Prof. HAKAN ÇALIŞKAN

Personal Information

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Biography

Professor Dr. Hakan CALISKAN is the **youngest Professor of Mechanical Engineering** in Turkey. He received *all of his BSc, MSc, and PhD* degrees with "**first class honor**" in the Department of Mechanical Engineering (Thermodynamics) at Pamukkale, Eskisehir Osmangazi, and Ege Universities in Turkey, respectively. He is also in the **top 2% scientists** of the world list (https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3).

He worked as a Professor in Department of Mechanical Engineering of Kyung Hee University in **Republic of Korea** (among the top 500 universities in the world), as a Professor in the Teikyo University in **Japan**, and as a Researcher in University of Ontario Institute of Technology (Ontario Tech University) in **Canada**. He has more than 100 publications (based on thermodynamics/ energy/ exergy/ environment/ thermoeconomy/ sustainability/ etc) in SCI indexed journals. He is an Assistant Editor/Guest Editor/Editorial Board member of 16 international journals. He is an editorial board member in eleven different international journals, and an active reviewer in more than 50 high qualities (SCI/SCIE/SSCI indexed) international journals. He is also an Associate Editor of SCI-exp. indexed Frontiers in Energy Research journal. He served as a chairman, organization committee member, scientific committee member, technical committee member in many international conferences/symposiums. He also worked as a panelist, commissioner and referee in TUBITAK (The Scientific and Technological Research Council of Turkey), Republic of Turkey Ministry of Industry and Technology, KOSGEB (Small and Medium Enterprises Development Organization), Latvian Science Council, National Science Centre (NCN) of Poland, National Centre of Science and Technology (NCS) of Kazakhstan, Italian Ministry of Education (MIUR), Innovation Fund Denmark (IFD), EUREKA, EUROSTARS, INNOWWIDE, HORIZON (EU), COST projects. He established Usak University Energy, Environment and Sustainability (ENÇES) Application and Research Center and also contributed to postgraduate education activities by establishing the Department of Energy and Environmental Sciences, and provided a bilateral agreement with Teikyo University, and provided the opportunity to exchange academics and students with scholarships.

Prof. Dr. Hakan Caliskan is an academic of Usak University since 2007. He also worked as Research Assistant at Ege University, Research Assistant at University of Ontario Institute of Technology, researcher professor at Teikyo University, and professor at Kyung Hee University. He is currently working in the Mechanical Engineering Department of Usak University. His research areas are thermodynamics, heat transfer, fluid mechanics, energy, exergy, sustainability, efficiency, thermoeconomics and environmental analyses, energy and environmental policies, energy systems, internal combustion engines, aircrafts, turbojet-turbofan-turboprop engines, emission improvement systems, exhaust emissions and nanoparticles, energy efficient buildings, power and energy systems, fuels, thermal energy storage systems, heat exchangers, heat pumps, renewable energy (wind, solar, etc.), hydrogen, heating and cooling systems, etc. (**h index: 31, i10 index: 62**) https://www.adscientificindex.com/scientist.php?id=209702 .

For full information, see https://www.hakancaliskan.net/en/

-"6000 academics who has the most citations and highest h-index in Turkey". 2021. https://www.researchgate.net/publication/349075094_Turkiye%27de_en_cok_atif_alan_ve_H_index%27i_en_yuksek_6000_akademisyen

-The World's Top 2% Scientists. Elsevier. 2021. https://data.mendeley.com/datasets/btchxktzyw/2

- In "Energy-Exergy-Thermodynamic-Heat Transfer-Environmental" research areas, the scientist ranking of Prof.Dr. Hakan CALISKAN is as follows: rank #332th in Europe, rank #1211th in the world. https://www.adscientificindex.com/scientist.php?id=209702

-The World's Top 2% Scientists. Elsevier. 2022. https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4

