

## Res. Asst. BERKAY KARAÇOR

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Cukurova University, Mühendislik Fakültesi, Otomotiv Mühendisliği, Turkey 2020 - Continues

Postgraduate, Cukurova University, Fen Bilimleri Enstitüsü, Otomotiv Mühendisliği, Turkey 2017 - 2020

Undergraduate, Cukurova University, Mühendislik Fakültesi, Otomotiv Mühendisliği, Turkey 2012 - 2017

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Vocational Training, INTRODUCTION TO ANSYS MECHANICAL, ANOVA, 2018

Occupational Health and Safety, İş Sağlığı ve Güvenliği Uzmanı-C Sınıfı, İris Akademi, 2017

Vocational Training, Taşlama ve Kesme Taşlarının Güvenli ve Verimli Kullanımı, PFERD Tools, 2016

Vocational Training, 3DS MAX Eğitimi, CEO Kariyer Geliştirme ve Planlama Merkezi, 2014

Vocational Training, CATIA Eğitimi, CEO Kariyer Geliştirme ve Planlama Merkezi, 2013

### Dissertations

Postgraduate, The Usage of Natural Fiber Reinforced Hybrid Composite Materials as an Alternative to Automobile Interior Plastics, Cukurova University, Fen Bilimleri Enstitüsü, Otomotiv Mühendisliği, 2020

### Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Composites, Engineering and Technology

### Academic Titles / Tasks

Research Assistant, Cukurova University, Mühendislik Fakültesi, Otomotiv Mühendisliği, 2018 - Continues

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

- I. **The influence of hybridization and different manufacturing methods on the mechanical properties of the composites reinforced with basalt, jute, and flax fibers**  
KARAÇOR B., ÖZCANLI M., SERİN H.  
Iranian Polymer Journal (English Edition), vol.33, no.3, pp.289-304, 2024 (SCI-Expanded)
- II. **Hybrid jute/carbon fiber composites: optimum post-curing time**  
Karaçor B., Özcanlı M., Kumlu U.  
IRANIAN POLYMER JOURNAL (ENGLISH EDITION), vol.32, no.11, pp.1443-1454, 2023 (SCI-Expanded)
- III. **Properties of basalt/aramid fiber reinforced hybrid composites compared to carbon fiber composites**  
Çelik O., Yaşar A., Karaçor B.  
POLYMER COMPOSITES, vol.44, no.6, pp.3509-3521, 2023 (SCI-Expanded)
- IV. **Thermal and mechanical characteristic investigation of the hybridization of basalt fiber with aramid fiber and carbon fiber**  
KARAÇOR B., ÖZCANLI M.  
POLYMER COMPOSITES, vol.43, no.11, pp.8529-8544, 2022 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Short Review: The Use and Application of Matrix Resins Formed with Some Plant-Based Oils in Bio-Composite Materials**  
Karaçor B., Özcanlı M.  
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.12, no.3, pp.1315-1333, 2024 (Peer-Reviewed Journal)
- II. **Investigation of the Use of Hybrid Composite Materials Formed Using Two Different Resins in Vehicle Bumpers**  
Yalçın F., Özcanlı M., Karaçor B.  
Osmaniye Korkut Ata Üniversitesi Fen Bilimleri Enstitüsü Dergisi (Online), vol.7, no.2, pp.751-766, 2024 (Peer-Reviewed Journal)
- III. **Researching the Current Status of the Universities of Mechanical Engineering Education in Turkey**  
KARACOR B.  
Üniversite Araştırmaları Dergisi (Online), vol.6, no.2, pp.191-198, 2023 (Peer-Reviewed Journal)
- IV. **Analysis of Mechanical Properties of Flax/Carbon Fiber Reinforced Hybrid Composites Produced Using Two Different Production Methods**  
Karaçor B., Özcanlı M.  
Journal of Engineering Sciences and Design, vol.11, no.2, pp.459-473, 2023 (Peer-Reviewed Journal)
- V. **Examination of Fiber Reinforced Composite Materials**  
Karaçor B., Özcanlı M.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.36, no.1, pp.301-320, 2023 (Scopus)
- VI. **Characterization Of Jute/Aramid Hybrid Composite Materials with Using Different Resins**  
Karaçor B., Özcanlı M.  
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.26, no.5, pp.915-930, 2022 (Peer-Reviewed Journal)
- VII. **Evaluation of Mechanical Properties of Intraply Hybrid Carbon/Aramid Composite Materials**  
Karaçor B., Özcanlı M.  
Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, vol.27, no.2, pp.537-556, 2022 (Peer-Reviewed Journal)
- VIII. **Post curing temperature effect on mechanical characterization of jute/basalt fiber reinforced hybrid composites**  
Karaçor B., Özcanlı M.  
International Advanced Researches and Engineering Journal, vol.6, no.2, pp.90-99, 2022 (Peer-Reviewed Journal)
- IX. **The effect of use of different types of matrix material on mechanical characteristics in jute/carbon fiber reinforced hybrid composites**

