

## Assoc. Prof. CELALETTİN YÜCE

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: R-3733-2017

ScopusID: 56237466100

Yoksis Researcher ID: 22196

### Education Information

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Mechanical Engineering, Turkey 2013 - 2018

Postgraduate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Mechanical Engineering, Turkey 2011 - 2013

Undergraduate, Suleyman Demirel University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Turkey 2005 - 2009

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Yüksek mukavemetli çelikler ile alüminyum alaşımlarının lazer kaynağı ile birleştirilmesinde kaynak parametrelerinin bağlantı üzerine etkilerinin incelenmesi, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, 2018

Postgraduate, Yeni nesil ticari araçlar için hafifletilmiş yolcu koltuğu tasarımı ve prototip imalatı, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Mechanical Engineering, 2013

### Research Areas

Mechanical Engineering, Construction and Manufacturing, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2022 - Continues

Assistant Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2022 - Continues

Assistant Professor, Bursa Technical University, Faculty Of Engineering And Natural Sciences, Department Of Mechatronics Engineering, 2018 - 2022

Research Assistant, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Mechanical Engineering, 2011 - 2018

## Academic and Administrative Experience

Deputy Head of Department, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2022 - 2023

## Courses

Manufacturing Methods, Undergraduate, 2021 - 2022

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

- I. **Effects of process parameters on surface quality and mechanical performance of 316L stainless steel produced by selective laser melting**  
Şener B., Çavuşoğlu O., Yüce C.  
OPTİK, vol.287, no.171050, pp.1-11, 2023 (SCI-Expanded)
- II. **Multi-response optimization for laser transmission welding of PMMA to ABS using Taguchi-based TOPSIS method**  
Kucukoglu A., YÜCE C., Sozer I. E., KARPAT F.  
Advances in Mechanical Engineering, vol.15, no.8, 2023 (SCI-Expanded)
- III. **Effects of tooth root cracks on vibration and dynamic transmission error responses of asymmetric gears: A comparative study**  
Kalay O. C., Dogan O., YÜCE C., KARPAT F.  
MECHANICS BASED DESIGN OF STRUCTURES AND MACHINES, 2023 (SCI-Expanded)
- IV. **Mechanical characterization and microstructure of fiber laser welded TWIP980 steel depending on welding speed and focal distance**  
Çavuşoğlu O., Yuce C., Aydın H.  
OPTİK, vol.274, pp.1-9, 2023 (SCI-Expanded)
- V. **Fatigue performances of helicopter gears**  
Kalay O. C., Yuce C., Doğan O., Yılmaz T. G., Karpaz E., Kopmaz O., Karpaz F.  
MATERIALS TESTING, vol.65, no.1, pp.52-62, 2023 (SCI-Expanded)
- VI. **Multi-Objective Optimization of Fiber Laser Cutting of Stainless-Steel Plates Using Taguchi-Based Grey Relational Analysis**  
TÜRKKAN Y. A., Aslan M., Tarkan A., Aslan Ö., YÜCE C., YAVUZ N.  
Metals, vol.13, no.1, 2023 (SCI-Expanded)
- VII. **Effects of asymmetric tooth profile on single-tooth stiffness of polymer gears**  
Yuce C., Dogan O., KARPAT F.  
MATERIALS TESTING, vol.64, no.4, pp.513-523, 2022 (SCI-Expanded)
- VIII. **A Comparative 3D Finite Element Computational Study of Stress Distribution and Stress Transfer in Small-Diameter Conical Dental Implants**  
Kalay O. C., Karaman H., KARPAT F., Dogan O., YÜCE C., KARPAT E., Dhanasekaran L., Khandaker M.  
TEHNICKI VJESNIK-TECHNICAL GAZETTE, vol.28, no.6, pp.2045-2054, 2021 (SCI-Expanded)
- IX. **Effects of rim thickness and drive side pressure angle on gear tooth root stress and fatigue crack propagation life**  
Dogan O., Yuce C., KARPAT F.  
ENGINEERING FAILURE ANALYSIS, vol.122, 2021 (SCI-Expanded)
- X. **A comparative experimental study on the impact strength of standard and asymmetric involute spur gears**  
Kalay O. C., Doğan O., YILMAZ T. G., Yüce C., KARPAT F.  
MEASUREMENT, vol.172, 2021 (SCI-Expanded)
- XI. **Multi-objective optimisation for indentation rate, nugget diameter and tensile load in resistance spot**

### **welding using Taguchi-based grey relational analysis**

Yuce C.

