

## Lect. HARUN ŞEN



### Personal Information

**Email:** harun.sen@deu.edu.tr

**Web:** <https://avesis.deu.edu.tr/harun.sen>

### International Researcher IDs

ScholarID: q0qbzJUAAAAJ

ORCID: 0000-0003-3089-8678

Publons / Web Of Science ResearcherID: HJA-2794-2022

ScopusID: 57216184630

Yoksis Researcher ID: 390928



### Education Information

Doctorate, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Turkey 2022 - Continues

Postgraduate, Recep Tayyip Erdogan University, Lisansüstü Eğitim Enstitüsü, Makine Mühendisliği (YI), Turkey 2019 - 2021

Undergraduate, Bayburt University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2014 - 2018

Undergraduate, Ondokuz Mayıs University, Eğitim Fakültesi, İlköğretim Matematik Öğretmenliği, Turkey 2006 - 2011

### Dissertations

Postgraduate, Parametric optimization of solar chimney power plants, Recep Tayyip Erdogan University, Fen Bilimleri Enstitüsü, 2021

### Research Areas

Energy, Thermodynamics

### Academic Titles / Tasks

Lecturer, Dokuz Eylül University, Bergama Meslek Yüksekokulu, Motorlu Araçlar ve Ulaştırma Teknolojileri Bölümü, 2023 - Continues

### Courses

Pompalar ve Kompresörler, Associate Degree, 2023 - 2024

Motor Bilgisi, Associate Degree, 2023 - 2024

Hidrolik Pnömatik, Associate Degree, 2023 - 2024

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Performance Evaluation of Solar Chimney Power Plants with Bayburt Stone and Basalt on the Ground as Natural Energy Storage Material**  
MERT CÜCE A. P., CÜCE E., Alshahrani S., Saboor S., ŞEN H., Veza I., Saleel C. A.  
SUSTAINABILITY, vol.14, no.17, 2022 (SCI-Expanded)
- II. **Performance assessment of solar chimney power plants with natural thermal energy storage materials on ground: CFD analysis with experimental validation**  
CÜCE E., Saxena A., MERT CÜCE A. P., ŞEN H., EROĞLU H., Selvanathan S. P., Sudhakar K., Hasanuzzaman M.  
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, pp.752-759, 2022 (SCI-Expanded)
- III. **Solar Chimney Power Plants: A Review of the Concepts, Designs and Performances**  
Cüce E., Mert Cüce A. P., Carlucci S., Şen H., Sudhakar K., Hasanuzzaman M., Daneshazarian R.  
SUSTAINABILITY, vol.14, no.3, 2022 (SCI-Expanded)
- IV. **Performance assessment of solar chimney power plants with the impacts of divergent and convergent chimney geometry**  
CÜCE E., Saxena A., MERT CÜCE A. P., ŞEN H., Guo S., Sudhakar K.  
INTERNATIONAL JOURNAL OF LOW-CARBON TECHNOLOGIES, vol.16, no.3, pp.704-714, 2021 (SCI-Expanded)
- V. **Impacts of Ground Slope on Main Performance Figures of Solar Chimney Power Plants: A Comprehensive CFD Research with Experimental Validation**  
CÜCE E., MERT CÜCE A. P., ŞEN H., Sudhakar K., Berardi U., SERENCAM U.  
INTERNATIONAL JOURNAL OF PHOTOENERGY, vol.2021, 2021 (SCI-Expanded)
- VI. **Numerical performance modelling of solar chimney power plants: Influence of chimney height for a pilot plant in Manzanares, Spain**  
CÜCE E., ŞEN H., MERT CÜCE A. P.  
SUSTAINABLE ENERGY TECHNOLOGIES AND ASSESSMENTS, vol.39, 2020 (SCI-Expanded)

## Articles Published in Other Journals

- I. **New Approaches in Solar Chimney Power Plants: Recent Applications of Hybrid Power Production**  
Sen H., Cüce P. M., Cüce E.  
Recep Tayyip Erdoğan Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.3, no.2, pp.125-135, 2022 (Peer-Reviewed Journal)
- II. **Collector factor in a solar chimney power plant: CFD analysis for the pilot plant in Manzanares**  
SAULĖS KAMINO ELEKTRINĖS KOLEKTORIAUS KOEFICIENTAS: MANSANARESO BANDOMOSIOS JĖGAINĖS SKAIČIUOJAMOSIOS SKYSČIŲ DINAMIKOS (CFD) ANALIZĖ  
Cüce E., Şen H., Mert Cüce A. P.  
Energetika, vol.68, no.1, pp.33-42, 2022 (Scopus)
- III. **Impacts of Collector Radius and Height on Performance Parameters of Solar Chimney Power Plants: A Case Study for Manzanares, Spain**  
ŞEN H., MERT CÜCE A. P., CÜCE E.  
Recep Tayyip Erdoğan Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.2, 2021 (Peer-Reviewed Journal)
- IV. **Impact of Tower Diameter on Power Output in Solar Chimney Power Plants**  
CÜCE P. M., SEN H., CÜCE E.  
Gazi Mühendislik Bilimleri Dergisi, vol.7, no.3, pp.253-263, 2021 (Peer-Reviewed Journal)
- V. **A thorough performance assessment of solar chimney power plants: Case study for Manzanares**  
CÜCE E., MERT CÜCE A. P., Sen H.  
Cleaner Engineering and Technology, vol.1, 2020 (Scopus)

