

## Assoc. Prof. Aslı GÜNAY BULUTSUZ

### Personal Information

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### International Researcher IDs

ScholarID: YY16e1EAAAAJ

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ScopusID: 56545837900

Yoksis Researcher ID: 173771

### Education Information

Post Doctorate, Technische Universitaet Darmstadt, Materials Science , Physical Metallurgy, Germany 2019 - 2020

Doctorate, Yildiz Technical University, Makina Fakültesi, Makina Mühendisliği/ Makina Malzemesi Ve İmal Teknolojisi A.B.D., Turkey 2011 - 2017

Postgraduate, Yildiz Technical University, Makina Fakültesi, Makina Mühendisliği/Makina Malzemesi Ve İmalat Teknolojisi A.B.D., Turkey 2010 - 2011

Undergraduate, Trakya University, Mimarlık Mühendislik Fakültesi, Makina Mühendisliği, Turkey 2005 - 2009

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Investigation of the Application Conditions of Severe Plastic Deformation Technique in the Production of Enhanced Biocompatible Implant Materials with Improved Mechanical Properties, Yildiz Technical University, Makina Mühendisliği , 2018

### Research Areas

Mechanical Engineering, Construction and Manufacturing, Plastic Forming Methods, Engineering and Technology

### Academic Titles / Tasks

Research Assistant PhD, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2010 - Continues

### Courses

Engineering Statistics, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020  
Industrial Engineering Materials, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023  
Materials Science , Undergraduate, 2024 - 2025, 2023 - 2024, 2021 - 2022  
Temel Bilgisayar Bilimleri, Undergraduate, 2022 - 2023, 2020 - 2021, 2018 - 2019  
Manufacturing Technologies, Undergraduate, 2020 - 2021

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

- I. **Processing of Al-CuO Composite Powders by High-Pressure Torsion: the Effect of Rotation Number on their Mechanical and Corrosive Properties**  
Günay Bulutsuz A., Dikici B., Bruder E.  
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.12, no.1, pp.1-12, 2025 (SCI-Expanded)
- II. **Development of Fe-10% (HA/ $\beta$ -Tricalcium Phosphate) Composite via Solid-State Manufacturing Route and Investigation of Material Properties for Biodegradable Implant Applications**  
GÜNAY BULUTSUZ A., Chrominski W., Bazarnik P., Bruder E.  
Advanced Engineering Materials, vol.26, no.11, 2024 (SCI-Expanded)
- III. **An investigation over microstructure and HIP processing effects on wear performance of pure chromium parts fabricated by laser powder bed fusion**  
GÜNAY BULUTSUZ A., Gulec B., Gokcekaya O., Gardstam J., Nakano T., YILMAZER H.  
International Journal of Refractory Metals and Hard Materials, vol.120, 2024 (SCI-Expanded)
- IV. **Investigation of corrosion and wear performance of TiNbTaZr/Cr-Mo PVD coatings on 316L SS in Hanks's solution for improved biomedical applications**  
Atmaca I., DİKİCİ B., EZİRMİK K. V., GÜNAY BULUTSUZ A., Niinomi M.  
Surface and Coatings Technology, vol.473, 2023 (SCI-Expanded)
- V. **Systemic observation and measurement of microgap formation in dental implant–abutment connection interface under fatigue**  
Mercan C., Günay Bulutsuz A., Katiboglu A. B.  
Materials Testing, vol.65, no.11, pp.1-15, 2023 (SCI-Expanded)
- VI. **Tribological behavior of high-pressure torsion processed biodegradable pure Zn under dry and wet conditions**  
GÜNAY BULUTSUZ A.  
Industrial Lubrication and Tribology, vol.74, no.5, pp.542-549, 2022 (SCI-Expanded)
- VII. **Ultrasonic Assisted Incremental Equal Angular Channel Pressing Process of AA 6063**  
Günay Bulutsuz A.  
Advanced Engineering Materials, vol.23, 2021 (SCI-Expanded)
- VIII. **Incremental Severe Plastic Deformation Effect on Mechanical and Microstructural Characteristics of AA6063**  
GÜNAY BULUTSUZ A., Chrominski W.  
TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS, vol.74, no.1, pp.69-77, 2021 (SCI-Expanded)
- IX. **A Comparison of Warm and Combined Warm and Low-Temperature Processing Routes for the Equal-Channel Angular Pressing of Pure Titanium**  
Bulutsuz A., Chrominski W., Huang Y., Kral P., YURCİ M. E., Lewandowska M., Langdon T. G.  
ADVANCED ENGINEERING MATERIALS, vol.22, no.2, 2020 (SCI-Expanded)
- X. **Investigation UV-treatment and surface modifications effect on surface energy and aging behaviour of biomedical surfaces**  
Bulutsuz A.  
INTERNATIONAL JOURNAL OF SURFACE SCIENCE AND ENGINEERING, vol.14, no.3, pp.223-237, 2020 (SCI-Expanded)
- XI. **Tribological behavior of a hydrostatically extruded ultra-fine grained Ti-13Nb-13Zr alloy**  
Bulutsuz A., Yurci M. E., Ozaltın K., Chrominski W., Lewandowska M.

