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### International Researcher IDs

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ScopusID: 57934672900

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### Education Information

Doctorate, Yıldız Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, Turkey 2022 - Continues

Postgraduate, Konya Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2019 - 2022

Undergraduate Double Major, Selcuk University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, Turkey 2017 - 2019

Undergraduate, Selcuk University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2014 - 2019

### Dissertations

Postgraduate, EXPERIMENTAL AND NUMERICAL INVESTIGATION OF DAMAGE STATE OF Ti-6Al-4V ALLOY, Konya Technical University, Faculty Of Engineering, Department Of Mechanical Engineering, 2022

### Research Areas

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

### Academic Titles / Tasks

Research Assistant, Yıldız Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2021 - Continues

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

- Machining and Sustainability Performance Comparison for the Milling Process of Al6082 Alloy Under Various Minimum Quantity Lubrication Conditions**  
Yapan Y. F., Türkeli K., Emiroğlu U., Bahçe E., Uysal A.

International Journal of Precision Engineering and Manufacturing - Green Technology, vol.12, no.2, pp.409-430, 2025 (SCI-Expanded)

- II. **A novel approach to enhance formability in Ti-6Al-4V alloy: Experimental investigations and microstructural analysis of pulsating tensile test**  
Korkmaz H. G., Toros S., Korkmaz H. G., Türköz M., YAPAN Y. F.  
CIRP Journal of Manufacturing Science and Technology, vol.55, pp.98-107, 2024 (SCI-Expanded)
- III. **The effects of minimum quantity lubrication parameters on the lubrication efficiency in the turning of plastic mold steel**  
Hamdi A., YAPAN Y. F., UYSAL A., Merghache S. M.  
International Journal of Advanced Manufacturing Technology, vol.132, no.11-12, pp.5803-5821, 2024 (SCI-Expanded)
- IV. **Experimental and numerical investigation of the damage state of Ti-6Al-4V alloy sheet in the tensile test, hydraulic bulging, and hydroforming processes**  
Yapan Y. F., Korkmaz H. G., Toros S., Türköz M.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.1, no.1, pp.1-21, 2024 (SCI-Expanded)
- V. **Enhancing formability of Ti-6Al-4V cylindrical cups by pulsating hydroforming process: Experimental, numerical and microstructural investigations**  
Öztürk O., Aydın M., Gökçepinar Ö. F., İlbeyli H. M., Korkmaz H. G., Yapan Y. F., Dilmeç M., Halkacı H. S., Kotan H., Livatyahı H., et al.  
ENGINEERING SCIENCE AND TECHNOLOGY, AN INTERNATIONAL JOURNAL, vol.50, pp.1-15, 2024 (SCI-Expanded)
- VI. **Influence of singular and dual MQL nozzles on sustainable milling of Al6061-T651 in different machining environments**  
Cönger D. B., Yapan Y. F., Emiroğlu U., Uysal A., Altan E.  
JOURNAL OF MANUFACTURING PROCESSES, vol.109, pp.524-536, 2024 (SCI-Expanded)
- VII. **Investigation of ultrasonic vibration assisted orthogonal turning under dry and minimum quantity lubrication conditions and performing sustainability analyses**  
Duman E., Yapan Y. F., Salvi H., Sofuoğlu M. A., Khanna N., Uysal A.  
JOURNAL OF CLEANER PRODUCTION, vol.434, pp.1-16, 2024 (SCI-Expanded)
- VIII. **Investigation of MQL and CNC turning parameters on the machinability of unreinforced polypropylene: study of surface roughness, temperature, and specific cutting energy**  
Hamdi A., Yapan Y. F., Uysal A., Merghache S. M.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.130, pp.717-730, 2024 (SCI-Expanded)
- IX. **Sustainability assessment and optimization for milling of compacted graphite iron using hybrid nanofluid assisted minimum quantity lubrication method**  
Demir U., Yapan Y. F., Uysal A., Uslu Uysal M.  
SUSTAINABLE MATERIALS AND TECHNOLOGIES, vol.38, pp.1-16, 2023 (SCI-Expanded)
- X. **Multi-objective analysis and optimization of energy aspects during dry and MQL turning of unreinforced polypropylene (PP): an approach based on ANOVA, ANN, MOWCA, and MOALO**  
Hamdi A., Yapan Y. F., Uysal A., Abderazek H.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.1, pp.1-18, 2023 (SCI-Expanded)
- XI. **Microstructural Characterization of Improved Formability of Ti-6Al-4V Sheet by Pulsating Hydraulic Bulging at Room Temperature**  
Yapan Y. F., Öztürk O., Türköz M., Dilmeç M., Livatyahı H., Halkacı H. S., Kotan H.  
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.32, pp.6258-6269, 2023 (SCI-Expanded)
- XII. **Assessment of turning AISI 316L stainless steel under MWCNT-reinforced nanofluid-assisted MQL and optimization of process parameters by NSGA-II and TOPSIS**  
Oussama B., Yapan Y. F., Uysal A., Abdelhakim C., Mourad N.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.1, pp.1-14, 2023 (SCI-Expanded)
- XIII. **Orthogonal turning of AISI 310S austenitic stainless steel under hybrid nanofluid-assisted MQL and**

