Can Measure Impact Force, Muscle Vibration and CMAP**  
Uslu S., NÜZKET T., Albayrak Y., UYSAL H.  
JOURNAL OF NEUROLOGICAL SCIENCES-TURKISH, vol.33, no.2, pp.214-226, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **MAKSİMUM OKSİJEN TÜKETİMİNİN ADIM KİNEMATİKLERİ KULLANILARAK MAKİNE ÖĞRENME YÖNTEMLERİYLE BELİRLENMESİ**  
Uslu S.  
Spor ve Performans Araştırmaları Dergisi, vol.13, no.2, pp.201-2016, 2022 (Peer-Reviewed Journal)
- II. **Farklı Ağırlıklar ile Yapılan Squat Sıçramanın Makine Öğrenme Yöntemleri ile Değerlendirilmesi**  
Uslu S.  
Akdeniz Spor Bilimleri Dergisi, vol.5, no.1, pp.1-12, 2022 (Scopus)
- III. **The Comparison of Reconstruction Algorithms for Diffuse Optical Tomography**  
MERCAN T., SEVİM G., ÜNCÜ Y. A., USLU S., KAZANCI H. Ö., CANPOLAT M.  
Süleyman Demirel Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi, vol.14, no.2, pp.285-295, 2019 (Peer-Reviewed Journal)

**IV. Modified motor unit number index (MUNIX) algorithm for assessing excitability of alpha motor neuron in spasticity.**

Uslu S., NÜZKET T., UYSAL H.

Clinical neurophysiology practice, vol.3, pp.127-133, 2018 (ESCI)

**Refereed Congress / Symposium Publications in Proceedings**

- I. **Determination of Cartilage Thickness in-vivo Using Back Reflection Spectroscopy**  
CANPOLAT M., GÜMÜS B., OZBEY-UNLU O., USLU S., NÜZKET T., ÜNCÜ Y. A., SÖYÜNCÜ Y., TURGUT Ç., ÜSTÜNEL İ.  
2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, pp.1
- II. **Determination of Cartilage Thickness in-vivo Using Back Reflection Spectroscopy**  
Canpolat M., Gümüş B., Özbey Ünlü Ö., Uslu S., Nüzket T., Üncü Y. A., Söyüncü Y., Turgut Ç., Üstünel İ.  
2017 21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 - 26 November 2017
- III. **Investigation of Lateralization Effect in Prefrontal Cortex Activation During Verbal Fluency Test by Near Infrared Spectroscopy**  
USLU S., NUZKET T., ZEYBEK G., GOZTEPE M. B., CİNEMRE B., BAYSAL O., CANPOLAT M.  
21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017
- IV. **Evaluation of Prefrontal Cortex Hemodynamic Changes with Near Infrared Spectroscopy During Wisconsin Card Sorting Test: A Pilot Study**  
USLU S., NUZKET T., ZEYBEK G., GOZTEPE M. B., CİNEMRE B., BAYSAL O., CANPOLAT M.  
21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017
- V. **Determination of Cartilage Thickness in-vivo Using Back Reflection Spectroscopy**  
CANPOLAT M., GUMUS B., OZBEY-UNLU O., USLU S., NUZKET T., ÜNCÜ Y. A., SOYUNCU Y., TURGUT C., ÜSTÜNEL İ.  
21st National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 24 November - 26 December 2017
- VI. **Investigation Of Motor Unit Number And Size Index Of Rectus Femoris Muscle In Cerebral Spasticity**  
Nüzket T., USLU S., Özcan C., Yağcıoğlu S., CANPOLAT M., UYSAL H.  
International MotoNeuron Meeting, İstanbul, Turkey, 20 - 23 June 2016, pp.63
- VII. **Modified MUNIX Algorithm for Estimating T Response Motor Unit Number in Spasticity**  
USLU S., NÜZKET T., Özcan C., Yağcıoğlu S., CANPOLAT M., UYSAL H.  
International MotoNeuron Meeting, İstanbul, Turkey, 20 - 23 June 2016, pp.62
- VIII. **Spastisitede Patella T Refleksinin Değerlendirilmesi İçin Yeni Bir Cihaz Tasarımı**  
USLU S., Nüzket T., Özcan C., Yağcıoğlu S., UYSAL H.  
32. Ulusal Klinik Nörofizyoloji EEG - EMG Kongresi, Muğla, Turkey, 27 April - 01 May 2016, pp.37
- IX. **Serabral Spastisitede Rektus Femoris Motor Ünite ve Büyüklük İndeksinin İncelenmesi**  
Nüzket T., USLU S., Özcan C., Yağcıoğlu S., UYSAL H.  
32. Ulusal Klinik Nörofizyoloji EEG - EMG Kongresi, İstanbul, Turkey, 27 April - 01 May 2016, pp.38
- X. **Detarmination of patellar T EMG response with the Deep Tendon Reflex grading and tapping force**  
ALBAYRAK Y., UYSAL H., Uslu S., Nüzket T.  
BİYOMUT 2015, İstanbul, Turkey, 5 - 06 October 2015, pp.2
- XI. **Patella T Refl eksinde Çekiç Vuruş Gücü, Kas Vibrasyonu ve Rektus Femoris M Yanıtı Arasındaki İlişki**  
USLU S., Nüzket T., UYSAL H.  
31. Ulusal Klinik Nörofizyoloji EEG - EMG Kongresi, Muğla, Turkey, 8 - 12 April 2015, pp.46
- XII. **Detarmination of Patellar T EMG Response with The Deep Tendon Reflex Grading and Tapping Force**  
USLU S., Nuzket T., ALBAYRAK Y., UYSAL H.  
19th National Biomedical Engineering Meeting (BIYOMUT), İstanbul, Turkey, 5 - 06 November 2015
- XIII. **A New Method for Determination of EDR Signal from ECG Signal**  
Uslu S., Nüzket T., Bilgin S.  
TIPTEKNO2014, Nevşehir, Turkey, 25 - 27 September 2014, vol.1, no.1, pp.275-278
- XIV. **Web Servis Aracılığıyla Android Cihazlardan Sıcaklık Kontrolü**  
ALBAYRAK Y., KOÇER A., Uslu S.