MATERIALS TESTING, vol.61, no.6, pp.543-548, 2019 (SCI-Expanded)

- XII. **Biological responses of ultrafine grained pure titanium and their sand blasted surfaces**  
Günay Bulutsuz A., Berrak Ö., Yeprem H. A., Arısan E. D., Yurci M. E.  
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.91, pp.382-388, 2018 (SCI-Expanded)
- XIII. **Optimization Process Parameters of Equal Angular Channel Pressing According to the Measurement Results of Microstructural Homogeneity**  
GÜNAY BULUTSUZ A., YURCI M. E., Durakbaşa N.  
MATERIALS RESEARCH-IBERO-AMERICAN JOURNAL OF MATERIALS, vol.21, no.6, pp.1-9, 2018 (SCI-Expanded)
- XIV. **Microstructure and Texture Evolutions of Biomedical Ti-13Nb-13Zr Alloy Processed by Hydrostatic Extrusion**  
OZALTIN K., PANIGRAHI A., CHROMINSKI W., Bulutsuz A., Kulczyk M., Zehetbauer M. J., LEWANDOWSKA M.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.11, pp.5747-5755, 2017 (SCI-Expanded)
- XV. **Influence of Surface Modification Methods on the Topography of Dental Implants by Using Metrological Observation Techniques**  
Bulutsuz A., MERCAN C. U., Karapinar G., Katiboglu A. B., LEWANDOWSKA M.  
ACTA PHYSICA POLONICA A, vol.129, no.4, pp.625-627, 2016 (SCI-Expanded)
- XVI. **Measurement of temperature change during the implant site preparation to determine influence of tool characteristics**  
Bulutsuz A., Tanyel R. C., Katiboglu A. B.  
MEASUREMENT, vol.79, pp.354-359, 2016 (SCI-Expanded)
- XVII. **Optimization of end milling parameters and determination of the effects of edge profile for high surface quality of AISI H13 steel by using precise and fast measurements**  
Durakbasa M. N., AKDOĞAN A., Vanli A. S., Bulutsuz A.  
MEASUREMENT, vol.68, pp.92-99, 2015 (SCI-Expanded)
- XVIII. **Application of fuzzy logic methodology for predicting dynamic measurement errors related to process parameters of coordinate measuring machines**  
Bulutsuz A., Yetilmezsoy K., Durakbasa N.  
JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, vol.29, pp.1619-1633, 2015 (SCI-Expanded)
- XIX. **Enhancement in mechanical properties of a beta-titanium alloy by high-pressure torsion**  
Sharman K., Bazarnik P., Brynk T., Bulutsuz A., Lewandowska M., Huang Y., Langdon T. G.  
JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY-JMR&T, vol.4, no.1, pp.79-83, 2015 (SCI-Expanded)
- XX. **Importance of Measurement Parameters for the Dental Implant Surface Characterization**  
GUNAY A., SAĞBAŞ B., DURAKBASA M. N.  
ACTA PHYSICA POLONICA A, vol.125, no.2, pp.484-487, 2014 (SCI-Expanded)
- XXI. **Development of Ann-Based Models to Predict Biogas and Methane Productions in Anaerobic Treatment of Molasses Wastewater**  
Yetilmezsoy K., Türkdoğan F. İ., Temizel I., Gunay A.  
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.10, pp.885-907, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Effect of Nb0.5 and Mo0.75 addition on in-vitro corrosion and wear resistance of high-speed laser metal deposited Al<sub>0.3</sub>CrFeCoNi high-entropy alloy coatings**  
Dikici B., Lindner T., Lampke T., Grund T., Günay Bulutsuz A.  
APPLIED SURFACE SCIENCE ADVANCES, vol.26, no.26, pp.1-12, 2025 (ESCI)
- II. **Biyoçözünür İmplant Uygulamaları İçin Saf Çinko Tozlarından İnce Taneli Yapıların İmalatı ve Çözünme Davranışının Karakterizasyonu**  
Günay Bulutsuz A.

Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.9, no.1, pp.467-469, 2021 (Peer-Reviewed Journal)

- III. **Investigation Ha/ $\beta$ -TCP blasting and anodization effect and surface contact angle and topography**  
Günay Bulutsuz A.  
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.8, no.1, pp.1072-1083, 2020 (Peer-Reviewed Journal)
- IV. **Calculation of measurement uncertainty for plastic (ABS) material in flexural testing**  
Gunay Bulutsuz A., Fank S., Gülmez T., Durakbasa N.  
International Journal of Metrology and Quality Engineering, vol.4, no.1, pp.29-33, 2013 (Scopus)
- V. **Dental İmplantolojide Kullanılan G4 Saf Titanyum İmplantların Kumlama ve Asitleme Teknikleriyle Oluşturulan Yüzey Modifi kasyonlarının İmalat Aşamalarını Ele Alarak Değerlendirilmesi**  
GÜNAY BULUTSUZ A., KATİBOĞLU A. B., M NUMAN D.  
MÜHENDİS VE MAKİNA, vol.54, 2013 (Peer-Reviewed Journal)
- VI. **Determining the Measurement Uncertainties to Fulfill the Demands on Product Quality**  
Akdoğan A., Günay Bulutsuz A.  
ACADEMIC SCIENCE OF JOURNAL, vol.2, no.1, pp.243-247, 2013 (Peer-Reviewed Journal)
- VII. **Assessment of machining with uncoated and coated end mills and determining surface topography using 2D fast Fourier transform**  
Durakbasa M., Demircioglu P., Bogrekci I., Bas G., Gunay A.  
International Journal of Nanomanufacturing, vol.8, pp.493-507, 2012 (Scopus)
- VIII. **Surface Characterization by Accurate Measurement and Image Processing Systems on Machined Surfaces of Precision Cutting Tools**  
M NUMAN D., Ismail B., DEMİRCİOĞLU P., BAŞ G., GÜNAY BULUTSUZ A.  
Journal of Automation, Mobile Robotics Intelligent Systems, vol.3, pp.51-55, 2011 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Effect of Equal Channel Angular Pressing Parameters on Meta-Stable Beta Titanium Alloy with Changeable Young ' s Modulus**  
Mahmutoğlu M. A., Günay Bulutsuz A., Nakai M., Yapıcı G. G., Yilmazer H.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), Antalya, Turkey, 25 - 27 April 2019, vol.1, pp.1013-1015
- II. **Effect of Equal Channel Angular Pressing Parameters on Meta-Stable Beta Titanium Alloy with Changeable Young ' s Modulus**  
Mahmutoğlu M. A., GÜNAY BULUTSUZ A., Nakai M., YAPICI G. G., Yilmazer H.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), 25 - 27 April 2019
- III. **Continuous severe plastic deformation methods**  
GÜNAY BULUTSUZ A., Yurci M. E.  
Materials Science and Technology 2018, MS and T 2018, 14 - 18 October 2018
- IV. **Investigation of Different Severe Plastic Deformation Methods Effect on Ti13Nb13Zr**  
GÜNAY BULUTSUZ A., Kadir Ö., Witold C., Yurci M. E., Lewandowska M.  
Materials Science and Technology 2018, MS and T 2018, 14 - 18 October 2018
- V. **Ultrasonic Assistance for Severe Plastic Deformation Applications**  
GÜNAY BULUTSUZ A., Yilmazer H.  
1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), 22 - 24 March 2018
- VI. **Surface Modification of Ti6Al4V Type Dental Alloy in Acidic Medium**  
Gökçen E., Gürsoy Ö., GÜNAY BULUTSUZ A., Mercan Ç., Tan E., KATİBOĞLU A. B., Ağaoğlu G., Orhan G., DIŞPINAR D.  
1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), 22 - 24 March 2018
- VII. **High performance copper and copper alloys fabricated by severe plastic deformation**  
GÖKDUMAN A., YILMAZER H., GÖDE C., DİKİCİ B., DVORAK J., SKLENICKA V., GÜNAY BULUTSUZ A., BAKKALOĞLU A., GÖKER H.  
3rd International Iron Steel Symposium, Karabük, Turkey, 3 - 05 April 2017, pp.75-78

