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International Researcher IDs

ScholarID: WVI17X4AAAAJ

ORCID: 0000-0002-1594-5002

Publons / Web Of Science ResearcherID: AAE-5947-2022

ScopusID: 57205007096

Yoksis Researcher ID: 198792

Education Information

Post Doctorate, University of Maryland, College Park, Faculty of Engineering, Department of Mechanical Engineering, United States Of America 2023 - 2024

Doctorate, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey 2015 - 2021

Postgraduate, Gazi University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Turkey 2012 - 2015

Undergraduate, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey 2008 - 2012

Certificates, Courses and Trainings

Vocational Course, Laser Ignition Summer School 2018, National Institute for Laser, Plasma and Radiation Physics - Sibiu/Romanya, 2018

Vocational Course, International Combustion Institute Summer School on Near-Wall Reactive Flow, Technical University of Darmstadt, 2016

Vocational Course, International Combustion Institute Winter School on Combustion, Eindhoven University of Technology, 2016

Dissertations

Doctorate, BİR DİZEL MOTORDA ÇİFT YAKIT OLARAK PROPAN-DİZEL KULLANIMININ YANMA REJİMİNE, MOTOR PERFORMANSINA VE EMİSYON DEĞERLERİNE OLAN ETKİLERİNİN SAYISAL OLARAK İNCELENMESİ, Gazi University, Fen Bilimleri Enstitüsü, 2021

Postgraduate, Katalitik konvertör öncesinde ısıtmanın konvertör verime etkisinin sayısal olarak incelenmesi, Gazi University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2015

Research Areas

Energy, Renewable Energy Systems, Alternative Energy Resources, Fuels and Combustion, Internal Combustion Engines

Academic Titles / Tasks

Associate Professor, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2023 - Continues

Research Assistant PhD, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2021 - 2023

Research Assistant, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2014 - 2021

Courses

Makina Mühendisliği Laboratuvarı (ÖD), Undergraduate, 2023 - 2024

Internal Combustion Engines, Undergraduate, 2023 - 2024

Makina Mühendisliği Laboratuvarı (ÖD), Undergraduate, 2021 - 2022

Bitirme Tasarım Projesi II, Undergraduate, 2021 - 2022

ÖLÇME VE VERİ DEĞERLENDİRME, Undergraduate, 2021 - 2022

Bitirme Tasarım Projesi I, Undergraduate, 2021 - 2022

Advising Theses

Aktaş F., DİZEL MOTORLARDA TİO₂ NANOPARTİKÜLLERİNİN MOTOR PERFORMANSINA VE EMİSYON DEĞERLERİNE ETKİSİNİN DENEYSEL OLARAK İNCELENMESİ, Postgraduate, S.KOCA(Student), 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Thermal analysis of a refrigeration system integrated with a thermoelectric couple and microchannels using TiO₂-water nanofluid**
Elibol E. A., YILMAZOĞLU M. Z., AKSOY E., AKTAŞ F.
International Journal of Heat and Fluid Flow, vol.108, 2024 (SCI-Expanded)
- II. **Effect of using a ZnO-TiO₂/water hybrid nanofluid on heat transfer performance and pressure drop in a flat tube with louvered finned heat exchanger**
Elibol E. A., GÖNÜLAÇAR Y. E., AKTAŞ F., Tigli B.
Journal of Thermal Analysis and Calorimetry, vol.149, no.15, pp.8665-8680, 2024 (SCI-Expanded)
- III. **Role of spent FCC catalyst in pyrolysis and CO₂-assisted gasification of pinewood**
AKTAŞ F., Mavukwana A., Burra K. R. G., Gupta A. K.
Applied Energy, vol.366, 2024 (SCI-Expanded)
- IV. **Numerical investigation of the effect of swirl number on performance, combustion, and emissions characteristics in a converted heavy-duty natural gas engine**
Aktaş F.
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.24, no.3, pp.162-173, 2024 (SCI-Expanded)
- V. **Investigation of the effects of propane usage at different ratios and start of combustion time on performance, emission, and in-cylinder combustion characteristics in converting a diesel engine to a reactivity-controlled compression ignition** Dizel bir motorun reaktivite kontrollü sıkıştırma ateşlemeli bir motora dönüşümünde farklı oranlarda propan kullanımının ve yanma başlangıç zamanının performans, emisyon ve silindir içi yanma karakteristiklerine olan etkilerinin incelenmesi
Aktaş F., Yücel N.
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.39, no.2, pp.785-796, 2024 (SCI-Expanded)
- VI. **Experimental investigation on heat transfer and flow characteristics of TiO₂-water nanofluid in a heavy vehicle radiator**
Elibol E. A., Turgut O., Aktaş F., Senol H., Çelik A.
Journal of Thermal Analysis and Calorimetry, vol.148, no.3, pp.977-994, 2023 (Scopus)
- VII. **Numerical Investigation of Equivalence Ratio Effects on a Converted Diesel Engine Using Natural Gas**