- Karaçor B., Özcanlı M.  
Niğde Üniversitesi Mühendislik Bilimleri Dergisi, vol.11, no.2, pp.439-448, 2022 (Peer-Reviewed Journal)
- X. **Effect of Various Matrix Materials on Mechanical Properties of Basalt/Jute/Glass Fiber Reinforced Hybrid Composites**  
Karaçor B., Özcanlı M.  
Çukurova Üniversitesi Mühendislik Fakültesi dergisi, vol.36, no.4, pp.941-954, 2021 (Peer-Reviewed Journal)
- XI. **Different Curing Temperature Effects on Mechanical Properties of Jute/Glass Fiber Reinforced Hybrid Composites**  
Karaçor B., Özcanlı M.  
International Journal of Automotive Science and Technology, vol.5, no.4, pp.358-371, 2021 (Peer-Reviewed Journal)
- XII. **Feasibility of a Composite Material Formed with a Waste Granular Rubber Tire on Racing Vehicle Aerodynamic Wings**  
Karaçor B., Akar M. A., Özcanlı M., Serin H., Baş O.  
Osmaniye Korkut Ata Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.3, no.2, pp.26-31, 2020 (Peer-Reviewed Journal)
- XIII. **Investigation of Use of Hybrid Composite Materials in Automobile Interior**  
Karaçor B., Özcanlı M.  
International Journal of Automotive Engineering and Technologies, vol.9, no.4, pp.214-228, 2020 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Case Study: Fatigue Analysis Using Different Material in Vehicle Control Arm Design**  
Karaçor B., Demir S., Özcanlı M.  
11. International European Congress on Advanced Studies in Basic Sciences, Rome, Italy, 11 - 13 November 2024, pp.94-105
- II. **Effect of Using Different Hole Diameters and Different Materials in Brake Discs on Thermal Analysis**  
Karaçor B., Avkan İ., Özcanlı M.  
11. International European Congress on Advanced Studies in Basic Sciences, Rome, Italy, 11 - 13 November 2024, pp.395-410
- III. **Modal Analysis Study on Different Mini Electric Vehicle Rim Designs**  
Karaçor B., Kaysadı K., Özcanlı M.  
6th International Congress on Contemporary Scientific Research, Paris, France, 25 - 28 October 2024, pp.943-967
- IV. **A Fatigue Analysis Study: New Generation Mini Electric Rim Designs**  
Karaçor B., Gökçe Y. E., Özcanlı M.  
6th International Congress on Contemporary Scientific Research, Paris, France, 25 - 28 October 2024, pp.968-989
- V. **Fatigue Analysis of the Rim Designed for Mini Electric Vehicle**  
Karaçor B., Kaysadı K., Özcanlı M.  
6. International Mediterranean Scientific Research Congress, Rome, Italy, 13 - 15 August 2024, pp.208-209
- VI. **The Effect of Using Different Materials in Electric Vehicle Rims on Vibration Behavior**  
Karaçor B., Gökçe Y. E., Özcanlı M.  
6. International Mediterranean Scientific Research Congress, Rome, Italy, 13 - 15 August 2024, pp.210-211
- VII. **Weight Reduction Using Ultra High Strength Steel (UHSS) in Semi Trailer Chassis**  
Talas T., Karaçor B., Özcanlı M.  
10. International European Congress on Advanced Studies in Basic Sciences , Amsterdam, Netherlands, 26 - 28 July 2024, pp.1112-1128
- VIII. **Effect of Different Geometric Designs and Change of Materials on Piston Head Thermal Analysis**  
Karaçor B., Avkan İ., Özcanlı M.  
10. International European Congress on Advanced Studies in Basic Sciences , Amsterdam, Netherlands, 26 - 28 July

