

Asst. Prof. AYŞE UĞURCAN ATMACA

Personal Information

Email: ugurcan.atmaca@deu.edu.tr

Web: <https://avesis.deu.edu.tr/ugurcan.atmaca>

International Researcher IDs

ORCID: 0000-0002-5581-6184

Publons / Web Of Science ResearcherID: S-3418-2019

ScopusID: 56549701100

Yoksis Researcher ID: 120130

Education Information

Doctorate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Termodinamik (Dr), Turkey 2014 - 2020

Postgraduate, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Termodinamik (YI) (Tezli), Turkey 2011 - 2013

Undergraduate, Izmir Institute Of Technology, Faculty Of Engineering, Department Of Mechanical Engineering (English), Turkey 2006 - 2011

Dissertations

Doctorate, NUMERICAL AND EXPERIMENTAL INVESTIGATION OF EJECTOR USE AS THE EXPANDER IN THE VAPOR-COMPRESSION REFRIGERATION CYCLE OPERATING WITH A NEW GENERATION REFRIGERANT, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Termodinamik (Dr), 2020

Postgraduate, Modelling and optimization of different hydraulic schemes of a heating appliance for domestic hot water (DHW) comfort and efficiency, Dokuz Eylul University, Fen Bilimleri Enstitüsü, Termodinamik (YI) (Tezli), 2013

Research Areas

Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Dokuz Eylul University, Mühendislik Fakültesi, Havacılık ve Uzay Mühendisliği Bölümü, 2022 - Continues

Research Assistant, Dokuz Eylul University, Mühendislik Fakültesi, Makina Mühendisliği Bölümü, 2014 - 2022

Academic and Administrative Experience

Deputy Head of Department, Dokuz Eylul University, Mühendislik Fakültesi, Havacılık ve Uzay Mühendisliği Bölümü, 2022 - Continues

Courses

Thermodynamics II, Undergraduate, 2022 - 2023
Thermodynamics II, Undergraduate, 2022 - 2023
Bilgisayar Programlama, Undergraduate, 2020 - 2021
Temel Bilgi Teknolojileri, Undergraduate, 2021 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **TRNSYS MODEL OF THE COMBI BOILER DOMESTIC HOT WATER CIRCUIT WITH A FOCUS ON THE PARAMETER DEFINITION OF THE PLATE HEAT EXCHANGER**
GÖK O., ATMACA A. U., EREK A., ALTAY H. M.
Isı Bilimi ve Tekniği Dergisi, vol.43, no.2, pp.191-205, 2023 (SCI-Expanded)
- II. **One-dimensional analysis of the convergent-divergent motive nozzle for the two-phase ejector: Effect of the operating and design parameters**
ATMACA A. U., EREK A., EKREN O.
APPLIED THERMAL ENGINEERING, vol.181, 2020 (SCI-Expanded)
- III. **Investigation of the Liquid-Vapor Separator Efficiency on the Performance of the Ejector Used as an Expansion Device in the Vapor-Compression Refrigeration Cycle**
ATMACA A. U., EREK A., EKREN O.
JOURNAL OF ENERGY RESOURCES TECHNOLOGY-TRANSACTIONS OF THE ASME, vol.142, no.1, 2020 (SCI-Expanded)
- IV. **Numerical investigation of the flow structures inside mixing section of the ejector**
Metin C., Gök O., ATMACA A. U., EREK A.
ENERGY, vol.166, pp.1216-1228, 2019 (SCI-Expanded)
- V. **Impact of the mixing theories on the performance of ejector expansion refrigeration cycles for environmentally-friendly refrigerants**
ATMACA A. U., EREK A., EKREN O.
INTERNATIONAL JOURNAL OF REFRIGERATION-REVUE INTERNATIONALE DU FROID, vol.97, pp.211-225, 2019 (SCI-Expanded)
- VI. **THERMODYNAMIC PERFORMANCE OF THE TRANSCRITICAL REFRIGERATION CYCLE WITH EJECTOR EXPANSION FOR R744, R170, AND R41**
ATMACA A. U., EREK A., EKREN O., ÇOBAN M. T.
ISI BILIMI VE TEKNIGI DERGISI-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.38, no.2, pp.111-127, 2018 (SCI-Expanded)
- VII. **Comparison of two numerical approaches to the domestic hot water circuit in a combi boiler appliance**
ATMACA A. U., EREK A., Altay H. M.
ENERGY AND BUILDINGS, vol.127, pp.1043-1056, 2016 (SCI-Expanded)
- VIII. **Investigation of transient behaviour of combi boiler type appliances for domestic hot water**
ATMACA A. U., EREK A., Altay H. M.
Applied Thermal Engineering, vol.82, pp.129-140, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Ejektör Genleştiricili Soğutma Çevriminde Sıvı-Buhar Ayırıcı Verimliliğinin R134a, R1234yf ve R1234ze(E) Soğutkanları için Farklı Çalışma Koşullarında Teorik Olarak İncelenmesi**
ATMACA A. U., EREK A., EKREN O.
Soğutma Dünyası, 2023 (Peer-Reviewed Journal)
- II. **Model of the combi boiler appliance in TRNSYS for domestic hot water circuit: Experimental and numerical validations of economic mode simulations**

Gök O., ATMACA A. U., Altay H. M., EREK A.