INTERNATIONAL JOURNAL OF MATERIALS & PRODUCT TECHNOLOGY, vol.63, no.4, pp.321-338, 2021 (SCI-Expanded)

- XII. **Experimental measurement and numerical validation of single tooth stiffness for involute spur gears**  
KARPAT F., Yuce C., Dugan O.  
MEASUREMENT, vol.150, 2020 (SCI-Expanded)
- XIII. **Investigations on the microstructure and mechanical properties of laser welded dissimilar galvanized steel-aluminum joints**  
Yuce C., KARPAT F., YAVUZ N.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.104, no.5-8, pp.2693-2704, 2019 (SCI-Expanded)
- XIV. **Design and development of tractor clutch using combined field and bench tests**  
KARPAT F., Yuce C., DOĞAN O., Genc M. O., KAYA N.  
TRANSACTIONS OF THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING, vol.42, no.2, pp.136-146, 2018 (SCI-Expanded)
- XV. **An improved numerical method for the mesh stiffness calculation of spur gears with asymmetric teeth on dynamic load analysis**  
KARPAT F., DOĞAN O., Yuce C., Ekwaro-Osire S.  
ADVANCES IN MECHANICAL ENGINEERING, vol.9, no.8, 2017 (SCI-Expanded)
- XVI. **The Effect of Process Parameters on the Microstructure and Mechanical Performance of Fiber Laser-Welded AA5182 Aluminium Alloys**  
Yuce C., Tutar M., KARPAT F., YAVUZ N., Tekin G.  
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.63, no.9, pp.510-518, 2017 (SCI-Expanded)
- XVII. **The Optimization of Process Parameters and Microstructural Characterization of Fiber Laser Welded Dissimilar HSLA and MART Steel Joints**  
Yuce C., Tutar M., KARPAT F., YAVUZ N.  
METALS, vol.6, no.10, 2016 (SCI-Expanded)
- XVIII. **A novel design procedure for tractor clutch fingers by using optimization and response surface methods**  
DOĞAN O., KARPAT F., Yuce C., KAYA N., YAVUZ N., Sen H.  
JOURNAL OF MECHANICAL SCIENCE AND TECHNOLOGY, vol.30, no.6, pp.2615-2625, 2016 (SCI-Expanded)
- XIX. **The optimisation of process parameters for friction stir spot-welded AA3003-H12 aluminium alloy using a Taguchi orthogonal array**  
Tutar M., AYDIN H., Yuce C., YAVUZ N., BAYRAM A.  
MATERIALS & DESIGN, vol.63, pp.789-797, 2014 (SCI-Expanded)
- XX. **A Case Study: Designing for Sustainability and Reliability in an Automotive Seat Structure**  
Yuce C., KARPAT F., YAVUZ N., Sendeniz G.  
SUSTAINABILITY, vol.6, no.7, pp.4608-4631, 2014 (SCI-Expanded)
- XXI. **Effect of Rotational Speed and Dwell Time on Mechanical Properties of Dissimilar AA1050-AA3105 Friction Stir Spot Welded Joints**  
AYDIN H., Tuncel O., Yuce C., Tutar M., YAVUZ N., BAYRAM A.  
MATERIALS TESTING, vol.56, no.10, pp.818-825, 2014 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **Design and Analysis of Modular Support Arm Mechanism for Heavy Commercial Vehicle Suspension Systems**  
ALTINEL K., YILDIZ A., Yuce C.  
Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.11, no.3, pp.794-803, 2023 (Peer-Reviewed)