- VI. **Improving Electricity Production in Solar Chimney Power Plants with Sloping Ground Design: An Extensive CFD Research**  
MERT CÜCE A. P., CÜCE E., ŞEN H.  
Zeal Press, vol.7, pp.122-131, 2020 (Peer-Reviewed Journal)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **Potential of waste heat use in solar chimney power plants: Performance enhancement through soil-based heat storage medium**  
Şen H., Cüce E., Mert Cüce A. P.  
Seventh International Hasankeyf Scientific Research and Innovation Congress, Batman, Turkey, 23 - 24 February 2024, pp.261-270
- II. **Performance approach to solar chimney power plants: Chimney and collector effect**  
Şen H., Cüce E., Mert Cüce A. P.  
Seventh International Hasankeyf Scientific Research and Innovation Congress, Batman, Turkey, 23 - 24 February 2024, pp.271-279
- III. **Numerical analysis of the effect of material type on heat dissipation ducts in parabolic fin application**  
Cüce E., Mert Cüce A. P., Şen H.  
20th International Conference on Sustainable Energy Technologies, Nottingham, England, 15 - 17 August 2023, pp.156-165
- IV. **NUMERICAL ANALYSIS OF THE EFFECT OF GROOVE GEOMETRY ON FIN PERFORMANCE IN RECTANGULAR FIN DESIGN**  
Şen H., Cüce E., Mert Cüce A. P.  
ICHEAS 4th International Conference On HEALTH, ENGINEERING AND APPLIED Sciences, Dubai, United Arab Emirates, 14 - 16 April 2023, pp.152-157
- V. **NUMERICAL ANALYSIS OF THE EFFECT OF ADDING PARALLEL GROOVES ON FIN PERFORMANCE IN RECTANGULAR FIN DESIGN**  
Şen H., Cüce E., Mert Cüce A. P.  
ICSHRS 4 th International Conference on Applied Sciences, Dubai, United Arab Emirates, 14 - 16 April 2023, pp.146-151
- VI. **IMPACT OF DIVERGENCE ANGLE ON PERFORMANCE FIGURES OF SOLAR CHIMNEY POWER PLANTS: A COMPREHENSIVE CFD RESEARCH**  
Mert Cüce A. P., Şen H., Cüce E.  
VII-International European Conference on Interdisciplinary Scientific Research, Frankfurt, Germany, 28 - 30 March 2023, pp.344-351
- VII. **THE EFFECT OF THE BARRIER DESIGN ON THE HEAT CONDUCTION IN DOUBLE GLASS WINDOWS**  
Cüce E., Mert Cüce A. P., Şen H.  
15 th INTERNATIONAL CONFERENCE ON ENGINEERING & NATURAL SCIENCES, Muş, Turkey, 4 - 06 March 2023, pp.237-241
- VIII. **NUMERICAL ANALYSIS OF THE EFFECT OF COLLECTOR HEIGHT IN SOLAR CHIMNEY POWER PLANTS**  
Cüce E., Şen H., Mert Cüce A. P.  
15th INTERNATIONAL CONFERENCE ON ENGINEERING & NATURALSCIENCES, Muş, Turkey, 4 - 06 March 2023, pp.230-236
- IX. **Numerical investigation of barrier effect with air, argon and krypton gases in double glazing application**  
Mert Cüce A. P., Cüce E., Şen H.  
19th International Conference on Sustainable Energy Technologies, İstanbul, Turkey, 16 - 18 August 2022, pp.355-362
- X. **Impact of support pillars on the thermal insulation performance of vacuum glazing**

Cüce E., Mert Cüce A. P., Şen H.

19th International Conference on Sustainable Energy Technologies, İstanbul, Turkey, 16 - 18 August 2022, pp.239-246

- XI. **ANALYSIS OF THE EFFECT OF THE ENERGY STORAGE UNIT ON THE PERFORMANCE OF THE SOLAR CHIMNEY POWER PLANT WITH DIVERGENT CHIMNEY DESIGN THROUGH THE MANZANARES PILOT PLANT**

Cüce E., Mert Cüce A. P., Şen H.

18th International Conference of Young Scientists on Energy and Natural Sciences Issues, Kaunas, Lithuania, 24 - 27 May 2022, pp.81-88

- XII. **NUMERICAL ANALYSIS OF THERMAL INSULATION PERFORMANCE OF DOUBLE GLAZING PRODUCTS USING AIR, ARGON AND KRYPTON**

Mert Cüce A. P., Cüce E., Şen H.

II-International Conference on Global Practice of Multidisciplinary Scientific Studies, Batumi, Georgia, 26 - 28 July 2022, pp.1480-1486

- XIII. **Dünden bugüne güneş bacası güç santralleri: sistem güç çıkışına etki eden performans parametreleri**

Cüce E., Şen H.

EURO ASIA 7th. INTERNATIONAL CONGRESS ON APPLIED SCIENCES, Trabzon, Turkey, 21 - 22 August 2020, pp.256-262

## **Scholarships**

2211-A Genel Yurt İçi Doktora Burs Programı, TÜBİTAK, 2022 - Continues

2210-A Genel Yurt İçi Yüksek Lisans Burs Programı, TÜBİTAK, 2019 - 2021