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Education Information

Doctorate, Istanbul Medipol University, Fen Bilimleri Enstitüsü, BİYOMEDİKAL MÜHENDİSLİĞİ VE BİYOFENFORMATİK, Turkey 2015 - 2022

Doctorate, Izmir Institute Of Technology, MÜHENDİSLİK VE FEN BİLİMLERİ ENSTİTÜSÜ, BİYOMÜHENDİSLİK , Turkey 2012 - 2019

Doctorate, Dokuz Eylül University, Fen Bilimleri Enstitüsü, NANOBİLİM VE NANOMÜHENDİSLİK, Turkey 2014 - 2018

Postgraduate, Izmir Institute Of Technology, MÜHENDİSLİK VE FEN BİLİMLERİ ENSTİTÜSÜ, BİYOTEKNOLOJİ , Turkey 2008 - 2011

Undergraduate, Izmir Institute Of Technology, FEN FAKÜLTESİ, FİZİK BÖLÜMÜ, Turkey 2003 - 2008

Foreign Languages

Italian, A1 Beginner

English, C2 Mastery

Certificates, Courses and Trainings

Vocational Training, 'ANSYS Workbench Temel Seviye Analiz' Sertifika Programı, İstanbul Üniversitesi, Sürekli Eğitim Uygulama ve Araştırma Merkezi, 2022

Vocational Training, 'Solidworks Eğitimi' Sertifika Programı, İstanbul Üniversitesi, Sürekli Eğitim Uygulama ve Araştırma Merkezi, 2022

Vocational Training, Biyoistatistiksel Metotlar, SPSS Kullanımı, SCI veya SCI-Expanded için Yayın Hazırlama, Biruni Üniversitesi, Sürekli Eğitim Merkezi, Uygulama ve Araştırma Merkezi, 2018

Vocational Training, XI. Deneysel Hayvanları Kullanım Sertifikası, İstanbul Medipol Üniversitesi, Rejeneratif ve Restoratif Tıp Araştırma Merkezi (REMER), 2017

Vocational Training, 21. Ulusal Biyomedikal Mühendisliği Toplantısı, Biyodizayn Eğitimi, Acıbadem Mehmet Ali Aydınlar Üniversitesi, 2017

Vocational Training, 21. Ulusal Biyomedikal Mühendisliği Toplantısı, 3 Boyutlu Dizayn ve Yazıcı Teknikleri Eğitimi, Acıbadem Mehmet Ali Aydınlar Üniversitesi, 2017

Vocational Training, Pedagogik Formasyon Eğitimi (Fizik Öğretmenliği), Dokuz Eylül Üniversitesi, Buca Eğitim Fakültesi, 2014

Dissertations

Doctorate, Mechanical analysis of spinal implants in patients with adolescent idiopathic scoliosis, Istanbul Medipol University, Fen Bilimleri Enstitüsü, 2022

Postgraduate, Towards the design of ultrasound contrast agents: Investigation of monolayer microstructure, Izmir Institute Of Technology, Institute Of Engineering And Natural Sciences, 2011

Research Areas

Medicine, Biomedical Engineering, Biomechanics, Finite Element Methods, Material Characterization, Life Sciences, Biotechnology, Physics, Surfaces, Interfaces, Thin Films and Nanosystems, 3D-Modeling, Natural Sciences

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effect of a Pedicle Screw Fixation System on Lumbar Spinal Segments: A Finite Element Study**
Akıncı S. Z., Karabulut D., Doğru S. C., Sürmen H. K., Yaman O., Arslan Y. Z.
Türkiye Klinikleri Tıp Bilimleri Dergisi, vol.43, no.4, pp.372-381, 2023 (SCI-Expanded)
- II. **FINITE ELEMENT SPINE MODELS AND SPINAL INSTRUMENTS: A REVIEW**
AKINCI S. Z., Arslan Y. Z.
Journal of Mechanics in Medicine and Biology, vol.22, no.4, 2022 (SCI-Expanded)