- Aktas F.
JOURNAL OF ENERGY RESOURCES TECHNOLOGY, TRANSACTIONS OF THE ASME, vol.144, no.9, pp.1-9, 2022 (SCI-Expanded)
- VIII. **Spark ignition timing effects on a converted diesel engine using natural gas: A numerical study**
AKTAŞ F.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART D-JOURNAL OF AUTOMOBILE ENGINEERING, vol.236, no.9, pp.1949-1963, 2022 (SCI-Expanded)
- IX. **Colorless distributed combustion (CDC) effects on a converted spark-ignition natural gas engine**
AKTAŞ F., KARYEYEN S.
Fuel, vol.317, 2022 (SCI-Expanded)
- X. **Three-Dimensional Computational Fluid Dynamics Simulation and Mesh Size Effect of the Conversion of a Heavy-Duty Diesel Engine to Spark-Ignition Natural Gas Engine**
Aktaş F.
Journal Of Engineering For Gas Turbines And Power-Transactions Of The Asme, vol.144, no.6, pp.1-12, 2022 (SCI-Expanded)
- XI. **Experimental investigation of cold start emission using preheating system on the exhaust line at the idle conditions on a spark ignition engine**
AKTAŞ F., DİNLER N., KARAASLAN S., Turker A., YÜCEL N.
Sadhana - Academy Proceedings in Engineering Sciences, vol.46, no.3, 2021 (SCI-Expanded)
- XII. **EFFECTS OF PREHEATER LOAD AND LOCATION ON THE CATALYTIC CONVERTER EFFICIENCY DURING COLD START AND IDLING CONDITIONS**
DİNLER N., Taskin S., AKTAŞ F., KARAASLAN S., YÜCEL N.
ISI BILIMI VE TEKNIGI DERGISI-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.41, no.2, pp.239-247, 2021 (SCI-Expanded)
- XIII. **Effects of channel design and temperature on the performance of the catalytic converter**
DİNLER N., AKTAŞ F., YÜCEL N.
INTERNATIONAL JOURNAL OF GREEN ENERGY, vol.15, no.13, pp.813-820, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **0/1 and 3- dimensional cold flow analysis of a diesel engine: A case study**
Kethudaoglu G., Aktaş F., Karaaslan S., Dinler N.
International Journal of Automotive Science and Technology, vol.8, no.1, pp.142-149, 2024 (Scopus)
- II. **Investigation of the Effect of TiO₂ Nanoparticles on Engine Performance and Emission Characteristics in Diesel Engines**
Koca S., Zincirci O., AKTAŞ F.
International Journal of Automotive Science and Technology, vol.8, no.2, pp.242-251, 2024 (Scopus)
- III. **Effect of Spent Fluid Catalytic Cracking Catalysts on Syngas Yield during CO₂-Assisted Gasification of Solid Waste**
Mavukwana A., AKTAŞ F., Burra K. G., Sempuga C., Gupta A. K.
Chemical Engineering Transactions, vol.111, pp.673-678, 2024 (Scopus)
- IV. **Aerodynamic analysis of car rear spoiler with computational fluid dynamics for different angles and profiles**
Özetemel M. A., AKTAŞ F., YÜCEL N.
International journal of energy studies (Online), vol.8, no.4, pp.649-665, 2023 (Peer-Reviewed Journal)
- V. **Investigation of conversion of a diesel engine to homogeneous charge compression ignition engine using n-heptane: A zero-dimensional modeling**
KETHUDAOGLU G., Aktaş F., KARAASLAN S., Polat S., DINLER N.
International journal of energy studies (Online), vol.8, no.3, pp.535-556, 2023 (Peer-Reviewed Journal)
- VI. **Numerical Investigation of the Effects of Engine Speed on Performance and Combustion**

Characteristics on a Converted Spark-Ignition Natural Gas Engine

Aktaş F.

Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, vol.10, no.3, pp.613-626, 2022 (Peer-Reviewed Journal)

VII. Performance and emission prediction of hydrogen addition to natural gas powered engine using 0/1 dimensional thermodynamic simulation

Aktaş F.