Journal)

- II. **Prognostics and Health Management of Wind Energy Infrastructure Systems**  
Yuce C., Gecgel O., Dogan O., Dabetwar S., Yanik Y., Kalay O. C., Karpas E., Karpas F., Ekwaro-Osire S.  
ASCE-ASME J Risk and Uncert in Engrg Sys Part B Mech Engrg, vol.8, 2022 (ESCI)
- III. **PMMA ve ABS MALZEMELERİN LAZER İLETİM KAYNAĞI İLE BİRLEŞTİRİLMESİNDE PROSES PARAMETRE ETKİLERİNİN İNCELENMESİ**  
KÜÇÜKOĞLU A., YÜCE C., KARPAT F., Okar H., Sözer İ. E., Kurt N.  
Uludağ University Journal of The Faculty of Engineering, vol.26, no.2, pp.481-491, 2021 (Peer-Reviewed Journal)
- IV. **Paslanmaz Çelik Malzemelerin Fiber Lazer ile Kesiminde Proses Parametrelerinin Optimizasyonu**  
YÜCE C.  
Uludağ University Journal of The Faculty of Engineering, no.2, pp.685-696, 2019 (Peer-Reviewed Journal)
- V. **Shape Optimization of an Overdesigned Chain Link by using Desing of Experiment and Grapical Optimization**  
KARPAT F., DOĞAN O., YÜCE C.  
International Journal of Mechanical And Production Engineering, vol.5, no.10, pp.106-110, 2017 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Fault Diagnosis With Deep Learning for Standard and Asymmetric Involute Spur Gears**  
KARPAT F., DİRİK A. E., KALAY O. C., YÜCE C., DOĞAN O., KORCUKLU B.  
ASME 2021 International Mechanical Engineering Congress and Exposition, United States Of America, 01 November 2021, vol.1314029
- II. **Yüksek Basıncılı Döküm Yöntemi ile Üretilen Silafont-36 Parçalarının Isıl İşlem Performanslarının İncelenmesi**  
Kara B., Zeybek A., YÜCE C.  
10th International Automotive Technologies Congress, OTEKON 2020, Bursa, Turkey, 6 - 07 September 2021, pp.1613-1618
- III. **Şehirlerarası Yolcu Otobüsleri için Döner Mekanizmaya Sahip Hostes Koltuğu Geliştirilmesi**  
Aktürk G., Sezgin E., YÜCE C.  
10th International Automotive Technologies Congress, OTEKON 2020, Bursa, Turkey, 6 - 07 September 2021, pp.1397-1404
- IV. **Ses Sinyalleri Kullanılarak Talaşlı İmalat Prosesinde Takım Durumunun İzlenmesi**  
KALKANLI E., YÜCE C.  
2. Uluslararası Mühendislik Bilimleri ve Multidisipliner Yaklaşımlar Kongresi, İstanbul, Turkey, 18 September 2021, pp.263-269
- V. **Bal Peteği Hücresel Yapılı Sandviç Panellerin Mekanik Özelliklerinin Sonlu Elemanlar Yöntemi ile İncelenmesi**  
YÜCE C.  
IES'20 International Engineering Symposium | Engineering Applications in Industry (Virtual), İzmir, Turkey, 5 - 06 December 2020, pp.84-90
- VI. **The Effect of Laser Beam Wobbling Mode on Weld Bead Geometry of Tailor Welded Blanks**  
YÜCE C.  
8th International Symposium on Innovative Technologies in Engineering and Science, Bursa, Turkey, 23 - 25 October 2020, vol.3, pp.282-290
- VII. **Mechanical and Microstructural Properties of ColdMetal Transfer (CMT) Welded 6082-T6 Aluminum Alloys**  
YÜCE C., Kara B., Tekin G., Çapar N., Şengül D.  
9th International Conference on Advanced Technologies (ICAT2020), İstanbul, Turkey, 10 - 12 August 2020, pp.174-177