Education Information

Post Doctorate, Kyung Hee University, College of Engineering, Department of Mechanical Engineering, South Korea 2017 - 2018
Post Doctorate, Teikyo University, Faculty of Science & Engineering, Department of Mechanical & Precision System Engineering, Japan 2016 - 2016
Doctorate, Ege University, Graduate School, Mechanical Engineering (PhD) (Thesis), Turkey 2009 - 2012
Post Doctorate, University of Ontario Institute of Technology (Ontario Tech University), Faculty of Engineering and Applied Science, Department of Mechanical and Manufacturing Engineering, Canada 2010 - 2011
Postgraduate, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, Mechanical Engineering (MSc) (Thesis), Turkey 2007 - 2009
Undergraduate, Pamukkale University, Faculty of Engineering, Mechanical Engineering Department, Turkey 2003 - 2007

Dissertations

Doctorate, Özgün ısıl enerji depolama sistemlerinin analizi ve performans değerlendirmesi, Ege University, Fen Bilimleri Enstitüsü, Termodinamik (Dr), 2012
Postgraduate, İçtan yanmalı motorlarda ekserji analizi, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, Makine Mühendisliği (Yl) (Tezli), 2009

Research Areas

Mechanical Engineering, Petroleum And Natural Gas Engineering, Aeronautical and Space Engineering

Academic Titles / Tasks

Professor, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2021 - Continues
Associate Professor, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2015 - 2021
Assistant Professor, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2013 - 2015
Research Assistant PhD, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2012 - 2013
Research Assistant, Ege University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2010 - 2012
Research Assistant, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2007 - 2010

Academic and Administrative Experience

Head of Department, Usak University, LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ, Enerji ve Çevre Bilimleri, 2019 - 2020
Head of Department, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2018 - 2020
Head of Department, Usak University, LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ, Makine Mühendisliği Anabilim Dalı, 2018 - 2020
Head of Department, Usak University, MÜHENDİSLİK VE DOĞA BİLİMLERİ FAKÜLTESİ, Makine Mühendisliği Bölümü, 2015 - 2020
Director of the Center, Usak University, REKTÖRLÜK, Uşak Üniversitesi Enerji, Çevre ve Sürdürülebilirlik Uygulama ve Araştırma Merkezi , 2014 - 2018

Courses

YAKITLAR VE YANMA, Undergraduate, 2016 - 2017
ISI DEĞİŞTİRİCİLER, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015
TEZ ÇALIŞMASI, Postgraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014
İLERİ TERMODİNAMİK, Doctorate, 2016 - 2017, 2015 - 2016
MAKİNE PROJE, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014
UZMANLIK ALAN DERSİ, Postgraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014
YAKIT PİLİ SİSTEMLERİ, Postgraduate, 2016 - 2017, 2014 - 2015
TERMOEKONOMİ, Doctorate, 2016 - 2017, 2013 - 2014
MAKİNE MÜHENDİSLİĞİNE GİRİŞ, Undergraduate, 2016 - 2017
ENERJİ SİSTEMLERİNİN YAŞAM ÇEVRİMİ DEĞERLENDİRMESİ, Doctorate, 2016 - 2017
DERS DANIŞMANLIĞI, Postgraduate, 2016 - 2017
İÇTEN YANMALI MOTORLARIN İLERİ TERMODİNAMİĞİ, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014
ISI TRANSFERİ, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014
TEZ HAZIRLIK ÇALIŞMASI, Postgraduate, 2015 - 2016, 2014 - 2015
DOĞALGAZ TESİSAT SİSTEMLERİ, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013
BİTİRME PROJESİ, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013
TERMODİNAMİK I, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013
BUHAR KAZANLARI, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013
TERMODİNAMİK, Undergraduate, 2014 - 2015, 2013 - 2014
ENERJİ SİSTEMLERİNİN ÇEVRESEL ANALİZİ, Doctorate, 2014 - 2015
İŞÇİ SAĞLIĞI VE İŞ GÜVENLİĞİ, Undergraduate, 2014 - 2015
ISI POMPALARI VE UYGULAMALARI, Postgraduate, 2013 - 2014, 2012 - 2013
HAVALANDIRMA VE İKLİMLENDİRME SİSTEMLERİNDE VERİMLİLİK VE MODELLEME, Doctorate, 2013 - 2014
TERMODİNAMİK II, Undergraduate, 2013 - 2014
SÜRDÜRÜLEBİLİR ENERJİ TEKNOLOJİLERİ, Doctorate, 2013 - 2014
DÜŞÜK EKSERJİLİ ISITMA VE SOĞUTMA SİSTEMLERİ, Postgraduate, 2013 - 2014, 2012 - 2013
İLERİ ISI VE KÜTLE TRANSFERİ, Postgraduate, 2013 - 2014
ENERJİ DEPOLAMA SİSTEMLERİ, Postgraduate, 2012 - 2013
ISI VE KÜTLE GEÇİŞİ, Undergraduate, 2012 - 2013
AKIŞKANLAR MEKANİĞİ, Undergraduate, 2012 - 2013