2024, pp.386-401

- IX. An Optimization Study: Examining Different Materials Usage in the Truck Chassis**  
Karaçor B., Aslan A., Özcanlı M., Kılıncı Ö.  
6th International Conference on Global Practice of Multidisciplinary Scientific Studies, Lisbon, Portugal, 9 - 16 April 2024, pp.2006-2033
- X. A Modal Analysis Study Using Different Materials in the Formula Student Car Chassis**  
Karaçor B., Elçim M. M., Özcanlı M.  
6th International Conference on Global Practice of Multidisciplinary Scientific Studies, Lisbon, Portugal, 9 - 16 April 2024, pp.1982-2005
- XI. Investigation of fatigue analysis in different designs and materials of commercial vehicle brake discs**  
Karaçor B., Özcanlı M., Çeliktöpus Ç.  
Ankara International Congress on Scientific Research-IX, Ankara, Turkey, 26 - 29 December 2023, pp.179-198
- XII. A Case Study: Examining Vibration Analysis of Leaf Springs with Design Optimization**  
Karaçor B., Özcanlı M., Elçim M. M.  
Ankara International Congress on Scientific Research-IX, Ankara, Turkey, 26 December 2023, pp.199-212
- XIII. Crashworthiness analysis of circular and elliptical cross-sectional beams in vehicle door**  
Kumlu U., Karaçor B., Özkeser B., Aslan A.  
IV. International Siirt Conference on Scientific Research, Siirt, Turkey, 17 - 18 November 2023, pp.287-300
- XIV. Examination of different material designs through finite element analysis on the military vehicle platform**  
Kumlu U., Karaçor B., Kılıncı Ö., Aslan A.  
IV. International Siirt Conference on Scientific Research, Siirt, Turkey, 17 - 18 November 2023, pp.268-286
- XV. Investigation of fatigue life using finite element method with the use of different materials in leaf spring design**  
Karaçor B., Hükümdar Ö., Özcanlı M.  
9th International Black Sea Coastline Countries Scientific Research Conference, Ankara, Turkey, 10 - 11 August 2023, pp.140-154
- XVI. A case study: Vibration analysis by finite element method in electric micro vehicle chassis**  
Karaçor B., Hükümdar Ö., Özcanlı M.  
9th International Black Sea Coastline Countries Scientific Research Conference, Ankara, Turkey, 10 - 11 August 2023, pp.412-426
- XVII. Effects of using different materials on the crankshaft in modal analysis**  
Karaçor B., Hükümdar Ö., Özcanlı M.  
4th International Black Sea Modern Scientific Research Congress, Rize, Turkey, 06 June 2023, pp.1611-1633
- XVIII. Thermal analysis on brake disc structures of different geometric design shapes and material usage**  
Karaçor B., Hükümdar Ö., Özcanlı M.  
4th International Black Sea Modern Scientific Research Congress, Rize, Turkey, 06 June 2023, pp.1634-1648
- XIX. Modal analysis and structural simulation of heavy commercial vehicle chassis**  
Karaçor B., Özcanlı M., Hükümdar Ö.  
3th International Mediterranean Congress, Mersin, Turkey, 17 - 18 April 2023, pp.582-602
- XX. A case study: Fatigue analysis simulation using different materials on the front axle**  
Karaçor B., Özcanlı M., Hükümdar Ö.  
3th International Mediterranean Congress, Mersin, Turkey, 17 - 18 April 2023, pp.568-581
- XXI. Thermogravimetric analysis in nitrogen ambient of copper/titania selective catalytic reduction catalyst poisoned with calcium**  
Özarslan H., Karaçor B.  
3th International Siirt Scientific Research Congress, Siirt, Turkey, 18 - 19 November 2022, pp.586-595
- XXII. The effect of the use of different materials and design optimization in the connecting rod on fatigue analysis**  
Karaçor B., Duman A. K., Özcanlı M.  
2nd International Congress on Multidisciplinary Natural Sciences(ICOMNAS 2022), 1 - 02 December 2022, pp.219-