- VIII. **Topology Optimisation of a Passenger Seat Pillar**  
YÜCE C., Öncel C., Sezgin E.  
3rd International Conference on Data Science and Applications (ICONDATA'20), İstanbul, Turkey, 25 - 28 June 2020, pp.251-257
- IX. **Alüminyum Ekstrüzyon Alaşımlarının Soğuk Metal Transfer Ark Kaynağında Proses Parametre Etkilerinin İncelenmesi**  
YÜCE C., Tekin G., Kara B., Şengül D.  
3. International Conference on Materials Science, Mechanical and Automotive Engineerings and Technology (IMSMATEC'20), Turkey, 24 - 26 June 2020, pp.294-298
- X. **INFLUENCE OF HEAT INPUT ON MECHANICAL PROPERTIES AND MICROSTRUCTURE OF LASER WELDED DISSIMILAR GALVANIZED STEEL-ALUMINUM JOINTS**  
Yuce C., KARPAT F., YAVUZ N.  
13th ASME International Manufacturing Science and Engineering Conference, Texas, United States Of America, 18 - 22 June 2018
- XI. **IMPROVEMENT OF LOADING CAPACITY OF INTERNAL SPUR GEAR WITH USING ASYMMETRIC TROCHOID PROFILE**  
YILMAZ T. G., DOĞAN O., Yuce C., KARPAT F.  
ASME International Mechanical Engineering Congress and Exposition, Tama, Japan, 3 - 09 November 2017
- XII. **DESIGN AND ANALYSIS OF INTERNAL GEARS WITH DIFFERENT RIM THICKNESS AND SHAPES**  
KARPAT F., Ekwaro-Osire S., YILMAZ T. G., Dogan O., Yuce C.  
ASME International Mechanical Engineering Congress and Exposition (IMECE2015), Texas, United States Of America, 13 - 19 November 2015
- XIII. **OPTIMUM DESIGN OF TRACTOR CLUTCH PTO FINGER BY USING TOPOLOGY AND SHAPE OPTIMIZATION**  
Dogan O., KARPAT F., KAYA N., Yuce C., Genc M. O., Yavuz N.  
ASME International Mechanical Engineering Congress and Exposition (IMECE2015), Texas, United States Of America, 13 - 19 November 2015
- XIV. **A Review on advanced joining techniques of multi material part manufacturing for automotive industry**  
YÜCE C., KARPAT F., YAVUZ N., DOĞAN O.  
Proceedings of Eighteenth TheIIER International Conference, ROMA, Italy, 28 - 29 March 2015, pp.51-56
- XV. **EFFECTS OF RIM THICKNESS ON TOOTH ROOT STRESS AND MESH STIFFNESS OF INTERNAL GEARS**  
KARPAT F., Engin B., Dogan O., Yuce C., YILMAZ T. G.  
ASME International Mechanical Engineering Congress and Exposition (IMECE), Montreal, Canada, 14 - 20 November 2014
- XVI. **THE INVESTIGATION OF STRESS DISTRIBUTION ON THE TRACTOR CLUTCH FINGER MECHANISM BY USING FINITE ELEMENT METHOD**  
KARPAT F., Dogan O., Yuce C., KAYA N., Cengiz G.  
ASME International Mechanical Engineering Congress and Exposition (IMECE2014), Montreal, Canada, 14 - 20 November 2014
- XVII. **A NOVEL METHOD FOR CALCULATION GEAR TOOTH STIFFNESS FOR DYNAMIC ANALYSIS OF SPUR GEARS WITH ASYMMETRIC TEETH**  
KARPAT F., Dogan O., Ekwaro-Osire S., Yuce C.  
ASME International Mechanical Engineering Congress and Exposition (IMECE), Montreal, Canada, 14 - 20 November 2014
- XVIII. **Influence of welding parameters on mechanical properties and microstructure of friction stir spot welded AA5754 Aluminium alloys**  
TUTAR M., AYDIN H., YÜCE C., TUNÇEL O., YAVUZ N., BAYRAM A.  
15. International Materials Symposium, Denizli, Turkey, 15 October 2014
- XIX. **Effect of rotational speed and dwell time on mechanical properties of dissimilar AA1050-AA3105 joints produced by friction stir spot welding**

AYDIN H., TUNÇEL O., YÜCE C., TUTAR M., YAVUZ N., BAYRAM A.