Advising Theses

Çalışkan H., İçten yanmalı motorlarda farklı egzoz arıtma sistemlerinin yakıt emisyonları üzerine etkisinin incelenmesi, Doctorate, H.İBRAHİM(Student), 2024
Çalışkan H., Farklı çevre koşullarının ve klima kullanımının elektrikli bir aracın enerji tüketimine ve menziline etkilerinin incelenmesi, Postgraduate, E.MUHAMMED(Student), 2023
Çalışkan H., Bir binek otomobilin ilk rölanti süresinin ve ortam koşullarının gerçek sürüş emisyonlarına etkilerinin incelenmesi , Postgraduate, Y.SELİM(Student), 2022
Çalışkan H., Enhanced thermodynamic analysis and assessment of a cogeneration system for a ceramic factory, Doctorate, H.ÇAĞLAYAN(Student), 2020
Çalışkan H., Thermodynamic analysis and emission assessment of a diesel engine fueled with various fuels, Postgraduate,

İ.YILDIZ(Student), 2018

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Impact of hydrogen induction on atomization combustion performance and emissions in diesel engines fueled with heated biodiesel blends**
Yadav P. s., Said Z., Gautam R., ÇALIŞKAN H., Wu H.
Energy, vol.313, 2024 (SCI-Expanded)

II. **A Comprehensive analysis of energy, exergy, economic and environment on integrated solarcombined cycle with various HTFs and thermal storage**
Khandelwal N., Yadav P. S., Said Z., Sharma M., Shukla A. K., Singh O., Khandelwal D., ÇALIŞKAN H.
Applied Energy, vol.376, 2024 (SCI-Expanded)

III. **Improving single-slope passive solar still efficiency through integration of phase change materials and Al2O3 nanoparticles**
Khan Y., Said Z., Raman R., Singh P., Mehdi Rashidi M., ÇALIŞKAN H., Garg A.
Journal of Thermal Analysis and Calorimetry, vol.149, no.21, pp.11807-11816, 2024 (SCI-Expanded)

IV. **Nozzle effects on spray combustion and emissions in compression ignition engines using waste cooking oil biodiesel: A computational fluid dynamics analysis at varying injection pressures**
Yadav P. S., Ahmed S. F. A., Gautam R., ÇALIŞKAN H., ÇALIŞKAN N., Hong H.
IET Renewable Power Generation, vol.18, no.14, pp.2340-2359, 2024 (SCI-Expanded)

V. **Analyzing the influence of feedstock selection in pyrolysis on aviation gas turbine engines: A study on performance, combustion efficiency, and emission profiles**
GÜNERHAN A., Altuntas O., ÇALIŞKAN H.
Energy, vol.306, 2024 (SCI-Expanded)

VI. **Investigating renewable and sustainable biofuel and biofuel/diesel blends utilizations in a turboshaft engine used on helicopters**
Balli O., ÇALIŞKAN H.
Energy, vol.306, 2024 (SCI-Expanded)

VII. **Prediction and optimisation of gasoline quality in petroleum refining: The use of machine learning model as a surrogate in optimisation framework**
Saghir H., Ahmad I., Kano M., ÇALIŞKAN H., Hong H.
CAAI Transactions on Intelligence Technology, vol.9, no.5, pp.1185-1198, 2024 (SCI-Expanded)

VIII. **Artificial intelligence assisted prediction of optimum operating conditions of shell and tube heat exchangers: A grey-box approach**
Ullah Z., Ahmad I., Samad A., Saghir H., Ahmad F., Kano M., Çalışkan H., Caliskan N., Hong H.
CAAI Transactions on Intelligence Technology, vol.0, no.0, pp.1-10, 2024 (SCI-Expanded)