- VIII. **Geometrical Tolerances for Additive Manufacturing: An Overview**  
Sağbaşı B., Günay Bulutsuz A.  
2nd International Symposium on 3D Printing Technologies (3D-PTS2017), 3-4 April, 2017, Istanbul Turkey, İstanbul, Turkey, 3 - 04 April 2017, pp.1
- IX. **Ultra Fine Grained Pure Titanium Grade 4 Surface Morphologies as Dental Implant Materials**  
Günay Bulutsuz A., Yeprem H. A., Yurci M. E.  
Collaborative Conference on 3D & Materials Research, Seoul, South Korea, 20 - 24 June 2016
- X. **INFLUENCE OF SEVERE PLASTIC DEFORMATION ON Ti13Nb13Zr SURFACE MORPHOLOGY**  
GÜNAY BULUTSUZ A., YURCI M. E., LEWANDOWSKA M.  
XXI IMEKO World Congress "Measurement in Research and Industry", 30 August - 04 September 2015
- XI. **INVESTIGATION CMM MEASUREMENT PARAMETERS EFFECT TO THE MEASUREMENT ERROR**  
GÜNAY BULUTSUZ A., YURCI M. E., DURAKBAŞA M. N.  
XXI IMEKO World Congress "Measurement in Research and Industry", 30 September - 02 October 2015
- XII. **Estimation of Surface Modification Methods Effect on Topography of Dental Implants by Using Metrological Observation Techniques**  
GÜNAY BULUTSUZ A., ÇİĞDEM ÜNLÜ M., KARAPINAR G., KATİBOĞLU A. B., LEWANDOWSKA M.  
International Congress on Biomaterials & Biosensors, 16 - 19 April 2015
- XIII. **Investigation of Dynamic Fatigue Effect on Marginal Fit and Microgaps of Different Dental Implant Abutment Interfaces**  
MERCAN Ç. Ü., GÜNAY BULUTSUZ A., KATİBOĞLU A. B.  
5th International Advances in Applied Physics and Materials Science Congress & Exhibition, 16 - 19 April 2015
- XIV. **Measurement and Image Processing Evaluation of Surface Modifications of Dental Implants G4 Pure Titanium Created by Different Techniques**  
Bulutsuz A., Demircioglu P., Bogrekci I., Durakbasa M. N., Katiboglu A. B.  
4th International Congress in Advances in Applied Physics and Materials Science (APMAS), Fethiye, Turkey, 24 - 27 April 2014, vol.1653
- XV. **Surface Topographical Investigations of the Machining Effects on Turning with Coated Inserts for Different Materials**  
DEMİRCİOĞLU P., GÜNAY BULUTSUZ A., SAĞBAŞ B., BÖĞREKÇİ İ., DURAKBAŞA N.  
7 th International Conference and Exhibition on Design and Production of Machines and Dies/Molds, 20 - 23 June 2013
- XVI. **Determination of Cutting Tool Geometries with High Precise Measurement Techniques and Investigation of Their Effects on Workpiece Surface Properties**  
Durakbaşı N., Akdoğan A., Vanlı A. S., Günay Bulutsuz A.  
12th IMEKO TC 10 Workshop on Technical Diagnostics, Florence, Italy, 17 - 20 June 2013, pp.106-111
- XVII. **Calculation of measurement uncertainty for plastic (ABS) material in flexural testing**  
GÜNAY BULUTSUZ A., FANK S., GÜLMEZ T., DURAKBAŞA N.  
XX Imeko World Congress Metrology for Green Growth September, 9 - 14 September 2012
- XVIII. **THE OPTIMIZATION OF MEASUREMENT CALIBRATION PROCEDURE WITH HEURISTIC APPROACH**  
GÜNAY BULUTSUZ A., DEMİRCİOĞLU P., Cem Y., DURAKBAŞA N.  
INTERNATIONAL DOKTORAL SEMINAR, 20 - 22 May 2012