### **a sustainability optimization using NSGA-II and TOPSIS**

Saatçi E., Yapan Y. F., Uslu Uysal M., Uysal A.

SUSTAINABLE MATERIALS AND TECHNOLOGIES, vol.36, pp.1-18, 2023 (SCI-Expanded)

### **XIV. Investigation on the effect of hybrid nanofluid in MQL condition in orthogonal turning and a sustainability assessment**

Usluer E., Emiroğlu U., Yapan Y. F., Kshitij G., Khanna N., Sarıkaya M., Uysal A.

SUSTAINABLE MATERIALS AND TECHNOLOGIES, vol.36, pp.1-14, 2023 (SCI-Expanded)

## **Articles Published in Other Journals**

### **I. Examining the Effect of the Fe<sub>3</sub>O<sub>4</sub>-Doped Nanofluid MQL Method on the Machining Performance of Al-Mg-Si Alloy**

Yücel M., Aydın A., Sağdıç Ö. F., Yapan Y. F., Uysal A.

Advances in Machinery, Materials Science and Engineering Application X, vol.58, pp.148-153, 2024 (Scopus)

### **II. Experimental investigation and optimization of hybrid turning of Ti6Al7Nb alloy under nanofluid based MQL by TOPSIS method**

DUMAN E., YAPAN Y. F., SOFUOĞLU M. A.

Journal of Advances in Manufacturing Engineering, vol.4, no.2, pp.35-45, 2023 (Peer-Reviewed Journal)

### **III. Surface Roughness Assessment After Milling of Pure and Carbon Black Reinforced Polypropylene Materials**

Akn A. H., Yapan Y. F., Kusyj Y., Ivanov V., Uysal A.

LECTURE NOTES IN MECHANICAL ENGINEERING, vol.1, pp.251-263, 2023 (Scopus)

### **IV. Ultra Yüksek Basınçta Çalışan Kalın Cidarlı Silindirlerin Tasarımına Etki Eden Parametrelerin Sayısal ve Analitik Olarak Araştırılması**

AYDIN M., TÜRKÖZ M., YAPAN Y. F.

SELCUK UNIVERSITY JOURNAL OF ENGINEERING, SCIENCE AND TECHNOLOGY, vol.10, no.2, pp.412-424, 2022 (Peer-Reviewed Journal)

## **Books**

### **I. Ultrasonic Vibration-Assisted Machining with Minimum Quantity Lubrication for Aerospace Materials**

Duman E., Yapan Y. F., Uysal A., Sofuoğlu M. A.

in: Advances in Manufacturing for Aerospace Alloys, Selim Gürgen, Editor, Springer Nature, Eskişehir, pp.47-76, 2024

## **Papers Published in Refereed Scientific Meetings**

### **I. CoCoSo Method-Based Evaluation of Cutting Parameters in Turning of AISI 1040 Steel Under Plain and Nano MoS<sub>2</sub> Reinforced Cutting Fluid Assisted MQL Methods**

Günay Y., YAPAN Y. F., Dzhemalyadinov R., Dzhemilov E., UYSAL A.

6th Grabchenko's International Conference on Advanced Manufacturing Processes, InterPartner 2024, Odessa, Ukraine, 10 - 13 September 2024, pp.290-299

### **II. ANALYSIS AND OPTIMIZATION OF MILLING PROCESS OF DIN 1.2738 MOLD STEEL USING NANOFLUID ASSISTED MQL METHOD**

AYDIN M., GÜNAY Y., YAPAN Y. F., LİVATYALI H., UYSAL A.