3. International Conference on Welding Technologies and Exhibition (ICWET 2014), Manisa, Turkey, 21 May 2014

**XX. PROTOTYPING A NEW LIGHTWEIGHT PASSENGER SEAT**

Yuçe C., KARPAT F., Yavuz N., Kaynaklı Ö., Dolaylar E., Sendeniz G.

ASME International Mechanical Engineering Congress and Exposition (IMECE2013), California, United States Of America, 15 - 21 November 2013

**XXI. A VIRTUAL TOOL FOR WEAR SIMULATION OF PLASTIC GEAR PAIRS**

Karpata F., Ekwaro-Osire S., Yuçe C., Karpata F.

ASME International Mechanical Engineering Congress and Exposition (IMECE2013), California, United States Of America, 15 - 21 November 2013

## Supported Projects

YÜCE C., KARPAT F., KAYA N., HEJAZI M., Project Supported by Higher Education Institutions, Araç Yapısal Parçalarında Kullanılan Farklı Türdeki Yüksek Mukavemetli Çeliklerin Lazer Kaynak ile Birleştirilmesinde Proses Parametre Etkilerinin İncelenmesi, 2022 - Continues

Sevilgen G., Kılıç M., Etemoğlu A. B., Karpata F., Kaya N., Sürmen A., Karamangil M. İ., Kuş A., Çavdur F., Cindoruk S. S., et al., TUBITAK Project, TÜBİTAK 1004 (Mükemmeliyet Merkezi Destek Programı) Elektrikli Taşıtlar İçin Batarya Teknolojileri Araştırma ve Geliştirme Platformu (BATEG), 2022 - 2026

Yuçe C., Karpata F., Kaya N., TUBITAK Project, Lightening the BRT Body Carcass by Performing Finite Element Analysis, 2023 - 2024

Yuçe C., Karpata F., TUBITAK Project, Döküm ve ekstrüzyon ürünlerinin birleştirilmesi ile yüksek performanslı alüminyum taşıyıcı alt travers geliştirilmesi, 2020 - 2022

Yuçe C., Project Supported by Higher Education Institutions, Farklı Metallerin Soğuk Metal Transfer Ark Kaynak Yöntemi (CMT) ile Birleştirilmesinin İncelenmesi, 2019 - 2021

Yuçe C., Karpata F., Kopmaz O., Project Supported by Other Private Institutions, Standart ve Standart Olmayan Dişli Çarklarda Diş Dibi Çatlaklarının Erken Belirlenmesi ve İzlenmesi İçin Sayısal Metotların Geliştirilmesi, 2018 - 2020

Karpata F., Yavuz N., Yılmaz E., Karadere G., TUBITAK Project, Havai Konveyör Hatlarına Özgü Bir İyileştirme ve Bakım Modelinin Geliştirilmesi, 2015 - 2018

Yuçe C., Yavuz N., Karpata F., Project Supported by Higher Education Institutions, Yüksek Mukavemetli Çelikler ile Alüminyum Alaşımlarının Lazer Kaynağı ile Birleştirilmesinde Kaynak Parametrelerinin Bağlantı Üzerine Etkilerinin Deneysel Olarak İncelenmesi, 2016 - 2017

Yavuz N., Karpata F., Industrial Thesis Project, Yeni Nesil Ticari Araçlar İçin Hafifletilmiş Yolcu Koltuğu Tasarımı ve Prototip İmalatı, 2013 - 2014

## Metrics

Publication: 48

Citation (WoS): 243

Citation (Scopus): 294

H-Index (WoS): 12

H-Index (Scopus): 10