Articles Published in Other Journals

- I. **The Effect of PEEK-Rod Fixation Systems on Finite Element Lumbar Spine Model**
Akıncı S. Z., Karabulut D., Sürmen H. K., Yaman O., Arslan Y. Z.
Avrupa Bilim ve Teknoloji Dergisi, no.34, pp.783-786, 2022 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Development of a Finite Element Model of the Lumbar Spine**
Akıncı S. Z., Karabulut D., Sürmen H. K., Yaman O., Arslan Y. Z.
Leverage of IT in Engineering and Science, LITES 2023, İstanbul, Turkey, 30 October - 01 November 2023, pp.11
- II. **The Effect of PEEK-Rod Fixation Systems on Finite Element Lumbar Spine Model**
Akıncı S. Z., Karabulut D., Sürmen H. K., Yaman O., Arslan Y. Z.
2nd International Conference on Applied Engineering and Natural Sciences (ICAENS 2022), Konya, Turkey, 10 - 13 March 2022, pp.484
- III. **Construction and Validation of Functional Lumbar Spine Unit**
AKINCI S. Z., SÜRMEH H. K., KARABULUT D., YAMAN O., ARSLAN Y. Z.
2nd International Symposium of Scientific Research and Innovative Studies (ISSRIS'22), Bahkesir, Turkey, 2 - 05 March 2022, pp.1349-1351
- IV. **The Investigation of the Effect of PEEK-Rod Fixation Systems on Pedicle Screws and The Adjacent Intervertebral Discs**
Akıncı S. Z., Karabulut D., Sürmen H. K., Yaman O., Arslan Y. Z.
4th International Conference on Medical Devices (ICMD'2021), Gaziantep, Turkey, 10 - 12 June 2021, pp.25
- V. **Biomechanical Effect of an Implant System on Lumbar Spinal Segments**

Akinci S. Z., Sürmen H. K., Karabulut D., Doğru S. C., Yaman O., Arslan Y. Z.

10th International Biomechanics Congress (BioMech 2021), İzmir, Turkey, 26 - 27 March 2021, pp.50

- VI. **Effect of U-shaped implant on the biomechanics of the cervical spine**
Mumtaz M., Zafarparandeh I., Taherzadeh P., AKINCI S. Z., Erbulut D. U.
20th National Biomedical Engineering Meeting, BIYOMUT 2016, İzmir, Turkey, 3 - 05 December 2016
- VII. **Ultrason Görüntülemeye Kullanılan Mikroköpükçüklerin Üretilmesi**
AKINCI S. Z., BEKAT T., ÖZDEMİR E., OKUR S., KILIÇ ÖZDEMİR S.
9.Ulusal Kimya Mühendisliği Kongresi, Ankara, Turkey, 22 - 25 June 2010
- VIII. **AFM and Kelvin Probe Study of Emulsifier Incorporated Phospholipids**
Akinci S. Z., Bekat T., Okur S., Kılıç Özdemir S.
6th Nanoscience and Nanotechnology Conference, İzmir, Turkey, 15 - 18 June 2010, pp.818
- IX. **Protein Adsorption on Cholesterol Incorporated Langmuir-Blodgett Phospholipid-Emulsifier Monolayers**
Akinci S. Z., Yörük S., Şen A. E., Özdemir E., Okur S., Kılıç Özdemir S.
6th Nanoscience and Nanotechnology Conference, İzmir, Turkey, 15 - 18 June 2010, pp.522
- X. **Investigation of Shell Characteristics of Contrast Agents for Ultrasonography**
AKINCI S. Z., OKUR S., ÖZDEMİR E., KILIÇ ÖZDEMİR S.
6th Nanoscience and Nanotechnology Conference, İzmir, Turkey, 15 - 18 June 2010, pp.101
- XI. **Towards The Development of Stable Ultrasound Contrast Agents**
AKINCI S. Z., CEYLAN S., Bergama O. E., ÖZDEMİR E., OKUR S., KILIÇ ÖZDEMİR S.
5th Nanoscience and Nanotechnology Conference, Eskişehir, Turkey, 8 - 12 June 2009, pp.55
- XII. **Meissner Effect in High Tc Superconductors**
ARSLAN O., AKINCI S. Z.
Turkish Physical Society, 4th International Conference and Festival of Physics Students (ICOFEPS), İzmir, Turkey, 31 August - 03 September 2005, pp.16