XV. AKADEMİK BİLİŞİM KONFERANSI, Antalya, Turkey, 1 - 04 February 2013, pp.157-160

**XV. RR Interval Variability and Heart Rate Calculation”, 2nd International Scientific Conference on Engineering**

ÖZEN Ş., Uslu S., BİLGİN S., Usluer M., Nüzket T., Bilgin G.

Manufacturing and Advanced Technologies, MAT 2012, Antalya, Turkey, 22 - 24 November 2012, pp.1-3

**XVI. RR Interval Variability and Heart Rate Calculation**

BİLGİN S., Uslu S., Usluer M., Nüzket T., ÖZEN Ş.

2nd International Scientific Conference on Engineering "Manufacturing and Advanced Technologies" (MAT2012), Antalya, Turkey, 22 - 24 November 2012, pp.311-314

**XVII. A Device Design For Evaluation of Kinetic Disturbances in Parkinson Patients**

Gencer E., Bilgin S., Öz E., Özdemir L., Gürbüz M., Uslu S., Özen Ş., Kızılay F., Uysal H.

TIPTEKNO 2012, Antalya, Turkey, 1 - 03 November 2012, pp.42-44

**XVIII. Parkinson Hastalarında hareket bozukluklarını değerlendirmeye yönelik bir cihaz tasarımı**

Gencer E., BİLGİN S., Öz E., ÖZDEMİR L., Gürbüz M., Uslu S., ÖZEN Ş., KIZILAY F., UYSAL H.

Tıp Teknolojileri Ulusal Kongresi 2012, Antalya, Turkey, 1 - 03 November 2012, pp.42-44

**XIX. Parkinson Hastalarında hareket bozukluklarını değerlendirmeye yönelik bir cihaz tasarımı**

Gencer E., BİLGİN S., Öz E., ÖZDEMİR L., Gürbüz M., Uslu S., ÖZEN Ş., KIZILAY F., UYSAL H.

Tıp Teknolojileri Ulusal Kongresi 2012, Antalya, Turkey, 1 - 03 November 2012, pp.42-44

**XX. Parkinson Hastalarında hareket bozukluklarını değerlendirmeye yönelik bir cihaz tasarımı**

Uysal H., Bilgin S., ÖZDEMİR L., Özen Ş., Kızılay F., Uslu S., Gencer E., Öz E., Gürbüz M.

Tıp Teknolojileri Ulusal Kongresi, Antalya, Turkey, 1 - 03 November 2012, vol.-, pp.42-44

## Supported Projects

Kantar Gül D., Kuzzu A. D., Derin N., Gülbetekin E., Uslu S., Research Project of the Presidency of Turkey Health Institutes (TÜSEB), Electrophysiological correlates of stress resilience in default mode network and affective responses: a machine learning study., 2023 - 2024

Çetin Özdoğan E., Aktop A., Özkaya Y. G., TUBITAK Project, Kadın Sporcularda Patlayıcı Kuvvete Bağlı Kas-Tendon Yaralanmalarının Biyomekanik ve Elektrofizyolojik Yöntemlerle İncelenmesi, 2022 - 2024

## Metrics

Publication: 40

Citation (WoS): 14

Citation (Scopus): 21

H-Index (WoS): 2

H-Index (Scopus): 3

## Congress and Symposium Activities

54. Ulusal Psikiyatri Kongresi, Attendee, İzmir, Turkey, 2018

33. Ulusal Klinik Nörofizyoloji EEG - EMG Kongresi, Attendee, Antalya, Turkey, 2017

10th BIENNIAL INTERNATIONAL MOTONEURON MEETING, Attendee, İstanbul, Turkey, 2016

32. Ulusal Klinik Nörofizyoloji EEG - EMG Kongresi, Attendee, Muğla, Turkey, 2016