

Asst. Prof. ARSLAN KAPTAN

Personal Information

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Address: Sivas Cumhuriyet Üniversitesi, Sivas Teknik Bilimler Meslek Yüksekokulu, Raylı Sistemler Makine Programı, Merkez/Sivas

International Researcher IDs

ORCID: 0000-0002-2431-9329

ScopusID: 16686228900

Yoksis Researcher ID: 100813

Education Information

Undergraduate, Sivas Cumhuriyet University, Mühendislik Fakültesi, Makine Mühendisliği, Turkey 2020 - 2021

Doctorate, Kocaeli University, Fen Bilimleri Enstitüsü, Turkey 2009 - 2015

Postgraduate, Kocaeli University, Fen Bilimleri Enstitüsü, Turkey 2004 - 2006

Foreign Languages

English, B2 Upper Intermediate

Certificates, Courses and Trainings

Foreign Language, Akademik İngilizce Yazma - Okuma, English House , 2020

Project Management, Orta Anadolu Kalkınma Ajansı (ORAN) Proje Yönetimi Eğitimi , Orta Anadolu Kalkınma Ajansı (ORAN) , 2019

Vocational Course, Ansys LS-Dyna İle Çarpışma Analizi, Fizik ve Geometride Simulasyon - FİGES, 2010

Vocational Course, ANSYS Workbench İle Analiz, Fizik ve Geometride Simulasyon ODTÜ Eğitim Merkezi - FİGES, 2010

Dissertations

Doctorate, Taşıt LPG tanklarının patlatma basınçları ve yorulma performanslarının incelenmesi, Kocaeli University, Fen Bilimleri Enstitüsü, 2015

Postgraduate, Taşıt LPG tanklarının bilgisayar destekli tasarımı ve gerilme analizi, Kocaeli University, Fen Bilimleri Enstitüsü, 2006

Research Areas

Mechanical Engineering, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Sivas Cumhuriyet University, Sivas Teknik Bilimler Meslek Yüksekokulu, Motorlu Araçlar Ve Ulaş.Tekno., 2019 - Continues

Courses

Yakıtlar ve Yanma, Associate Degree, 2018 - 2019
Güç Aktarma Organları, Associate Degree, 2019 - 2020
Kritik ve Analitik Düşünme, Associate Degree, 2018 - 2019
Servis Yönetimi ve Müşteri İlişkileri, Associate Degree, 2019 - 2020
Kritik ve Analitik Düşünme, Associate Degree, 2018 - 2019
Teknik Resim, Associate Degree, 2019 - 2020
Statik Mukavemet, Associate Degree, 2018 - 2019
Statik Mukavemet, Associate Degree, 2018 - 2019
Taşıt Klima Sistemleri, Associate Degree, 2018 - 2019
Fren Tekniği, Associate Degree, 2018 - 2019
Emisyon Kontrol Sistemleri, Associate Degree, 2019 - 2020
Motor Dinamiği, Undergraduate, 2019 - 2020
Güç Aktarma Organları, Associate Degree, 2019 - 2020
Teknik Resim, Associate Degree, 2019 - 2020
Tren Mekaniği, Associate Degree, 2019 - 2020
Taşıt Klima Sistemleri, Associate Degree, 2018 - 2019
Fren Tekniği, Associate Degree, 2018 - 2019
Tren Mekaniği, Associate Degree, 2019 - 2020
Sistem Analizi ve Tasarım, Associate Degree, 2017 - 2018
Emisyon Kontrol Sistemleri, Associate Degree, 2018 - 2019
Servis Yönetimi ve Müşteri İlişkileri, Associate Degree, 2018 - 2019
Sistem Analizi ve Tasarım, Associate Degree, 2017 - 2018
Teknolojinin Bilimsel İlkeleri, Associate Degree, 2017 - 2018
Raylı Sistem Trafiği, Associate Degree, 2016 - 2017
Alternatif Motor ve Yakıtlar, Associate Degree, 2016 - 2017
Alternatif Motor Ve Yakıtlar, Associate Degree, 2016 - 2017
Alternatif Motor Ve Yakıtlar, Associate Degree, 2016 - 2017
Oto Klima Sistemleri, Associate Degree, 2016 - 2017
Teknik İngilizce, Associate Degree, 2016 - 2017
Güç Aktarma Organları, Associate Degree, 2016 - 2017
Davranış Bilimleri, Associate Degree, 2016 - 2017
Alternatif Motor ve Yakıtlar, Associate Degree, 2016 - 2017
Alternatif Motor ve Yakıtlar, Associate Degree, 2016 - 2017
Raylı Sistem Trafiği, Associate Degree, 2016 - 2017
Alternatif Motor ve Yakıtlar, Associate Degree, 2016 - 2017
Davranış Bilimleri, Associate Degree, 2016 - 2017
Mesleki İngilizce - II, Associate Degree, 2016 - 2017
Soğutma Tekniği, Associate Degree, 2016 - 2017
Güç Aktarma Organları, Associate Degree, 2016 - 2017
Emisyon Kontrol Sistemleri, Associate Degree, 2016 - 2017
İçten Yanmalı Motorlar, Associate Degree, 2016 - 2017
Otomotiv Yönetim Sistemleri, Associate Degree, 2016 - 2017
İçten Yanmalı Motorlar, Associate Degree, 2016 - 2017
Otomotiv Yönetim Sistemleri, Associate Degree, 2016 - 2017
Alternatif Yakıtlar, Undergraduate, 2015 - 2016