IX. **Advanced exergoeconomic analysis and mathematical modelling of the natural gas fired gas turbine unit used for industrial cogeneration system**
Çağlayan H., Çalışkan H., Hong H., Çalışkan N., Kale U., Kilikevičius A.
CASE STUDIES IN THERMAL ENGINEERING, vol.61, no.104969, pp.1-26, 2024 (SCI-Expanded)

X. **Exergo-enviro-economic analyses of solar energy based novel air cooling system**
Tripathi R. J., Kumar D., Caliskan H., Hong H.
APPLIED THERMAL ENGINEERING, vol.254, pp.1-20, 2024 (SCI-Expanded)

XI. **A data-driven multi-objective optimization approach for enhanced methanol yield and exergy loss minimization in direct hydrogenation of CO2**
Samad A., Saghir H., Musawwir A., Ahmad I., ÇALIŞKAN H.
Applied Thermal Engineering, vol.251, 2024 (SCI-Expanded)

XII. **Plant wide modelling and thermodynamic optimization of a petroleum refinery for improvement potentials**
Sana A., Ahmad I., Saghir H., Kano M., ÇALIŞKAN H., Hong H.
Process Safety and Environmental Protection, vol.188, pp.64-72, 2024 (SCI-Expanded)

XIII. **Energy, exergy, sustainability, thermoeconomic, exergoeconomic, environmental and environmental-economic effects of novel boron-containing open cell geopolymer filter of a diesel engine on exhaust emissions**
KARALI H. İ., ÇALIŞKAN H.

Energy, vol.290, 2024 (SCI-Expanded)

XIV. **Thermodynamics, Environmental and Sustainability Impacts of a Turbofan Engine Under Different Design Conditions Considering Variable Needs in the Aviation Industry**
Aygun H., Sheikhi M. R., ÇALIŞKAN H.
Global Challenges, vol.8, no.2, 2024 (SCI-Expanded)

XV. **Thermodynamic and exergoenvironmental assessments of solar-assisted combined power cycle using eco-friendly fluids**
Khan Y., Raman R., Rashidi M. M., Said Z., ÇALIŞKAN H., Hoang A. T.
Journal of Thermal Analysis and Calorimetry, vol.149, no.3, pp.1125-1139, 2024 (SCI-Expanded)

XVI. **Sustainable Power Generation Through Solar-Driven Integration of Brayton and Transcritical CO2 Cycles: A Comprehensive 3E (Energy, Exergy, and Exergoenvironmental) Evaluation**
Khan Y., Raman R., Said Z., ÇALIŞKAN H., Hong H.
Global Challenges, vol.8, no.2, 2024 (SCI-Expanded)

XVII. **Prediction and optimization of emissions in cement manufacturing plant under uncertainty by using artificial intelligence-based surrogate modeling**
Usman M., Ahmad I., Ahsan M., ÇALIŞKAN H.
Environment, Development and Sustainability, 2024 (SCI-Expanded)

XVIII. **Grey-box modelling for estimation of optimum cut point temperature of crude distillation column**
Shahzad J., Ahmad I., Ahsan M., Ahmad F., Saghir H., Kano M., ÇALIŞKAN H., Hong H.
CAAI Transactions on Intelligence Technology, 2024 (SCI-Expanded)

XIX. **Advanced exergy-based environmental analysis of a cogeneration system used for ceramic industry**
Caglayan H., ÇALIŞKAN H., Hong H.
Journal of Thermal Analysis and Calorimetry, 2024 (SCI-Expanded)

XX. **Environmental and second law analysis of a turbojet engine operating with different fuels**
Kagan Ayaz S., ÇALIŞKAN H., Altuntas O.
Energy, vol.285, 2023 (SCI-Expanded)

XXI. **Artificial intelligence based prediction of optimum operating conditions of a plate and fin heat exchanger under uncertainty: A gray-box approach**
Khan J. S., Ahmad I., Jadoon U. K., Samad A., Saghir H., Kano M., ÇALIŞKAN H.
International Journal of Heat and Mass Transfer, vol.217, 2023 (SCI-Expanded)

