



SINAN SEZEK

ASSOC. PROF.

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Address : Atatürk Üniversitesi Mühendislik Fakültesi Makine
Mühendisliği Böl.

International Researcher IDs

ScholarID: B2sPjgAAAAJ

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Yoksis Researcher ID: 45376



Learning Knowledge

Doctorate

2001 - 2005

Ataturk University, Makine Mühendisliği, İmalat Ve Konstrüksiyon, Turkey

Undergraduate

1990 - 1994

Ataturk University, Mühendislik Fakültesi, Makina Mühendisliği , Turkey

Foreign Languages

English, B2 Upper Intermediate

Certificates, Courses and Trainings

Other, TTTF Mentorluk Eğitimi, TÜBİTAK / Smart Mentoring, 2016

Dissertations

Doctorate, Soğuk ve sıcak haddelemede akış fonksiyonları (dual stream functions) kullanarak teorik ve deneysel analizler, Atatürk Üniversitesi, Makina Mühendisliği , İmalat Konstrüksiyon, 2005

Postgraduate, Poligonal blokların "dual stream" fonksiyonları kullanılarak şekillendirilmesi, Atatürk Üniversitesi, Makina Mühendisliği , İmalat Konstrüksiyon, 2001

Academic Titles / Tasks

Associate Professor

2018 - Continues

Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği

Assistant Professor
2017 - 2018

Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği

Assistant Professor
2017 - 2018

Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği

Assistant Professor
2006 - 2017

Ataturk University, Aşkale Meslek Yüksekokulu, Elektrik ve Enerji

Lecturer
1996 - 2006

Ataturk University, Aşkale Meslek Yüksekokulu, Elektrik ve Enerji

Supported Projects

1. AVŞAR G., ÇİFTÇİ B., SEZEK S., Project Supported by Higher Education Institutions, İğnesiz Enjektör-2, 2022 - 2024
2. SEZEK S., İSPİRLİOĞLU KARA G., Project Supported by Higher Education Institutions, Santrifüj Döküm Yöntemiyle Çelik Matrisli Fonksiyonel Derecelendirilmiş Seramik Malzemelerin Üretimi, 2022 - 2024
3. Yılmaz H., Sezek S., TÜBİTAK International Bilateral Joint Cooperation Program Project, Yeni Nesil Ultra İnce Taneli Biyobozunur Üreteral Stentlerin Üretimi ve Karakterizasyonu, 2021 - 2024
4. Sezek S., Badem F., Arslan S. S., Project Supported by Higher Education Institutions, Kumarhanelerdeki araç gereçlerin hileli olduğu kanıtlanarak kumar alışkanlığı olan bireylerin bilinçlendirilmesi, 2022 - 2023
5. SEZEK S., KIZILELMA M. R., Project Supported by Higher Education Institutions, Ekstrüzyon Yöntemi ile Yüksek Dayanımlı Biyo-Uyumlu Stent Üretimi, 2021 - 2022
6. AVŞAR G., SEZEK S., ÇİFTÇİ B., Project Supported by Higher Education Institutions, İğnesiz Enjektör, 2019 - 2022
7. SEZEK S., ŞENGİL M. E., KOÇAK A. C., ERTAN Y., Project Supported by Higher Education Institutions, TÜBİTAK UAV TURKEY Yarışması Kapsamında TÜBİTAK İHA Sabit Kanat TÜBİTAK İHA Döner Kanat ve TEKNOFEST Savaşan İHA Kategorilerine Uygun İHA Geliştirme, 2021 - 2021
8. SEZEK S., ÖZDEMİR B., ŞENGİL M. E., ERASLAN Y. E., ÇELEBİ A., KOÇAK A. C., ÇANDIR E., ARSLAN S. S., KURDAL S., ÇELEBİ S., et al., Project Supported by Higher Education Institutions, 2020 TÜBİTAK İHA DÖNER KANAT TÜBİTAK İHA SABİT KANAT ve TEKNOFEST Savaşan İHA yarışmasına katılım, 2020 - 2020
9. EREN Z., KARAKAYA M. A., KUNDAKÇI M., BAŞTÜRK E., SEZEK S., AKBULUT İ., Project Supported by Higher Education Institutions, Yeşil Kampüs için Akıllı Çözümler: Güneş Enerjili Geri Dönüşüm Konteynırları, 2019 - 2020
10. SEZEK S., KOÇAK A. C., AKSOY A., ŞENGİL M. E., KONAKLI M. F., İNGEÇ F. M., EMİR H. E., ÇELEBİ A., ÖZDEMİR B., Project Supported by Higher Education Institutions, 2019 TÜBİTAK UAV Türkiye ve Teknofest Savaşan İha yarışmalarına prototip İha üretimi ve katılımı, 2019 - 2019
11. TOTİK Y., BULAT M., TOPRAK B. İ., SEZEK S., KOVACI H., GÖK S., HÜLAGÜ B., GÜRÜF G., TOP M. M., ÇELİK A., et al., Project Supported by Higher Education Institutions, TÜBİTAK Alternatif Enerjili Araçlar Yarışması İçin Elektrikli Otomobil, Elektrik Motoru Üretimi ve Geliştirme, 2018 - 2018
12. SEZEK S., Project Supported by Higher Education Institutions, KALÇA PROTEZİNİN SICAK PRESS İLE MODELLENMESİ VE İMALATI, 2010 - 2012