Alternatif Yakıtlar, Undergraduate, 2015 - 2016
Bilgisayar Destekli Tasarım - II, Associate Degree, 2014 - 2015
İş Sağlığı ve Güvenliği, Associate Degree, 2015 - 2016
Ölçme Teknolojisi, Associate Degree, 2015 - 2016
İş Sağlığı ve Güvenliği, Associate Degree, 2015 - 2016
İş Güvenliği, Associate Degree, 2015 - 2016
Malzeme Teknolojisi, Associate Degree, 2015 - 2016
Ölçme Teknolojisi, Associate Degree, 2015 - 2016
Tren ve Depo İlişkileri, Associate Degree, 2014 - 2015
Serviste Davranış Ve Kalite, Associate Degree, 2014 - 2015
Bilgisayar Kullanımı, Associate Degree, 2012 - 2013
Motorlu Taşıtlar Mekaniği, Associate Degree, 2012 - 2013
Temel Bilgisayar Teknolojileri Kullanımı, Associate Degree, 2012 - 2013
Genel Raylı sistem İşletmeciliği, Associate Degree, 2012 - 2013
Bilgisayar Destekli Tasarım, Associate Degree, 2013 - 2014
Bilgisayar - II, Associate Degree, 2012 - 2013
Bilgisayar Kullanımı, Associate Degree, 2012 - 2013
Bilgisayar - II, Associate Degree, 2012 - 2013
Temel Bilgisayar Teknolojileri Kullanımı, Associate Degree, 2012 - 2013
Raylı Sistem Trafiği, Associate Degree, 2011 - 2012
Oto Klima Sistemleri, Associate Degree, 2011 - 2012
Emisyon Kontrol Sistemleri, Associate Degree, 2011 - 2012
Serviste Davranış Ve Kalite, Associate Degree, 2011 - 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Enhancing the Tensile Behavior of Three-Dimensional Printed Polylactic Acid Composites through the Incorporation of Waste Beech Sawdust**
Kartal F., Kaptan A.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.33, no.16, pp.1-15, 2024 (SCI-Expanded)
- II. **Damaged Surface Morphology of AA6063/Cu30Zn Parts Joined with a New Technology by Friction-Mechanical Locking Method**
Mercan S., Kaptan A.
JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, vol.46, pp.1-21, 2024 (SCI-Expanded)
- III. **The Effect of Channel Depth on Joint Quality in Cu/AISI 1040 Materials Joined by Mechanical Locking Method**
Mercan S., Kaptan A.
Technical Gazette, vol.31, no.3, pp.1-12, 2024 (SCI-Expanded)
- IV. **Sustainable Reinforcement of PLA Composites with Waste Beech Sawdust for Enhanced 3D-Printing Performance**
Kartal F., KAPTAN A.
Journal of Materials Engineering and Performance, 2024 (SCI-Expanded)
- V. **Determination of burst pressures and failure locations of vehicle LPG cylinders**
Kaptan A., Kisioglu Y.
INTERNATIONAL JOURNAL OF PRESSURE VESSELS AND PIPING, vol.84, no.7, pp.451-459, 2007 (SCI-Expanded)