- XXIII. **Ballistic evaluation of armor plates at different angles**  
Kumlu U., Akar M. A., Başer D., Hükümdar Ö., Karaçor B.  
2nd International Congress on Multidisciplinary Natural Sciences, Ankara, Turkey, 01 December 2022, pp.230-240
- XXIV. **A case study: Weight reduction studies on an electric micro car using different materials**  
Karaçor B., Hükümdar Ö., Göktepe S., Tombuloğlu A. Ç., Özcanlı M.  
3th International Siirt Scientific Research Congress, Siirt, Turkey, 18 November 2022, pp.2835-2848
- XXV. **Fatigue analysis and weight reduction studies in rear axle design using different materials**  
Karaçor B., Hükümdar Ö., Eşki Ü., Divanoğlu A., Özcanlı M.  
7th International Mediterranean Science and Engineering Congress(IMSEC 2022), Antalya, Turkey, 24 - 26 October 2022, pp.255-262
- XXVI. **The effect of air gap of multi-layered armour configuration during ballistic impact**  
Kumlu U., Aldatmaz İ., Akar M. A., Karaçor B., Ercan E. S., Erdal D.  
7th International Mediterranean Science and Engineering Congress (IMSEC 2022), Antalya, Turkey, 24 - 26 October 2022, vol.1, no.236, pp.565-570
- XXVII. **Effect of rotational thrust on different geometries in crashing boxes**  
Kumlu U., Erdal D., Karaçor B., Akar M. A.  
7th International Mediterranean Science and Engineering Congress (IMSEC 2022), Antalya, Turkey, 24 - 26 October 2022, vol.1, no.212, pp.508-514
- XXVIII. **Effect of cerium addition on thermogravimetric analysis of iron/titania catalyst for selective catalytic reduction system**  
Özarslan H., Karaçor B.  
7th International Mediterranean Science and Engineering Congress(IMSEC 2022), Antalya, Turkey, 24 - 26 October 2022, pp.189-192
- XXIX. **Investigation of high-strength steel usage in Cukurova 885 model backhoe loader boom**  
Gurbet Z., Karahan Ü., Pesen E., Karaçor B., Özcanlı M.  
7th International Mediterranean Science and Engineering Congress(IMSEC 2022), Antalya, Turkey, 24 - 26 October 2022, pp.574
- XXX. **Crashworthiness analysis of heavy truck chassis by using finite element analysis**  
Karaçor B., Kapulu İ., Kumlu U., Özcanlı M.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, pp.635-642
- XXXI. **Investigation of bucket teeth stress-deformation distribution by using ultra high strength material**  
Gurbet Z., Karaçor B., Özcanlı M.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, pp.590-594
- XXXII. **Investigation of modal analysis of connecting rod by using ultra- high strength steel**  
Karaçor B., Temiz F., Sonat S., Özcanlı M.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, pp.604-608
- XXXIII. **Ballistic performance of multi-layered armor steel plates**  
Karaçor B., Kartal K.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, pp.597-603
- XXXIV. **Investigation of fatigue behaviour of different materials on crankshaft**  
Karaçor B., Demirtaş F., Ata F., Özcanlı M.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, pp.579-584
- XXXV. **A case study: The use of different projectile types to determine the ballistic performance of armored plates**  
Karaçor B., Kazanlık C.