Jury Memberships

Competition, Teknofest, Atatürk Üniversitesi, August, 2023

Competition, Teknofest, Atatürk Üniversitesi, May, 2023

Competition, İnsansız Tarımsal Kara Aracı Yarışması Teknofest , Ataturk University, January, 2021

Award, Akademik Teşvik Değerlendirme , Atatürk Üniversitesi, December, 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- 1. Enhanced mechanical, tribological and corrosion properties of graphite and carbon nanotube-reinforced copper-based hybrid composites**
Kara G. I., Sezek S., Aksakal B.
Journal of Composite Materials, vol.58, no.27, pp.2915-2935, 2024 (SCI-Expanded)
- 2. Effect of sintering temperature, additive ratios, and reinforcement of boron and boron carbide particle sizes on the mechanical and tribological properties of the synthesized Cu-Cr hybrid composites**
Ispirlioğlu Kara G., Sezek S., Aksakal B., Macit C. K., Horlu M.
TRIBOLOGY INTERNATIONAL, vol.199, 2024 (SCI-Expanded)
- 3. The effect of Silver addition and deformation parameters on mechanostructure, biodegradation, antimicrobial and mechanical properties of Zn-based biodegradable alloys**
Aksakal B., SEZEK S., Macit C. K.
JOURNAL OF BIOMATERIALS APPLICATIONS, vol.39, no.4, pp.298-316, 2024 (SCI-Expanded)
- 4. The influence of cold rolling and hydroxyapatite coating on the mechanostructure, corrosion resistance, cell viability, and antibacterial activity of ZnCu biodegradable implants**
Aksakal B., Karadogan S. A., Aslan N., Fidan F., Yilmazer Y., Sezek S.
JOURNAL OF MATERIALS RESEARCH, vol.39, no.11, pp.1701-1715, 2024 (SCI-Expanded)
- 5. Investigating Corrosion, Wear Resistance and Friction of AA5454-O Series after its Severe Deformation by Rolling**
SEZEK S.
MATERIALS SCIENCE-MEDZIAGOTYRA, vol.23, no.1, pp.27-31, 2017 (SCI-Expanded)
- 6. Biomechanical comparison of straight and helical compression plates for fixation of transverse and oblique bone fractures: Modeling and experiments**
SEZEK S., AKSAKAL B., GÜRGER M., Malkoc M., Say Y.
BIO-MEDICAL MATERIALS AND ENGINEERING, vol.27, pp.197-209, 2016 (SCI-Expanded)
- 7. Influence of drill parameters on bone temperature and necrosis: A FEM modelling and in vitro experiments**
SEZEK S., Aksakal B., Karaca F.
COMPUTATIONAL MATERIALS SCIENCE, vol.60, pp.13-18, 2012 (SCI-Expanded)
- 8. The Effects of Square and Circular Die-Orifices on the Performance of Combined Extrusion-Forging Process**
SEZEK S., Misirli C., Aksakal B., Can Y.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.21, no.4, pp.500-507, 2012 (SCI-Expanded)
- 9. Effect of Die Radius on Blank Holder Force and Drawing Ratio: A Model and Experimental Investigation**
SEZEK S., Savas V., Aksakal B.
MATERIALS AND MANUFACTURING PROCESSES, vol.25, no.7, pp.557-564, 2010 (SCI-Expanded)
- 10. Deformation and temperature behaviour during cold, warm and hot flat rolling of AA5454-O alloy**
SEZEK S., Aksakal B.
MATERIALS & DESIGN, vol.30, no.9, pp.3450-3459, 2009 (SCI-Expanded)
- 11. Analysis of cold and hot plate rolling using dual stream functions**
SEZEK S., Aksakal B., Can Y.
Materials and Design, vol.29, no.3, pp.584-596, 2008 (SCI-Expanded)
- 12. Forging of polygonal discs using the dual stream functions**
AKSAKAL B., SEZEK S., Can Y.
Materials and Design, vol.26, no.8, pp.643-654, 2005 (SCI-Expanded)

