## Res. Asst. BERKAY KARAÇOR

#### **Personal Information**

Office Phone: +90 322 338 6600 Extension: 3636

Email: bkaracor@cu.edu.tr

International Researcher IDs ORCID: 0000-0001-5208-366X

Publons / Web Of Science ResearcherID: J-2845-2018

Yoksis Researcher ID: 283408

#### **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**

 $Research\ Assistant,\ Cukurova\ University,\ M\"{u}hendislik\ Fak\"{u}ltesi,\ Otomotiv\ M\"{u}hendisli\breve{g}i,\ 2018\ -\ Continues$ 

## 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, pp.1443-1454, 2023 (SCI-Expanded)

III. Properties of basalt/aramid fiber reinforced hybrid composites compared to carbon fiber composites

Celik O., Yasar 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. 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)

II. 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)

III. 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)

IV. Examination of Fiber Reinforced Composite Materials

Karaçor B., Özcanlı M.

GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.36, no.1, pp.301-320, 2023 (Scopus)

V. 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)

VI. 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)

VII. 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)

VIII. 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)

IX. 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)

X. 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)

XI. 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)

XII. 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: Examining Vibration Analysis of Leaf Springs with Design Optimization KARAÇOR B., ÖZCANLI M., ELÇİM M. M.

ANKARA INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH-IX, Ankara, Turkey, 26 December 2023, pp.199-212

II. Investigation of fatigue analysis in different designs and materials of commercial vehicle brake discs KARAÇOR B., ÖZCANLI M., ÇELİKTOPUZ Ç.

ANKARA INTERNATIONAL CONGRESS ON SCIENTIFIC RESEARCH-IX, Ankara, Turkey, 26 - 29 December 2023, pp.179-198

III. 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

IV. Examination of different material designs through finite element analysis on the military vehicle platform

Kumlu U., Karaçor B., Kılınç Ö., Aslan A.

IV. International Siirt Conference on Scientific Research, Siirt, Turkey, 17 - 18 November 2023, pp.268-286

V. 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

VI. Investigation of fatigue life using finite element method with the use of different materials in leaf spring design

Karacor B., Hükümdar Ö., Özcanlı M.

9th International Black Sea Coastline Countries Scientific Research Conference, Ankara, Turkey, 10 - 11 August 2023, pp.140-154

VII. 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

VIII. 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

IX. 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

X. 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

XI. 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

XII. 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

XIII. 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

XIV. 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.219-229

XV. 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

XVI. 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

XVII. 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

XVIII. 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

XIX. 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

XX. 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

XXI. 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

XXII. 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

#### XXIII. 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

## XXIV. 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

#### XXV. 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

## XXVI. 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

## XXVII. 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

#### XXVIII. 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

#### XXIX. 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

# XXX. 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

### XXXI. 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

# XXXII. 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

## XXXIII. 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

### XXXIV. 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

XXXV. 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 Yarış 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: 56 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 Araştırmalar 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