International journal of energy studies (Online), vol.8, no.1, pp.15-38, 2023 (Peer-Reviewed Journal)

- III. **Sabit Alanda ve Sabit Basınçta Karışımli Ejektör Modellerinin Performans Değerlendirmesi**
ATMACA A. U., EREK A., EKREN O.
Mühendis ve Makina, vol.59, no.690, pp.89-118, 2018 (Peer-Reviewed Journal)
- IV. **Investigation of new generation refrigerants under two different ejector mixing theories**
ATMACA A. U., EREK A., EKREN O.
ENERGY PROCEDIA, vol.136, pp.394-401, 2017 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Evaluation of the Ejector Component and Separator Efficiencies under Constant Area Mixing Theory: Design Considerations**
Atmaca A. U., EreK A., Ekren O.
XV INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM, İzmir, Turkey, 20 - 23 September 2022
- II. **Effects of the Methods for the Determination of the Motive Nozzle Outlet Pressure on the Performance Analyses of the Ejector Expansion Refrigeration Cycle**
Atmaca A. U., EreK A., Ekren O.
XV INTERNATIONAL HVAC&R TECHNOLOGIES SYMPOSIUM, 20 September 2022
- III. **The Use of TRNSYS as a Simulation Tool for the Domestic Hot Water Performance Evaluations of the Combi Boilers**
GÖK O., ATMACA A. U., ALTAY H. M., EREK A.
2nd International Conference on Energy, Environment and Storage of Energy, ICEESEN-2022, Kayseri, Turkey, 1 - 03 September 2022
- IV. **Ejektör Genleştircili Soğutma Çevriminde Sıvı-Buhar Ayırıcı Verimliliğinin R134a, R1234yf Ve R1234ze(E) Soğutkanları İçin Farklı Çalışma Koşullarında Teorik Olarak İncelenmesi**
ATMACA A. U., EREK A., EKREN O.
14.Ulusal Tesisat Mühendisliği Kongresi, Turkey, 17 - 20 April 2019
- V. **Preliminary Design of the Two-Phase Ejector under Constant Area Mixing Assumption for 5 kW Experimental System**
ATMACA A. U., EREK A., EKREN O.
4th International Conference on Advances on Clean Energy Research (ICACER), Coimbra, Portugal, 5 - 07 April 2019, vol.103
- VI. **Parametric Investigation of Supercritical Refrigeration Cycle for R744 and R170**
ATMACA A. U., EREK A., ÇOBAN M. T., EKREN O.
7th Global Conference on Global Warming-2018, 24 - 28 June 2018
- VII. **Thermodynamic Assessment Of Ejector Expansion Refrigeration Cycle Under Reversible Ejector Assumption**
ATMACA A. U., EREK A., EKREN O.
7th Global Conference on Global Warming-2018, 24 - 28 June 2018
- VIII. **COMPREHENSIVE PERFORMANCE COMPARISON OF R290 AND R600a IN ANEJECTOR EXPANSION REFRIGERATION CYCLE**
ATMACA A. U., EREK A., EKREN O.
4. Uluslararası Katılımlı Anadolu Enerji Sempozyumu, 18 - 20 April 2018
- IX. **Investigating The Effects Of The Ejector Section Efficiencies On The Overall Cycle Performance**
ATMACA A. U., EREK A., EKREN O.
ULIBTK'17 21. Ulusal Isı Bilimi Ve Tekniği Kongresi, Turkey, 13 - 16 September 2017
- X. **Sabit Alanda Ve Sabit Basınçta Karışımli Ejektör Modellerinin Performans Değerlendirmesi**
ATMACA A. U., EREK A., EKREN O.
13. Ulusal Tesisat Mühendisliği Kongresi, Turkey, 19 - 22 April 2017

XI. Investigation of new generation refrigerants under two different ejector mixing theories

ATMACA A. U., EREK A., EKREN O.

4th International Conference on Energy and Environment Research (ICEER), Porto, Portugal, 17 - 20 July 2017,
vol.136, pp.394-401

XII. PERFORMANCE ANALYSES OF ENVIRONMENTALLY FRIENDLY LOW GWP REFRIGERANTS

ATMACA A. U., EREK A., EKREN O.

3rd International Conference on Thermophysical and Mechanical Properties of Advanced Materials, 1 - 03
September 2016

Metrics

Publication: 25

Citation (WoS): 86

Citation (Scopus): 85

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H-Index (Scopus): 4