INTERNATIONAL JOURNAL OF ENERGY STUDIES, vol.7, no.1, pp.67-81, 2022 (Peer-Reviewed Journal)

VIII. A 0/1-Dimensional Numerical Analysis of Performance and Emission Characteristics of the Conversion of Heavy-Duty Diesel Engine to Spark-Ignition Natural Gas Engine

Aktaş F.

International Journal of Automotive Science and Technology, vol.6, no.1, pp.1-8, 2022 (Peer-Reviewed Journal)

IX. Utilization of CFD for the Aerodynamic Analysis of a Subsonic Rocket

Aytac Z., Aktaş F.

JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.23, no.3, pp.879-887, 2020 (ESCI)

X. Numerical Investigation of the Effects of Different Percentage Ethanol and Methanol Addition on Performance and Emission Values of a Four Cylinder Diesel Engine at Full Load

AKTAŞ F., KARAASLAN S., Kilic M., YÜCEL N.

JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.22, no.4, pp.967-977, 2019 (ESCI)

XI. Soğuk Çalışma Durumunda Katalitik Konvertörün Tek Boyutlu Modellenmesi

Dinler N., Aktaş F., Bozkurt D., Karaaslan S., Yücel N.

Gazi Mühendislik Bilimleri Dergisi, vol.4, no.2, pp.108-114, 2018 (Peer-Reviewed Journal)

XII. Effects of Inlet Temperature and Channel Geometry on the Efficiency of a Catalytic Converter

Dinler N., Aktaş F., Yücel N.

Journal of Architecture and Engineering, vol.2, no.1, 2014 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. POLYETHYLENE TEREPHTHALATE GASIFICATION USING CO₂: IMPACT OF SFCC CATALYST CONTACT MODE AND AMOUNT

Aktaş F., Burra K. G., Gupta A. K.

ASME 2024 Power Conference, Washington, United States Of America, 15 - 18 September 2024, pp.1-6

II. TEMPERATURE AND POSITIONING EFFECTS OF SPENT FLUID CATALYTIC CRACKING CATALYST IN THE REACTOR ON PYROLYSIS OF POLYETHYLENE TEREPHTHALATE

Aktaş F., Burra K. G., Mavukwana A., Gupta A. K.

ASME 2024 Power Conference, Washington, United States Of America, 15 - 18 September 2024, pp.1-11

III. Effect of spent FCC catalyst during pyrolysis of Poly Ethylene Terephthalate

Aktaş F., Burra K. R. G., Gupta A. K.

AIAA SCITECH 2024 Forum, Florida, United States Of America, 8 January - 12 February 2024, pp.1-8

IV. Effect of Spent FCC Catalyst During Pyrolysis and CO₂-Assisted Gasification of Polyethylene Terephthalate

Mavukwana A., Aktaş F., Kiran B. G., Celestin S., Gupta A. K.

47th International Technical Conference on Clean Energy, Florida, United States Of America, 26 - 27 July 2023

V. Effect of Spent FCC Catalyst on CO₂-Assisted Gasification of Pinewood

Mavukwana A., Aktaş F., Burra K. G., Sempuga C., Gupta A. K.

47th International Technical Conference on Clean Energy, Florida, United States Of America, 23 - 27 July 2023

VI. 0/1 DIMENSIONAL ANALYSIS OF THE COMBUSTION MODEL EFFECT ON AN INTERNAL COMBUSTION ENGINE USING NATURAL GAS

Aktaş F.

6th INTERNATIONAL CONGRESS ON APPLIED SCIENCES, Edirne, Turkey, 6 - 08 May 2022, pp.25-26