- 6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Antalya, Turkey, 25 - 27 October 2021, pp.669-674
- XXXVI. **Evaluation of ultra-high strength materials in heavy truck chassis**  
Karaçor B., Hükümdar Ö., Akdağcık D., Özcanlı M.  
6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Adana, Turkey, 25 - 27 October 2021, pp.585-589
- XXXVII. **Evaluation of ultra-high strength steel as a material for connecting rod**  
Çalık A., Karaçor B., Tosun E., Özcanlı M.  
5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Antalya, Turkey, 21 - 23 October 2020, pp.249-253
- XXXVIII. **Advanced steel applications for race car protection bars**  
Karaçor B., Özcanlı M.  
5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Antalya, Turkey, 21 - 23 October 2020, pp.245-248
- XXXIX. **Advanced steel usage as a crankshaft materials in internal combustion engines; A case study**  
Karaçor B., Özcanlı M., Akar M. A.  
5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Antalya, Turkey, 21 - 23 October 2020, pp.240-244
- XL. **Comparison of stainless steel and ultra-high strength steel usage as a piston head material in internal combustion engines**  
Özcanlı M., Akar M. A., Karaçor B.  
5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Antalya, Turkey, 21 - 23 October 2020, pp.254-258
- XLI. **Recycled composite usage for race car wing production: Effect of the surface roughness on aerodynamics**  
Akar M. A., Karaçor B., Özcanlı M., Serin H.  
4th International Symposium the Environment and the Industry, SIMI 2019, Bucuresti, Romania, 25 - 27 September 2019, pp.55
- XLII. **Ultra-high strength steel usage in a sedan car chassis: A theoretical study**  
Özcanlı M., Karaçor B., Akar M. A., Serin H.  
4th International Symposium the Environment and the Industry, SIMI 2019, Bucuresti, Romania, 25 - 27 September 2019, pp.56-57
- XLIII. **Investigation of stress and displacement distribution in ultra high strength steel car chassis**  
Karaçor B., Özcanlı M.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), Antalya, Turkey, 25 - 27 April 2019
- XLIV. **Comparison of St-52 steel and ultra-high strength steel as a of pipe type chassis material for formula student race car**  
Karaçor B., Özcanlı M., Akar M. A., Yıldızhan Ş., Serin H.  
4th International Mediterranean Science and Engineering Congress (IMSEC 2019), Antalya, Turkey, 25 - 27 April 2019, pp.671-674
- XLV. **Cotton/Epoxy Bio-Composite usage as an impact attenuator material for formula student race cars**  
ÖZCANLI M., KARAÇOR B., YILDIZHAN Ş., SERİN H.  
European Biotechnology Congress, Athens, Greece, 26 - 28 April 2018, vol.280

## Supported Projects

AKAR M. A., KARAÇOR B., Project Supported by Higher Education Institutions, Atık Lastik Granül Tabanlı Kompozit Malzemenin Yarıç Aracı Aerodinamik Kanatlarında Kullanımının Araştırılması, 2019 - 2020

ÖZCANLI M., KARAÇOR B., Project Supported by Higher Education Institutions, Investigation of Advanced High Strength

Steel Usage as Chassis Material in Automotive Industry, 2019 - 2020

## Metrics

Publication: 67

Citation (Scopus): 2

H-Index (Scopus): 1

## Congress and Symposium Activities

ANKARA INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH-IX, Attendee, Ankara, Turkey, 2023

IV. International Siirt Conference on Scientific Research, Attendee, Siirt, Turkey, 2023

9th International Black Sea Coastline Countries Scientific Research Conference, Attendee, Ankara, Turkey, 2023

4th International Black Sea Modern Scientific Research Congress, Attendee, Rize, Turkey, 2023

3th International Mediterranean Congress, Attendee, Mersin, Turkey, 2023

2nd International Congress on Multidisciplinary Natural Sciences (ICOMNAS 2022), Attendee, Ankara, Turkey, 2022

3. Uluslararası Siirt Bilimsel Arařtırmalar Kongresi, Attendee, Siirt, Turkey, 2022

7th International Mediterranean Science and Engineering Congress(IMSEC 2022), Attendee, Antalya, Turkey, 2022

6th International Mediterranean Science and Engineering Congress (IMSEC 2021), Attendee, Antalya, Turkey, 2021

5th International Mediterranean Science and Engineering Congress (IMSEC 2020), Attendee, Antalya, Turkey, 2020

INTERNATIONAL SYMPOSIUM THE ENVIRONMENT AND THE INDUSTRY, Attendee, Bucuresti, Romania, 2019

4th INTERNATIONAL MEDITERRANEAN SCIENCE AND ENGINEERING CONGRESS(IMSEC 2019), Attendee, Antalya, Turkey, 2019

European Biotechnology Congress, Attendee, Athens, Greece, 2018