Articles Published in Other Journals

- I. **A critical review of composite filaments for fused deposition modeling: Material properties, applications, and future directions**
Kaptan A., Kartal F.
European Mechanical Science, vol.8, no.3, pp.199-209, 2024 (Peer-Reviewed Journal)
- II. **A review on Integration of Carbon Fiber and Polymer Matrix Composites in 3D Printing Technology**
Kaptan A., Kartal F.
International Advanced Researches and Engineering Journal, vol.8, no.2, pp.1-16, 2024 (Scopus)
- III. **Influence of Process Parameters on Kerf Width in Abrasive Waterjet Machining of GFRP Composites**
Kaptan A., Mercan S., Kartal F.
Journal of Science and Technology, vol.3, no.1, pp.35-43, 2024 (Peer-Reviewed Journal)
- IV. **Advancements in polylactic acid research: From material properties to sustainable applications**
Kaptan A., Kartal F.
European Mechanical Science, vol.8, no.2, pp.1-11, 2024 (Peer-Reviewed Journal)
- V. **Experimental investigation and optimization of the effect garnet vibratory tumbling as a post-process on the surface quality of 3D printed PLA parts**
Kartal F., Kaptan A.
European Mechanical Science, vol.8, no.1, pp.19-28, 2024 (Scopus)
- VI. **Artificial Neural Network and Multiple Regression Analysis for Predicting Abrasive Water Jet Cutting of Al 7068 Aerospace Alloy**
Kartal F., Kaptan A.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.42, no.2, pp.1-15, 2024 (ESCI)
- VII. **Response of PLA Material to 3D Printing Speeds: A Comprehensive Examination on Mechanical Properties and Production Quality**
Kartal F., Kaptan A.
European Mechanical Science, vol.8, no.1, pp.1-12, 2024 (Peer-Reviewed Journal)
- VIII. **Effect of Filling Ratio-Pattern Parameters on Mechanical Properties of PLA Filaments Used in 3D Printing**
Kartal F., Kaptan A.
Black Sea Journal of Engineering and Science, vol.7, no.1, pp.196-202, 2024 (Peer-Reviewed Journal)
- IX. **Mechanical Performance of Salvadora Persical (Miswak) Reinforced Polylactic Acid Matrix Composites for Three Dimensional Printing**
kartal f., KAPTAN A.
Black Sea Journal of Engineering and Science, vol.6, no.4, pp.458-468, 2023 (Peer-Reviewed Journal)
- X. **Strength Performance Evaluations of Vehicle Cylindrical LPG Tanks**
Kaptan A., Kişioğlu Y.
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, pp.1-13, 2023 (ESCI)
- XI. **EXPERIMENTAL DETERMINATION OF THE OPTIMUM CUTTING TOOL FOR CNC MILLING OF 3D PRINTED PLA PARTS**
Kartal F., Kaptan A.
International Journal of 3D Printing Technologies and Digital Industry, vol.7, no.2, pp.150-160, 2023 (Peer-Reviewed Journal)
- XII. **INFLUENCE OF ABRASIVE WATER JET TURNING OPERATING PARAMETERS ON SURFACE ROUGHNESS OF ABS AND PLA 3D PRINTED PARTS MATERIALS**
Kartal F., Kaptan A.
International Journal of 3D Printing Technologies and Digital Industry, vol.7, no.2, pp.184-190, 2023 (Peer-Reviewed Journal)
- XIII. **Effects of annealing temperature and duration on mechanical properties of PLA plastics produced by 3D Printing**
Kartal F., Kaptan A.
European Mechanical Science, vol.7, no.3, pp.7-15, 2023 (Peer-Reviewed Journal)