XXII. **A comparative study of combined cycles for concentrated solar power for efficient power generation using low Global Warming Potential (GWP) fluids to reduce environmental effects**
Khan Y., ÇALIŞKAN H., Hong H.
IET Renewable Power Generation, vol.17, no.16, pp.3741-3754, 2023 (SCI-Expanded)

XXIII. **Exergoeconomic and Thermodynamic Analyses of Solar Power Tower Based Novel Combined Helium Brayton Cycle-Transcritical CO2 Cycle for Carbon Free Power Generation**
Khan Y., Singh D., ÇALIŞKAN H., Hong H.
Global Challenges, vol.7, no.12, 2023 (SCI-Expanded)

XXIV. **Investigating the effects of first idle time and ambient temperature on real driving emissions of passenger cars**
Akdag Y. S., Kato A., ÇALIŞKAN H.
Air Quality, Atmosphere and Health, vol.16, no.12, pp.2443-2456, 2023 (SCI-Expanded)

XXV. **Investigation and assessment of the optimum conditions of solar heat source hybrid desiccant cooling system under different modes**
Seung D., Min S., ÇALIŞKAN H., Hong H.
Solar Energy, vol.265, 2023 (SCI-Expanded)

XXVI. **Maisotsenko Cycle for Heat Recovery in Gas Turbines: A Fundamental Thermodynamic Assessment**
Tariq R., ÇALIŞKAN H., Sheikh N. A.
Global Challenges, vol.7, no.11, 2023 (SCI-Expanded)

XXVII. **Prediction and optimization of exergetic efficiency of reactive units of a petroleum refinery under uncertainty through artificial neural network-based surrogate modeling**
Samad A., Ahmad I., Kano M., ÇALIŞKAN H.
Process Safety and Environmental Protection, vol.177, pp.1403-1414, 2023 (SCI-Expanded)

XXVIII. **Utilization of renewable and sustainable aviation biofuels from waste tyres for sustainable aviation transport sector**

GÜNERHAN A., Altuntas O., ÇALIŞKAN H.
Energy, vol.276, 2023 (SCI-Expanded)

XXIX. **Environmental and thermoecological comparative assessment of improved humid air waste heat recovery configurations**
Tariq R., ÇALIŞKAN H., Sheikh N. A.
Journal of Cleaner Production, vol.407, 2023 (SCI-Expanded)

XXX. **Thermodynamic analysis and experimental investigation of the water spray cooling of photovoltaic solar panels**
Khan Y., Raman R., Rashidi M. M., ÇALIŞKAN H., Chauhan M. K., Chauhan A. K.
Journal of Thermal Analysis and Calorimetry, vol.148, no.12, pp.5591-5602, 2023 (SCI-Expanded)

XXXI. **Energy, exergy, thermoecologic, environmental, enviroeconomic and sustainability analyses and assessments of the aircraft engine fueled with biofuel and jet fuel**
AKDENİZ H. Y., Balli O., ÇALIŞKAN H.
Journal of Thermal Analysis and Calorimetry, vol.148, no.9, pp.3585-3603, 2023 (SCI-Expanded)

XXXII. **Thermodynamic analysis of cumene production plant for identification of energy recovery potentials**
Samad A., Saghir H., Ahmad I., Ahmad F., ÇALIŞKAN H.
Energy, vol.270, 2023 (SCI-Expanded)

XXXIII. **Novel investigation on atomization, performance, and emission characteristics of preheated jatropha oil methyl ester and ethyl ester**
Yadav P. S., Said Z., Gautam R., Raman R., ÇALIŞKAN H.
Energy, vol.270, 2023 (SCI-Expanded)

XXXIV. **Energy, exergy, economic, environmental, and sustainability assessments of the CFM56-3 series turbofan engine used in the aviation sector**
Korba P., Balli O., ÇALIŞKAN H., Al-Rabeei S., Kale U.
Energy, vol.269, 2023 (SCI-Expanded)

XXXV. **Advanced, extended and combined extended-advanced exergy analyses of a novel geothermal powered combined cooling, heating and power (CCHP) system**
ÇALIŞKAN H., Açıkkalp E., Rostamnejad Takleh H., Zare V.
Renewable Energy, vol.206, pp.125-134, 2023 (SCI-Expanded)

