

Öğr. Gör. Dr. MEHMET KARACA

Kişisel Bilgiler

E-posta: mkaraca@metu.edu.tr

Web: <https://avesis.metu.edu.tr/mkaraca>

Uluslararası Araştırmacı ID'leri

ScholarID: g1WERy0AAAAJ

ORCID: 0000-0003-2821-9939

Publons / Web Of Science ResearcherID: AAN-5252-2021

ScopusID: 55183460700

Yoksis Araştırmacı ID: 330495

Araştırma Alanları

Akışkanlar Mekaniği , Akışkan Makineleri, Tepki Tahrik Sistemleri

Akademik Unvanlar / Görevler

Öğretim Görevlisi Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Havacılık ve Uzay Mühendisliği Bölümü, 2020
- Devam Ediyor

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. Numerical and experimental investigations of swirl-stabilized partially premixed flames using natural gas-hydrogen-air mixtures
Böncü E., Gülcü D., KARACA M., ALLOUÏS C. G., GÖKALP İ.
Applied Thermal Engineering, cilt.254, 2024 (SCI-Expanded)
- II. Designing restorative landscapes for students: A Kansei engineering approach enhanced by VR and EEG technologies
Karaca E., Çakar T., Karaca M., Hüseyin Miraç Gül H.
Ain Shams Engineering Journal, cilt.15, sa.9, 2024 (SCI-Expanded)
- III. Effect of flame characteristics on an isolated ethanol droplet evaporating through stagnation methane/air flames: An experimental and numerical study
Kaya Eyice D., KARACA M., Halter F., GÖKALP İ., Chauveau C.
Combustion and Flame, cilt.265, 2024 (SCI-Expanded)
- IV. Hydrogen production using aluminum-water splitting: A combined experimental and theoretical approach
Kandasamy J., Mutlu R. N., Eroğlu E., KARACA M., TOFFOLI H., GÖKALP İ.
International Journal of Hydrogen Energy, cilt.52, ss.202-211, 2024 (SCI-Expanded)
- V. Influence of cavity and ramp layout on combustion performance in a strut-based scramjet combustor
ATCI M., Jeyakumar S., Sharma P., KARACA M., JAYARAMAN K.
International Journal of Engine Research, 2024 (SCI-Expanded)
- VI. Performance evaluation of a scramjet engine utilizing varied cavity aft wall divergence with parallel

- injection in a reacting flow field**
 Maheswaran N., Jeyakumar S., JAYARAMAN K., KARACA M.
 International Journal of Turbo and Jet Engines, 2024 (SCI-Expanded)
- VII. **Steady and unsteady flow characteristics of dual cavity in strut injection scramjet combustor**
 Rajesh A., Jeyakumar S., Jayaraman K., Karaca M.
 INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, cilt.48, sa.72, ss.28174-28186, 2023 (SCI-Expanded)
- VIII. **The implications of dual cavity location in a strut-mounted scramjet combustor**
 Rajesh A., Jeyakumar S., JAYARAMAN K., KARACA M., Athithan A. A.
 International Communications in Heat and Mass Transfer, cilt.145, 2023 (SCI-Expanded)
- IX. **Numerical investigations on flashback dynamics of premixed methane-hydrogen-air laminar flames**
 Kiymaz T. B., Böncü E., Gülergöz D., KARACA M., YILMAZ B., ALLOUİS C. G., GÖKALP İ.
 International Journal of Hydrogen Energy, cilt.47, sa.59, ss.25022-25033, 2022 (SCI-Expanded)
- X. **Effect of hydrogen jets in supersonic mixing using strut injection schemes**
 Jeyakumar S., Kandasamy J., KARACA M., Karthik K., Sivakumar R.
 International Journal of Hydrogen Energy, cilt.46, sa.44, ss.23013-23025, 2021 (SCI-Expanded)
- XI. **Modeling and numerical simulations of lignite char gasification with CO₂: The effect of gasification parameters on internal transport phenomena**
 KARACA M., Kaya D., YOZGATLIGİL A., Gokalp I.
 FUEL, cilt.285, 2021 (SCI-Expanded)
- XII. **Numerical investigations on the hydrogen jet pressure variations in a strut based scramjet combustor**
 Suppandipillai J., Kandasamy J., Sivakumar R., KARACA M., Karthik K.
 Aircraft Engineering and Aerospace Technology, cilt.93, sa.4, ss.566-578, 2021 (SCI-Expanded)
- XIII. **Implicit large eddy simulation of vitiation effects in supersonic air/H-2 combustion**
 KARACA M., Zhao S., Fedioun I., Lardjane N.
 AEROSPACE SCIENCE AND TECHNOLOGY, cilt.89, ss.89-99, 2019 (SCI-Expanded)
- XIV. **Implicit Large Eddy Simulation of high-speed non-reacting and reacting air/H-2 jets with a 5th order WENO scheme**
 Karaca M., Lardjane N., Fedioun I.
 COMPUTERS & FLUIDS, cilt.62, ss.25-44, 2012 (SCI-Expanded)

Diger Dergilerde Yayınlanan Makaleler

- I. **Numerical Investigation on the Inflow Mach Number Variations in a Strut Injected Cavity Based Scramjet Combustors**
 Rajesh A., Jeyakumar S., JAYARAMAN K., KARACA M.
 International Journal of Fluid Mechanics Research, cilt.51, sa.6, 2024 (ESCI)
- II. **Application of a Robust Multigrid Technique for the Parallel Solution of Initial-Boundary Value Problems**
 Martynenko S., GÖKALP İ., Bakhtin V., KARACA M., Toktaliev P., Semenev P.
 Mathematical Models and Computer Simulations, cilt.14, sa.6, ss.1002-1010, 2022 (Scopus)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **ECONOMICALLY VIABLE LOW TEMPERATURE HYDROGEN PRODUCTION USING ALUMINUM-WATER SPLITTING METHODS**
 Kandasamy J., Mutlu R., Eroğlu E., Karaca M., Toffoli H., Gökalp I.
 Proceedings of WHEC 2022 - 23rd World Hydrogen Energy Conference: Bridging Continents by H₂, İstanbul, Türkiye, 26 - 30 Haziran 2022, ss.71-73

II. Effect of Variable Transport Properties in Rayleigh Benard Convection Problem at High Rayleigh Numbers

Afatsun A. C., Karban U., Yalçınkaya T., Karaca M.

International Conference on Applications in Computational Engineering & Sciences, Chennai, Hindistan, 30 - 31

Ekim 2020, ss.57

III. Turbo-rotary compound engine (TRCE) and novel thermodynamic cycle

Akmandor I. S., Ercan T., Karaca M.

50th ASME Turbo-Expo, Nevada, Amerika Birleşik Devletleri, 6 - 09 Haziran 2005, ss.107-114

Desteklenen Projeler

Ortakaya B., Temizsoylu O., Toffoli H., Yerli S. K., Kaya K., Baran Ö. U., Karaca M., Karagöz P., Koku H., Manguoğlu M., et al., UFUK 2020 Projesi, EuroCC@Türkiye, 2020 - 2022

Metrikler

Yayın: 19

Atıf (WoS): 42

Atıf (Scopus): 128

H-İndeks (WoS): 4

H-İndeks (Scopus): 8