- XIV. **Investigating the Effect of Nozzle Diameter on Tensile Strength in 3D-Printed PLA Parts**
Kaptan A., Kartal F.
Black Sea Journal of Engineering and Science, vol.6, no.3, pp.276-287, 2023 (Peer-Reviewed Journal)
- XV. **3B Yazıcıda Üretilen Düz Dişli Çarkların RTV2 Silikonu Kullanılarak Çoğaltılması**
Kartal F., Nazlı C., Yerlikaya Z., Kaptan A.
International Journal of 3D Printing Technologies and Digital Industry, vol.5, no.1, pp.34-42, 2021 (Peer-Reviewed Journal)
- XVI. **The Effect of Fill Rate on Mechanical Properties of PLA Printed Samples**
Kaptan A., Kartal F.
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.10, no.3, pp.1919-1927, 2020 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Part Production Time Estimation Model in 3d Printer: DataBased Machine Learning Approach And Parameter Analysis**
Kaptan A.
II. INTERNATIONAL CONFERENCE ON SCIENTIFIC AND INNOVATION RESEARCH, Sivas, Turkey, 15 - 17 September 2023, pp.1226-1241
- II. **THE EFFECT OF ANNEALING PROCESS APPLIED TO PLA PARTS MANUFACTURED BY FUSED DEPOSITION MODELING ON MECHANICAL PROPERTIES**
Kaptan A., Kartal F.
2nd INTERNATIONAL HALICH CONGRESS ON MULTIDISCIPLINARY SCIENTIFIC RESEARCH, İstanbul, Turkey, 29 - 30 October 2021, pp.496-502
- III. **Machinability of AISI 304 Austenitic Stainless Steel by Abrasive Waterjet Processing**
Kaptan A., Kartal F.
13. ULUSLARARASI EJONS MATEMATİK-MÜHENDİSLİK-FEN VE SAĞLIK BİLİMLERİ KONGRESİ, Nevşehir, Turkey, 25 - 26 October 2021, pp.281-287
- IV. **10 Yıllını Tamamlamış LPG Tanklarının Hasar Analizi**
KAPTAN A., KARTAL F., KİŞİOĞLU Y.
14. Uluslararası Makina Tasarım ve İmalat Kongresi, 29 July - 02 August 2010
- V. **Taşıt Silindirik LPG Tanklarında Hızlandırılmış Yorulma Deneyi Performansı**
KİŞİOĞLU Y., KARTAL F., KAPTAN A.
Eksen Mühendislik 2009 Kullanıcı Konferansı, Turkey, 1 - 02 January 2009
- VI. **Burst Pressure Prediction of the Vehicle Cylindrical LPG Tanks**
KİŞİOĞLU Y., KAPTAN A.
11 th Conference for Computer-Aided Engineering and System Modeling, 15 September 2006