XXXVI. **Thermodynamics, environmental damage cost, exergoeconomic, life cycle, and exergoenvironmental analyses of a JP-8 fueled turbodiesel aviation engine at take-off phase**
Korba P., Balli O., ÇALIŞKAN H., Al-Rabeei S., Kale U.
Case Studies in Thermal Engineering, vol.43, 2023 (SCI-Expanded)

XXXVII. **Aviation, energy, exergy, sustainability, exergoenvironmental and thermoeconomic analyses of a turbojet engine fueled with jet fuel and biofuel used on a pilot trainer aircraft**
Balli O., ÇALIŞKAN N., ÇALIŞKAN H.
Energy, vol.263, 2023 (SCI-Expanded)

XXXVIII. **Production and Assessment of New Biofuels from Waste Cooking Oils as Sustainable Bioenergy Sources**
ÇALIŞKAN H., Yildiz I., Mori K.
Energies, vol.16, no.1, 2023 (SCI-Expanded)

XXXIX. **Prediction of optimum operating conditions of a furnace under uncertainty: An integrated framework of artificial neural network and genetic algorithm**
Khan M., Ahmad I., Ahsan M., Kano M., ÇALIŞKAN H.
Fuel, vol.330, 2022 (SCI-Expanded)

XL. **An intelligent sensing system for estimation of efficiency of carbon-capturing unit in a cement plant**
Jadoon U. K., Ahmad I., Noor T., Kano M., ÇALIŞKAN H., Ahsan M.
Journal of Cleaner Production, vol.377, 2022 (SCI-Expanded)

XLI. **Environmental impact assessments of different auxiliary power units used for commercial aircraft by using global warming potential approach**
Balli O., ÇALIŞKAN H.
Environmental Science and Pollution Research, vol.29, no.58, pp.87334-87346, 2022 (SCI-Expanded)

XLII. **An integrated approach of artificial neural networks and polynomial chaos expansion for prediction and analysis of yield and environmental impact of oil shale retorting process under uncertainty**
Qayyum Chohan H., Ahmad I., Mohammad N., Manca D., ÇALIŞKAN H.
Fuel, vol.329, 2022 (SCI-Expanded)

XLIII. **Thermodynamic-based environmental and enviroeconomic assessments of a turboprop engine used for freight aircrafts under different flight phases**
Dinc A., ÇALIŞKAN H., Ekici S., ŞÖHRET Y.
Journal of Thermal Analysis and Calorimetry, vol.147, no.22, pp.12693-12707, 2022 (SCI-Expanded)

XLIV. **Assessment of a cogeneration system for ceramic industry by using various exergy based economic approaches**
Caglayan H., ÇALIŞKAN H.
Renewable and Sustainable Energy Reviews, vol.167, 2022 (SCI-Expanded)

XLV. **Thermodynamic-based analyses and assessments of a new-generation turbojet engine used for unmanned aerial vehicles (UAVs)**
ŞÖHRET Y., ÇALIŞKAN H.
Journal of Thermal Analysis and Calorimetry, vol.147, no.20, pp.11273-11288, 2022 (SCI-Expanded)

XLVI. **Extended exergy analysis of a photovoltaic-thermal (PVT) module based desiccant air cooling system for buildings**
Açıkkalp E., ÇALIŞKAN H., Hong H., Piao H., Seung D.
Applied Energy, vol.323, 2022 (SCI-Expanded)

XLVII. **Performance analysis of PVT systems applicable to apartment housing structures: experiment and simulation**
Piao H., ÇALIŞKAN H., Chung J. D., Kim J. H., Hong H.
Journal of Mechanical Science and Technology, vol.36, no.10, pp.5299-5307, 2022 (SCI-Expanded)

XLVIII. **Evaluating and modelling of thermodynamic and environmental parameters of a gas turbine engine and its components**
Aygun H., ÇALIŞKAN H.
Journal of Cleaner Production, vol.365, 2022 (SCI-Expanded)

XLIX. **Advanced exergy analysis of the turbojet engine main components considering mexogenous, endogenous, exegenous, avoidable and unavoidable exergy destructions**
ÇALIŞKAN H., Ekici S., ŞÖHRET Y.
Propulsion and Power Research, vol.11, no.3, pp.391-400, 2022 (SCI-Expanded)