Articles Published in Other Journals

- 1. Influence of Plastic Deformation and Hydroxyapatite Coating on Structure, Mechanical, Corrosion, Antibacterial and Cell Viability Properties of Zinc Based Biodegradable Alloys**
Sezek S., Aksakal B., Aslan N.
Metals and Materials International , vol.1, no.1, pp.120-132, 2024 (Peer-Reviewed Journal)
- 2. WEAR BEHAVIOR OF INCONEL 925 ALLOY AFTER PLASTIC DEFORMATION**
SEZEK S., İSPİRLİOĞLU KARA G., BAYRAM S., AKSAKAL B.
INTERNATIONAL JOURNAL OF MODERN MANUFACTURING TECHNOLOGIES, vol.9, no.3, 2023 (Scopus)
- 3. OPTIMIZATION TEMPERATURE AND FRICTION STENT PRODUCTION PROCESS BY EXTRUSION METHOD**
Sezek S., Kızılelma M., Aksakal B.
International Journal of Modern Manufacturing Technologies, vol.9, no.2, pp.280-285, 2022 (Scopus)
- 4. Dental İşlemlerde Kullanılan Frez Tiplerinden Birkaçının Sıcaklığa Etkisinin Sonlu Elemanlar Metodu İle Modellenmesi**
SEZEK S.
Fırat Üniversitesi Mühendislik Bilimleri Dergisi, vol.28, pp.247-253, 2016 (Peer-Reviewed Journal)
- 5. TEMPERATURE CONTROLLED NEW DIE MODELLING IN ALUMINUM 6061 EXTRUSION AND ITS COMPARISON WITH CONVENTIONAL DIESBY USE OF FEM ANALYSIS**
SEZEK S.
International Journal of Modern Manufacturing Technologies, vol.7, pp.197-206, 2015 (Scopus)
- 6. ANALYSIS OF HIP PROSTHESIS PRODUCTION WITH FORGING USING THE FINITE ELEMENT METHOD**
Gahramanzadeh asl H., SEZEK S., ALSARAN A.
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.8, pp.69, 2015 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- 1. INVESTIGATION OF TRIBOLOGICAL PROPERTIES OF Cu-Cr-B HYBRID COMPOSITES**
İSPİRLİOĞLU KARA G., HORLU M., MACİT C. K., AKSAKAL B., SEZEK S.
3 rd International Natural Science, Engineering and Material Technologies Conference Turkish Republic of Northern Cyprus, Gazimagusa, Cyprus (Kkct), 21 - 23 September 2023
- 2. ECAP MOLD DESIGN WITH TWO DIFFERENT EDGE ANGLES AND SIMUFACT ANALYSIS WITH Zn-A-B"**
SEZEK S., İSPİRLİOĞLU KARA G., AKINCI M. H., AKSAKAL B.
3 rd International Natural Science, Engineering and Material Technologies Conference Turkish Republic of Northern Cyprus, Gazimagusa, Cyprus (Kkct), 21 - 23 September 2023
- 3. WEAR BEHAVIOR OF INCONEL 925 ALLOY AFTER PLASTIC DEFORMATION**
SEZEK S., İSPİRLİOĞLU KARA G.
The 11th International Conference on Modern Manufacturing Technologies in Industrial Engineering, Bucharest, Romania, 14 - 16 June 2023
- 4. Stent production by extrusion method**
Sezek S.
ModTech, Constanta, Romania, 22 - 25 June 2022, pp.63-65
- 5. MODELLING OF DENTAL DRILLS AND RESTORATION PROCESSES BY FINITE ELEMENT METHOD**
SEZEK S., AKSAKAL B.
THE THIRD INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES (CMES-2018), Girne, Cyprus (Kkct), 3 - 06 May 2018
- 6. INVESTIGATION OF TEMPERATURE DISTRIBUTION IN COLD ROLLING PROCESSE**
Sezek S., Aksakal B.
THE THIRD INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES (CMES-2018), Girne, Cyprus (Kkct), 3 - 06 May 2018