Proceedings of 12th UTIS International Congress on Machining, Antalya, Turkey, 1 - 03 November 2024, vol.1, pp.79-92

### **III. Investigation of the microstructural reasons for the increase in formability of Ti-6Al-4V alloy by**

### **pulsating hydraulic bulging**

YAPAN Y. F., ÖZTÜRK O., TÜRKÖZ M., DİLMEÇ M., LİVATYALI H., HALKACI H. S., KOTAN H.

Materials Science and Engineering Congress (MSE), Darmstadt, Germany, 27 - 29 September 2022

- IV. **Tüp Hidroşekillendirmede Yükleme Profillerinin Bulanık Mantık Kontrol Algoritması ile Belirlenmesi**  
Yapan Y. F., Türköz M., Dilmeç M., Halkacı H. S.  
19. Uluslararası Makina Tasarım ve İmalat Kongresi, Nevşehir, Turkey, 31 August - 03 September 2022, pp.704-719
- V. **Determination of appropriate quasi-static constitutive equation for the Ti-6Al-4V alloy**  
Yapan Y. F., Türköz M.  
International Conference on Applied Engineering and Natural Sciences (ICAENS), Konya, Turkey, 20 - 23 July 2022, pp.2400-2403
- VI. **Investigation on Effect of Shrinkage Allowance to the Fatigue Life of Compound Cylinders Operating at High Pressure**  
Aydın M., Yapan Y. F., Türköz M.  
International Conference on Engineering Technologies (ICENTE'20), Konya, Turkey, 19 - 21 November 2020, pp.370-374

## **Supported Projects**

Uysal A., Livatyali H., Bayraktar E., TUBITAK Project, Real-time Prediction of Tool Wear, Surface Roughness, and Carbon Emissions Based on Power Consumption with a Hybrid Deep Learning-Based Model in Machining Process, 2024 - 2027

Uysal A., Sofuoğlu M. A., TUBITAK Project, Investigation, Modelling and Optimization of Sustainable Machining of Biomedical Ti-6Al-7Nb Alloy with Ultrasonic Vibration Assisted Nano Graphene Reinforced Nanofluid Based MQL Method, 2023 - 2025

UYSAL A., USLU UYSAL M., YAPAN Y. F., Project Supported by Higher Education Institutions, Ti6Al7Nb Alaşımının Ultrasonik Titreşim Destekli MMY Yöntemiyle Tornalama Performansının İncelenmesi, 2023 - 2024

Yapan Y. F., Ergun A., TUBITAK Project, Gerilme Gevşemesinin Magnezyum Alaşımının Şekillendirilebilirliğine ve Mikroyapısına Etkisi, 2023 - 2024

Türköz M., Livatyali H., Dilmeç M., Kotan H., Halkacı H. S., TUBITAK Project, Improving Formability of Ti-6Al-4V Alloy Using the Pulsating Sheet Hydroforming Process and Associating with Microstructure, 2020 - 2023

Yapan Y. F., Türköz M., Project Supported by Higher Education Institutions, EXPERIMENTAL AND NUMERICAL INVESTIGATION OF DAMAGE STATE OF Ti-6Al-4V ALLOY, 2021 - 2022

Halkacı H. S., Türköz M., Dilmeç M., TUBITAK Project, Increasing Formability by Optimizing Adaptive Control of Loading Curves in Double-Sided Sheet Hydroforming , 2018 - 2020

## **Activities in Scientific Journals**

Journal of Advances in Manufacturing Engineering, Assistant Editor/Section Editor, 2024 - Continues

## **Scientific Research / Working Group Memberships**

Yildiz Technical University Machining Science And Sustainability Research Group, Yıldiz Technical University, Türkiye, <http://www.massus.yildiz.edu.tr/>, 2023 - Continues

## **Metrics**

Publication: 25

Citation (WoS): 81

Citation (Scopus): 85

H-Index (WoS): 6

H-Index (Scopus): 6

## **Scholarships**

2250 - Performance-Based Scholarships Programme for PhD and Post-Doc Scholars, TUBITAK, 2023 - 2024

2250 - Performance-Based Scholarships Programme for PhD and Post-Doc Scholars, TUBITAK, 2023 - 2023