- VII. **INVESTIGATION OF THE EFFECT OF USING PROPANE-DIESEL DUAL FUEL IN DIESEL ENGINE ON PERFORMANCE AND EMISSION VALUE**
Aktaş F., Yücel N.
ULUSLARARASI KATILIMLI 23.ISI BİLİMİ VE TEKNİĞİ KONGRESİ, Gaziantep, Turkey, 8 - 10 September 2021, pp.554-558
- VIII. **DOĞALGAZLI BUJİ ATEŞLEMELİ BİR MOTORA DÖNÜŞTÜRÜLMÜŞ DİZEL BİR MOTORDA SIKIŞTIRMA ORANI ETKİSİNİN İNCELENMESİ**
Aktaş F.
ULUSLARARASI KATILIMLI 23.ISI BİLİMİ VE TEKNİĞİ KONGRESİ, Gaziantep, Turkey, 8 - 10 September 2021, pp.1554-1558
- IX. **NUMERICAL INVESTIGATION OF THE EFFECT OF THE AIR/FUEL RATIO IN A NATURAL GAS POWERED CONVERTED COMPRESSION IGNITION ENGINE**
Aktaş F.
OTEKON 2020, Bursa, Turkey, 6 - 07 September 2021, pp.1065-1073
- X. **A Sustainable Building Design in Turkey**
Sökmener A. B., Yılmaz A., TURGUT O., AKTAŞ F., Yıldız F. H., Altuntaş B., Bozer O.
4th International Conference on Innovations and Emerging Trends in Mechanical Engineering, Ankara, Turkey, 26 - 27 March 2019
- XI. **The effect of the number of turbine blade on Gorlov turbine performance**
Yılmaz A., Bozer O., Kırkpınar H. A., AKTAŞ F., TURGUT O.
4th International Conference on Innovations and Emerging Trends in Mechanical Engineering, (IETME-2019), 27 - 28 March 2019
- XII. **Experimental investigation of the effects of sunflower and hazelnut oil usage on performance and emission values in a diesel engine**
Aslan G., AKTAŞ F., KARAASLAN S., DİNLER N., YÜCEL N.
7th European Conference on Renewable Energy Systems (ECRES 2019), 10 - 12 June 2019
- XIII. **Investigation of the Effects of the Use of Diesel-Ethanol Fuel Mixture as a Secondary Fuel on the Performance and Emission Values of a Dual-Fuel Compressed-Ignition Engine**
AKTAŞ F., KARAASLAN S., YÜCEL N.
7th European Conference on Renewable Energy Systems (ECRES 2019), 10 - 12 June 2019
- XIV. **Numerical Simulation of Heat Exchanger for Jatropha Oil Biodiesel Fuel Preheating**
AKTAŞ F., KARAASLAN S., YÜCEL N.
4th International Conference on Engineering and Natural Sciences (ICENS 2018), 2 - 06 May 2018
- XV. **INFLUENCE OF ETHANOL AND METHANOL ADDITIVES ON A DIESEL ENGINE PERFORMANCE CHARACTERISTICS: 1-D MODELLING**
Kılıç M., AKTAŞ F., KARAASLAN S., YÜCEL N.
4th International Conference on Engineering and Natural Sciences (ICENS 2018), 2 - 06 May 2018
- XVI. **ÜÇ YOLLU KATALİTİK KONVERTÖR GİRİŞ ÇIKIŞ AÇILARI ETKİLERİNİN SAYISAL OLARAK İNCELENMESİ**
AKTAŞ F., YARAR A., DİNLER N., YÜCEL N.
Ulusal Isı Bilimi ve Tekniği Kongresi, Ankara, Turkey, 13 - 16 September 2017
- XVII. **Katalitik Konvertör Modellemesinde Kullanılan Reaksiyon Modellerinin Etkilerinin Sayısal İncelenmesi**
DİNLER N., AKTAŞ F., YÜCEL N.
OTEKON'14 7. Otomotiv Teknolojileri Kongresi, Turkey, 26 - 27 May 2014

Supported Projects

Aktaş F., Dinler N., Karaaslan S., Polat S., TUBITAK Project, Hcci Dönüşümü Yapılan Bir Dizel Motorda Farklı Yakıt Karışımlarının Ve Motor Çalışma Senaryolarının Motor Performansına Ve Egzoz Emisyonlarına Etkisinin Deneysel Ve

Sayısal Olarak İncelenmesi, 2022 - 2024

AKTAŞ F., AKSOY A. E., ELİBOL E. A., TERZİOĞLU İ. Y., ÇELİK A. F., Project Supported by Higher Education Institutions, Ağır Taşıt Radyatörlerinde Magnezyum Hidroksit (MgOH₂)-su Çinko Oksit (ZnO)-su ve Alüminyum Oksit (Al₂O₃)-su Nanoakışkanlarının Soğutma Performansına Etkilerinin Deneysel Olarak İncelenmesi, 2022 - 2023

YÜCEL N., AKTAŞ F., DİNLER N., KARAASLAN S., Project Supported by Higher Education Institutions, BİR DİZEL MOTORDA ÇİFT YAKIT OLARAK PROPAN-DİZEL KULLANIMININ YANMA REJİMİNE, MOTOR PERFORMANSINA VE EMİSYON DEĞERLERİNE OLAN ETKİLERİNİN SAYISAL OLARAK İNCELENMESİ, 2019 - 2021