## Supported Projects

Günay Bulutsuz A., Şahin M., TÜBİTAK Project, 630 Paslanmaz Çeliğine Yüzey Modifikasyonu Uygulanması ve Korozyon Davranışının İncelenmesi, 2024 - 2024

Günay Bulutsuz A., Yılmaz H., TÜBİTAK International Bilateral Joint Cooperation Program Project, Yeni Nesil Ultra İnce Taneli Biyobozunur Üretilen Stentlerin Üretimi ve Karakterizasyonu, 2021 - 2024

Günay Bulutsuz A., Project Supported by Higher Education Institutions, Manufacturing New Generation Zn Based Biodegradable Implant Material By Means of Plastic Deformation, 2021 - 2023

Günay Bulutsuz A., Türkeli K., TUBITAK Project, Ulaşım Sektöründe Kullanıma Yönelik İnce Taneli Yüksek Dayanımlı Al Kompozit İmalatı ve Aşınma Davranışının İncelenmesi, 2021 - 2022

Günay Bulutsuz A., Demirtaş M., TUBITAK Project, Surface Modification of Ultra Fine Grained Pure Zn Implant Material and Investigation its Wear Degradation Behaviour for Orthopedic Applications, 2021 - 2022

Yılmaz H., Günay Bulutsuz A., Dikici B., Arısan E. D., Taşpınar M., Project Supported by Higher Education Institutions, Kemik defekt tedavilerinde kullanılacak ideal biyobozunurluk ve yüksek mukavemet sergileyen biyobozunur nanokompozitlerin geliştirilmesi ve in vitro karakterizasyon çalışmaları, 2018 - 2021

Günay Bulutsuz A., Özyurt H., TUBITAK Project, BIYOMEDİKAL DENTAL İMPLANT KULLANIMINA UYGUN FONKSİYONEL YÜZEY İMALATI: ÇÖZÜNEBİLİR KITOSAN KULLANARAK YÜZEYLERİN BSA KAPLAMA PARAMETRELERİN ARASTIRILMASI, 2019 - 2020