7. **Studying temperature variations that occurred during cold and hot rolling of AA5454-O alloy**
SEZEK S., AKSAKAL B.
26th International Baltic Conference on Materials Engineering, 2017, Kaunas, Lithuania, 26 - 27 October 2017, pp.45-51
8. **Investigating Corrosion and Wear Resistance of AA5454 O Series After Its Severe Deformation by Rolling**
SEZEK S.
Modtech 2016 Iasi, Iasi, Romania, 15 - 18 June 2016
9. **Investigating Corrosion and Wear Resistance of AA5454 O Series After Its Severe Deformation by Rolling**
SEZEK S.
Modtech 2016 Iasi, Iasi, Romania, 15 - 18 June 2016
10. **TEMPERATURE CONTROLLED NEW DIE MODELLING IN ALUMINUM 6061 EXTRUSION AND ITS COMPARISON WITH CONVENTIONAL DIESBY USE OF FEM ANALYSIS**
SEZEK S.
Modtech 2015 Romania, Constanta, Romania, 17 - 20 June 2015, vol.7
11. **Kompleks geometriye sahip kalça protezinin dövme yöntemiyle üretiminin Fem analizleri**
SEZEK S., GAHRAMANZADEH ASL H., ALSARAN A.
International Iron Steel Symposium, 2 - 04 April 2012
12. **Ortopedik operasyonlardaki kemik delme işlemlerinde sıcaklık dağılım analizleri**
SEZEK S., AKSAKAL B., KARACA F.
IATS ELAZIĞ, 16 - 18 May 2011
13. **Deformation and fixation analysis of oblique and transverse bone fractures**
SEZEK S., AKSAKAL B.
IATS-Elazig, 16 - 18 May 2011
14. **Metal Şekillendirmede Nümerik Bir Metodla Otomasyona Yönelik Analizler**
AKSAKAL B., SEZEK S.
IV. Mühendislik Kongresi- URFA, Turkey, 6 - 08 June 2002

Academic and Administrative Experience

2018 - 2019	Deputy Head of Department	Ataturk University, Mühendislik Fakültesi, Makine Mühendisliği
2006 - 2017	Head of Department	Ataturk University, Aşkale Meslek Yüksekokulu, Elektrik ve Enerji
2002 - 2003	Assistant Director of Vocational School	Ataturk University, Aşkale Meslek Yüksekokulu, Elektrik ve Enerji

Courses

Technical Drawing with Computer Aid, Undergraduate, 2023 - 2024, 2022 - 2023, 2020 - 2021
 Plastik Deformasyon İşlemlerinin Sonlu Hacimler & Sonlu Elemanlar Analizleri, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021
 Teknik Resim, Undergraduate, 2022 - 2023
 Makine Anatasarım II, Undergraduate, 2021 - 2022, 2019 - 2020
 Technical Drawing with Computer Aid, Undergraduate, 2022 - 2023
 Makine Mühendisliği Seçmeli Tasarım, Undergraduate, 2022 - 2023
 Bitirme Projesi I, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