Dinler N., Yücel N., TUBİTAK Project, Soğuk Çalışmada Üç Yollu Katalitik Konvertör Öncesi Egzoz Gazı Isıtılmasının Egzoz Emisyonları Üzerine Etkisinin Deneysel Ve Sayısal Olarak İncelenmesi, 2012 - 2014

Aktaş F., Dinler N., Karaaslan S., Yücel N., Project Supported by Higher Education Institutions, Bir Dizel Motorda Alternatif Yakıt Olarak Fındık-Yağı Motorin Karışımlarının Kullanılmasının Motor Performansı ve Egzoz Emisyonlarına Etkisinin Deneysel İncelenmesi, 2010 - 2014

Memberships / Tasks in Scientific Organizations

Türk Isı Bilimi ve Tekniği Derneği, Member, 2018 - Continues, Turkey

The Combustion Institute, Member, 2016 - Continues, United States Of America

Scientific Refereeing

Karadeniz Fen Bilimleri Dergisi, National Scientific Refreed Journal, October 2024

International journal of energy studies (Online), National Scientific Refreed Journal, October 2024

ISI BİLİMİ VE TEKNİĞİ DERGİSİ/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, SCI Journal, August 2024

International Journal of Automotive Science and Technology, National Scientific Refreed Journal, June 2024

Çukurova Üniversitesi Mühendislik Fakültesi dergisi, National Scientific Refreed Journal, April 2024

Uluslararası Mühendislik Araştırma ve Geliştirme Dergisi, National Scientific Refreed Journal, March 2024

International journal of energy studies (Online), National Scientific Refreed Journal, March 2024

Karadeniz Fen Bilimleri Dergisi, National Scientific Refreed Journal, March 2024

ISI BİLİMİ VE TEKNİĞİ DERGİSİ/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, SCI Journal, February 2024

Bilecik Şeyh Edebali Üniversitesi Fen Bilimleri Dergisi, National Scientific Refreed Journal, February 2024

International journal of energy studies (Online), National Scientific Refreed Journal, January 2024

SÜLEYMAN DEMİREL ÜNİVERSİTESİ FEN EDEBİYAT FAKÜLTESİ FEN DERGİSİ = SÜLEYMAN DEMİREL UNIVERSITY FACULTY OF ARTS AND SCIENCE JOURNAL OF SCIENCE, National Scientific Refreed Journal, December 2023

CANADIAN JOURNAL OF CHEMICAL ENGINEERING, SCI Journal, September 2023

INTERNATIONAL JOURNAL OF ENERGY RESEARCH, SCI Journal, August 2023

Karadeniz Fen Bilimleri Dergisi, National Scientific Refreed Journal, April 2023

INTERNATIONAL JOURNAL OF AUTOMOTIVE TECHNOLOGY, SCI Journal, September 2022

SÜLEYMAN DEMİREL ÜNİVERSİTESİ FEN EDEBİYAT FAKÜLTESİ FEN DERGİSİ = SÜLEYMAN DEMİREL UNIVERSITY FACULTY OF ARTS AND SCIENCE JOURNAL OF SCIENCE, National Scientific Refreed Journal, September 2022

Politeknik Dergisi, National Scientific Refreed Journal, August 2022

GÜMÜŞHANE ÜNİVERSİTESİ FEN BİLİMLERİ ENSTİTÜSÜ DERGİSİ, National Scientific Refreed Journal, June 2022

PROPULSION AND POWER RESEARCH, SCI Journal, April 2022

Süleyman Demirel Üniversitesi Fen Edebiyat Fakültesi Fen Dergisi, National Scientific Refreed Journal, April 2022

INTERNATIONAL JOURNAL OF AUTOMOTIVE SCIENCE AND TECHNOLOGY, National Scientific Refreed Journal, March 2022

GAZİ UNIVERSITY JOURNAL OF SCIENCE, National Scientific Refreed Journal, March 2022

SADHANA-ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES, SCI Journal, September 2021

EUROPEAN MECHANICAL SCIENCE, National Scientific Refreed Journal, June 2021

Metrics

Publication: 42

Citation (WoS): 44

Citation (Scopus): 50

H-Index (WoS): 4

H-Index (Scopus): 5

Scholarships

2219-Yurtdışı Doktora Sonrası Araştırma Bursu (ABD), TÜBİTAK, 2023 - 2024

Awards

Aktaş F., Yayın Teşvik (UBYT), Tübitak, October 2024

Aktaş F., Karyeyen S., 2021-2022 YILI TEŞVİK ÖDÜLLERİ, Gazi Üniversitesi, December 2023

Aktaş F., Karyeyen S., Yayın Teşvik, Tübitak, November 2022