

## Öğr. Gör. Dr. MEHMET KARACA

### Kişisel Bilgiler

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### Uluslararası Araştırmacı ID'leri

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

ScopusID: 55183460700

Yoksis Araştırmacı ID: 330495

### Araştırma Alanları

Akışkanlar Mekaniği , Akışkan Makinaları, 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., Gülerüz D., KARACA M., ALLOUIS 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., TOFFOLÍ H., GÖKALP İ.  
International Journal of Hydrogen Energy, cilt.52, ss.202-211, 2024 (SCI-Expanded)
- V. **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)
- VI. **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)
- VII. **Numerical investigations on flashback dynamics of premixed methane-hydrogen-air laminar flames**  
Kıymaz T. B., Böncü E., Güteryüz D., KARACA M., YILMAZ B., ALLOUIS C. G., GÖKALP İ.  
International Journal of Hydrogen Energy, cilt.47, sa.59, ss.25022-25033, 2022 (SCI-Expanded)
- VIII. **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)
- IX. **Modeling and numerical simulations of lignite char gasification with CO<sub>2</sub>: The effect of gasification parameters on internal transport phenomena**  
KARACA M., Kaya D., YOZGATLIGİL A., Gokalp I.  
FUEL, cilt.285, 2021 (SCI-Expanded)
- X. **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)
- XI. **Implicit large eddy simulation of vitiation effects in supersonic air/H<sub>2</sub> combustion**  
KARACA M., Zhao S., Fedion I., Lardjane N.  
AEROSPACE SCIENCE AND TECHNOLOGY, cilt.89, ss.89-99, 2019 (SCI-Expanded)
- XII. **Implicit Large Eddy Simulation of high-speed non-reacting and reacting air/H<sub>2</sub> jets with a 5th order WENO scheme**  
Karaca M., Lardjane N., Fedion I.  
COMPUTERS & FLUIDS, cilt.62, ss.25-44, 2012 (SCI-Expanded)

## **Diğer 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 İ.  
Proceedings of WHEC 2022 - 23rd World Hydrogen Energy Conference: Bridging Continents by H<sub>2</sub>, 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., Manguođlu M., et al.,  
UFUK 2020 Projesi, EuroCC@Türkiye, 2020 - 2022

## **Metrikler**

Yayın: 17

Atıf (WoS): 42

Atıf (Scopus): 128

H-İndeks (WoS): 4

H-İndeks (Scopus): 8