L. **Energy, exergy, economic, environmental, energy based economic, exergoeconomic and enviroeconomic (7E) analyses of a jet fueled turbofan type of aircraft engine**
AKDENİZ H. Y., Balli O., ÇALIŞKAN H.
Fuel, vol.322, 2022 (SCI-Expanded)

LI. **Sustainability analyses of photovoltaic electrolysis and magnetic heat engine coupled novel system used for hydrogen production and electricity generation**
Açıkkalp E., Altuntas O., ÇALIŞKAN H., Grisolia G., Lucia U., Borge-Diez D., Rosales-Asensio E.
Sustainable Energy Technologies and Assessments, vol.52, 2022 (SCI-Expanded)

LII. **Life cycle assessment based exergoenvironmental analysis of a cogeneration system used for ceramic factories**
Caglayan H., ÇALIŞKAN H.
Sustainable Energy Technologies and Assessments, vol.52, 2022 (SCI-Expanded)

LIII. **Analysis of vapor compression refrigeration cycle using advanced exergetic approach with Taguchi and ANOVA optimization and refrigerant selection with enviroeconomic concerns by TOPSIS analysis**
Ustaoglu A., Kursuncu B., KAYA A. M., ÇALIŞKAN H.
Sustainable Energy Technologies and Assessments, vol.52, 2022 (SCI-Expanded)

LIV. **Energy, exergy, environmental and sustainability assessments of jet and hydrogen fueled military turbojet engine**
Balli O., ÇALIŞKAN H.
International Journal of Hydrogen Energy, vol.47, no.62, pp.26728-26745, 2022 (SCI-Expanded)

LV. **Thermal analysis and assessment of phase change material utilization for heating applications in buildings: A modelling**
ÇALIŞKAN H., GÜRBÜZ H., ŞÖHRET Y., Ates D.
Journal of Energy Storage, vol.50, 2022 (SCI-Expanded)

LVI. **Assessment of biofuels from waste cooking oils for diesel engines in terms of waste-to-energy perspectives**
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Publication: 181
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Çalışkan H., Akademik Performans Ödülü, Uşak Üniversitesi, January 2022
Çalışkan H., Akademik Personel Kalite Ödülü (Mühendislik), Uşak Üniversitesi, January 2022
Çalışkan H., Atıf Ödülü, Uşak Üniversitesi, January 2022
Çalışkan H., En Yüksek Etki Faktörlü Dergide Yayın Ödülü, Uşak Üniversitesi, January 2021
Çalışkan H., Uşak Üniversitesi En Yüksek Etki Faktörlü Dergide Yayın Ödülü, Uşak Üniversitesi, January 2021
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Çalışkan H., Akademik Performans Ödülü, Uşak Üniversitesi, January 2021
Çalışkan H., Uşak Üniversitesi Atıf Ödülü-2020, Uşak Üniversitesi, January 2020
Çalışkan H., Akademik Performans Ödülü-2020, Uşak Üniversitesi, January 2020
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Çalışkan H., Uşak Üniversitesi Bilimsel Yayın Ödülü, Uşak Üniversitesi, January 2015
Çalışkan H., Uşak Üniversitesi Bilimsel Yayın Onur Ödülü, Uşak Üniversitesi, January 2013
Çalışkan H., BİRİNCİLİK-MAKİNE MÜHENDİSLİĞİ ANABİLİM DALI, Ege Üniversitesi, January 2012
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Çalışkan H., BİRİNCİLİK-MAKİNE MÜHENDİSLİĞİ BÖLÜMÜ, Pamukkale Üniversitesi, January 2007

Non Academic Experience

University, Kyung Hee University, College of Engineering, Department of Mechanical Engineering, Yongin, Gyeonggi, Republic of Korea, Department of Mechanical Engineering
University, Teikyo University, Faculty of Science Engineering, Department of Mechanical Precision System Engineering, Utsunomiya, Tochigi, Japan, Department of Mechanical Precision System Engineering
University, Budapest University of Technology and Economics (BME), Budapest, Hungary, Budapest University of Technology and Economics (BME)
University, University of Ontario Institute of Technology (UOIT), Oshawa, Ontario/Canada, Faculty of Engineering and Applied Science