Supported Projects

- Kaptan A., Kartal F., Project Supported by Higher Education Institutions, Üç boyutlu yazıcılarda takviyeli ve takviyesiz PLA filament kullanılarak üretilen parçaların mekanik özelliklerinin incelenmesi, 2023 - 2024
- Kaptan A., Kartal F., Project Supported by Higher Education Institutions, ÜÇ BOYUTLU YAZICIDA ÜRETİLEN PARÇALARIN SİLİKON KALIPLAMA YÖNTEMİYLE ÇOĞALTILMASI İŞLEMİNDE SİLİKON MASTER KALIPLARININ OPTİMİZASYONU, 2022 - 2023
- Kaptan A., Mercan S., Project Supported by Higher Education Institutions, Mekanik Kilitleme Yöntemi Kullanılarak Bakır/Alüminyum Çiftlerinin Birleştirilmesi, 2020 - 2023
- Mercan S., Kaptan A., Project Supported by Higher Education Institutions, Joining Copper/Aluminum Material Pairs by Mechanical Locking Method, 2020 - 2023
- Kaptan A., Kartal F., Project Supported by Higher Education Institutions, Aşındırıcı su jeti ile kesme işleminin yapay sinir

ağlarıyla modellenmesi, 2020 - 2022

Kaptan A., Kişioğlu Y., Project Supported by Higher Education Institutions, Taşıt LPG Tanklarının Patlatma ve Hızlandırılmış Yorulma Performanslarının İncelenmesi, 2011 - 2015

Activities in Scientific Journals

Turkish Journal of Science and Healty, Editor, 2019 - 2023

Turkish Journal of Scince and Healty, Assistant Editor/Section Editor, 2019 - 2023

Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Editor, 2020 - 2022

Memberships / Tasks in Scientific Organizations

Makina Mühendisleri Odası - 130595, Member, 2021 - Continues, Turkey

Scientific Refereeing

Mühendis ve Makina, National Scientific Refreed Journal, June 2023

Material Science and Engineering Technology, SCI Journal, June 2023

MATERIALWISSENSCHAFT UND WERKSTOFFTECHNIK, Journal Indexed in SCI-E, June 2023

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, Journal Indexed in ESCI, June 2023

SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, Journal Indexed in ESCI, May 2023

Journal of Science, Technology and Engineering Research, National Scientific Refreed Journal, March 2023

Black Sea Journal of Engineering and Science, National Scientific Refreed Journal, January 2023

Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, National Scientific Refreed Journal, January 2023

Karadeniz Fen Bilimleri Dergisi, National Scientific Refreed Journal, January 2023

International Advanced Researches and Engineering Journal, National Scientific Refreed Journal, December 2022

Iğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, October 2022

International Journal of 3D Printing Technologies and Digital Industry, National Scientific Refreed Journal, September 2022

Düzce Üniversitesi Bilim ve Teknoloji Dergisi, National Scientific Refreed Journal, June 2022

International Advanced Researches and Engineering Journal, National Scientific Refreed Journal, April 2022

DEMİRYOLU MÜHENDİSLİĞİ, National Scientific Refreed Journal, November 2021

International Journal of Innovative Engineering Applicatios, Other Journals, July 2021

Technopark, Technology, Turkey, May 2020

IĞDIR ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, National Scientific Refreed Journal, April 2020

Mobility Activity

Erasmus Programme, Lecturing, Addis Ababa University, Ethiopia, 2021 - 2021

Erasmus Programme, Get Education, Azerbaycan Teknik Üniversitesi, Azerbaijan, 2018 - 2018

Metrics

Publication: 27

Citation (WoS): 22

Citation (Scopus): 26

H-Index (WoS): 1

H-Index (Scopus): 1

Congress and Symposium Activities

2. ULUSLARARASI HALIÇ MULTİDİSİPLİNER BİLİMSEL ARAŞTIRMALAR KONGRESİ 29 30 October 2021 İSTANBUL, Attendee, İstanbul, Turkey, 2021

13. ULUSLARARASI EJONS MATEMATİK-MÜHENDİSLİK-FEN VE SAĞLIK BİLİMLERİ KONGRESİ, Attendee, Nevşehir, Turkey, 2021

Non Academic Experience

Hyundai Sivas Servis

Ünsa Makine