Günay Bulutsuz A., Katiboğlu A. B., Project Supported by Higher Education Institutions, Titanyum diş implantlarına uygulanan asitle dağlama (SLA=Sounded Blasted Large Grid Asid Etched) yüzey işlemlerinin karşılaştırılması ve geliştirilmesi, 2019 - 2020

GÜNAY BULUTSUZ A., TUBITAK Project, Biyomedikal Alanda Kullanılan Saf Titanyuma Ultrasonik Titreşim Etkisi Altında Aşırı Plastik Deformasyon Uygulaması, 2018 - 2019

AKDOĞAN A., GÜNAY BULUTSUZ A., Project Supported by Higher Education Institutions, Kesici Takım Uç Geometrilerinin Üç Boyutlu Modern Ölçme Tekniği Metotları ile Yüksek Hassasiyette Tespiti ve İş Parçası Yüzey Dokusuna Etkilerinin Araştırılması, 2012 - 2014

GÜNAY BULUTSUZ A., EU Supported Other Project, Ortopedi Alanında Kullanılan Titanyum Bazlı Biyoyumlu İnovatif Yapılar için Akademi ve Endüstri Temel Eğitim Ağı, 2011 - 2014

## **Scientific Refereeing**

MATERIALS SCIENCE & ENGINEERING A: STRUCTURAL MATERIALS: PROPERTIES, MICROSTRUCTURE AND PROCESSING, Journal Indexed in SCI-E, November 2023

JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, Journal Indexed in SCI-E, February 2022

PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART B-JOURNAL OF ENGINEERING MANUFACTURE, SCI Journal, December 2021

JOURNAL OF TESTING AND EVALUATION, SCI Journal, November 2021

SCIENCE PROGRESS, Journal Indexed in SCI-E, October 2021

JOURNAL OF TESTING AND EVALUATION, SCI Journal, September 2021

ADVANCED ENGINEERING MATERIALS, SCI Journal, September 2021

MATERIALS RESEARCH-IBERO-AMERICAN JOURNAL OF MATERIALS, SCI Journal, May 2021

METALS AND MATERIALS INTERNATIONAL, SCI Journal, February 2021

MATERIALS RESEARCH-IBERO-AMERICAN JOURNAL OF MATERIALS, SCI Journal, February 2021

JOURNAL OF COMPOSITE MATERIALS, SCI Journal, July 2020

Proceedings Of The Institution Of Mechanical Engineers Part B-Journal Of Engineering Manufacture, SCI Journal, April 2020

METALLURGICAL TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, SCI Journal, March 2020

ADVANCED ENGINEERING MATERIALS, SCI Journal, February 2020

Sigma Journal of Engineering and Natural Sciences , Journal Indexed in ESCI, September 2019

Sigma Journal of Engineering and Natural Sciences, Journal Indexed in ESCI, May 2019

ADVANCED ENGINEERING MATERIALS, SCI Journal, January 2019

JOURNAL OF TESTING AND EVALUATION, SCI Journal, November 2018

MEASUREMENT, SCI Journal, January 2018

TUBITAK Project, 1002 - Quick Support Program, Yildiz Technical University, Turkey, January 2018

## **Mobility Activity**

Erasmus Programme, Guest Researcher, University of Southampton, England, 2017 - 2017

Other, Get Education, Universitaet Wien, Austria, 2014 - 2014

Erasmus Programme, Get Education, Technische Universitaet Wien, Austria, 2008 - 2009

## **Metrics**

Publication: 51

Citation (WoS): 149

Citation (Scopus): 238

H-Index (WoS): 6

H-Index (Scopus): 7

## **Scholarships**

DAAD- Deutscher Akademischer Austauschdienst, Other International Organizations, 2019 - 2020

2211-A Genel Yurt İçi Doktora Bursu, TUBITAK, 2013 - 2017

Maria Curie-Early Stage Researcher Scholarship, Other International Organizations, 2014 - 2014