Teknik Resim , Undergraduate, 2022 - 2023
Plastik Deformasyon İşlemlerinin Sonlu Hacimler & Sonlu Elemanlar Analizleri , Postgraduate, 2021 - 2022
mechanics of materials, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020
Bitirme Projesi II, Undergraduate, 2020 - 2021
Mechanics of Materials, Undergraduate, 2020 - 2021
MUHTRS , Undergraduate, 2021 - 2022
Statik, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018
Bilgisayar Destekli Teknik Resim, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Advising Theses

Sezek S., Eşit Kanallı Açılmalık Presleme (EKAP), Postgraduate, M.Harun(Student), 2024
Sezek S., FARKLI TAKVİYELERLE GÜÇLENDİRİLMİŞ BAKIR ESASLI KOMPOZİTLERİN TOZ METALURJİSİ YÖNTEMİ İLE ÜRETİMİ VE ANALİZLERİ, Doctorate, G.İSPİRLİOĞLU(Student), 2023
Sezek S., ENDOTRAKEAL TÜP VE ASPİRASYON KATETERİNİN TEK MODELE DÖNÜŞTÜRÜLMESİ, Postgraduate, İ.KÜSTÜK(Student), 2023
Sezek S., Ekstrüzyon yöntemi ile stent üretimi, Postgraduate, M.RUHİ(Student), 2021
Sezek S., SOL-JEL KAPLAMA MODELİNE SONLU ELEMANLAR METODU İLE YAKLAŞIM, Postgraduate, A.UĞURLU(Student), 2021
Sezek S., Plastik deformasyon sonrası TNTZ, inconel ve Nitinol'un mekanik özelliklerinin araştırılması, Postgraduate, S.BAYRAM(Student), 2021

Patent

Avşar G., Sezek S., ÇİFTÇİ B., automatic needleless injector, Patent, CHAPTER A Human Needs, The Invention Recourse Number: PT2019-00981 , Standard Registration, 2019

Scientific Refereeing

TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, March 2019
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, November 2017
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, May 2017
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, April 2017
Selected Engineering Problems, Other Indexed Journal, October 2016
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, January 2016
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, October 2015
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, February 2015
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, November 2011
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, January 2011
TUBITAK Project, 1505 - University-Industry Cooperation Support Program, Ataturk University, Turkey, June 2010

Metrics

Publication: 32
Citation (WoS): 124
Citation (Scopus): 146
H-Index (WoS): 5
H-Index (Scopus): 5

Congress and Symposium Activities

MODELLING OF DENTAL DRILLS AND RESTORATION PROCESSES BY FINITE ELEMENT METHOD, Attendee, Elazığ, Turkey, 2018

Studying Temperature Variations that Occurred during Cold and Hot Rolling of AA5454-O Alloy, Attendee, Kaunas, Lithuania, 2017

Investigating Corrosion and Wear Resistance of AA5454 O Series After Its Severe Deformation by Rolling, Attendee, Iasi, Romania, 2016

TEMPERATURE CONTROLLED NEW DIE MODELLING IN ALUMINUM 6061 EXTRUSION AND ITS COMPARISON WITH CONVENTIONAL DIESBY USE OF FEM ANALYSIS, Attendee, Constanta, Romania, 2015

Modtech, Invited Speaker, Constanta, Romania, 2015

Kompleks geometriye sahip kalça protezinin dövme yöntemiyle üretiminin Fem analizleri, Attendee, Karabük, Turkey, 2012

Deformation and fixation analysis of oblique and transverse bone fractures, Attendee, Elazığ, Turkey, 2011

Ortopedik operasyonlardaki kemik delme işlemlerinde sıcaklık dağılım analizleri, Attendee, Elazığ, Turkey, 2011

Metal Şekillendirmede Nümerik Bir Metodla Otomasyona Yönelik Analizler, Attendee, Şanlıurfa, Turkey, 2002

Research Areas

Mechanical Engineering, Construction and Manufacturing, Computer Aided Design and Manufacturing, Plastic Forming Methods, Mechanical, Biomechanics, Engineering and Technology

Representation and Promotion Activities

Institutional Representation, Teknofest 2020 , Turkey, Gaziantep, 2020 - 2020