

Res. Asst. MEHMET SAĞLAM

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAS-5368-2020

ScopusID: 57196326301

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Education Information

2017 - Continues	Doctorate, Karadeniz Technical University, -, Makina Mühendisliği, Turkey
2014 - 2017	Postgraduate, Karadeniz Technical University, -, Makina Mühendisliği, Turkey
2009 - 2014	Undergraduate, Karadeniz Technical University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey

Foreign Languages

English, C1 Advanced

Dissertations

2017	NATURAL CONVECTION INSIDE A RECTANGULAR ENCLOSURE WITH DISCRETE HEAT SOURCES ON ITS SIDE WALL, Karadeniz Technical University, Makina Mühendisliği, Postgraduate
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Research Areas

Mechanical Engineering, Thermodynamics, Engineering and Technology

Academic Titles / Tasks

2014 - Continues	Research Assistant, Karadeniz Technical University, Mühendislik Fakültesi, Makine Mühendisliği
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Published journal articles indexed by SCI, SSCI, and AHCI

- Thermal cycling performance of a Shell-and-tube latent heat thermal energy storage system with paraffin/graphite matrix composite**
SAĞLAM M., Ceboglu E., BİRİNCİ S., Sarper B., AYDIN O.
Journal of Energy Storage, vol.83, 2024 (SCI-Expanded)
- A novel fabrication method for polymeric flat plate pulsating heat pipe via additive manufacturing**
CANDAN CANDERE A., Miché N., Bernagozzi M., SAĞLAM M., Georgoulas A., AYDIN O., Marengo M.
Applied Thermal Engineering, vol.241, 2024 (SCI-Expanded)
- The role of jet-to-crossflow velocity ratio on convective heat transfer enhancement in the cooling of discrete heating modules**
Albayrak M., Sarper B., SAĞLAM M., BİRİNCİ S., AYDIN O.

THERMAL SCIENCE AND ENGINEERING PROGRESS, vol.37, 2023 (SCI-Expanded)

- IV. **Constructal enhancement of cooling performance of local heating elements with different heat generation rates under free and mixed convection regimes**
Sarper B., BİRİNCİ S., SAĞLAM M., AYDIN O.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.135, 2022 (SCI-Expanded)
- V. **Thermal energy storage performance of PCM/graphite matrix composite in a tube-in-shell geometry**
Yazici M., SAĞLAM M., AYDIN O., AVCI M.
THERMAL SCIENCE AND ENGINEERING PROGRESS, vol.23, 2021 (SCI-Expanded)
- VI. **Effect of heaters' clearance on mixed convection cooling performance in a discretely heated horizontal duct**
BİRİNCİ S., SAĞLAM M., Sarper B., AYDIN O.
International Journal of Thermal Sciences, vol.163, 2021 (SCI-Expanded)
- VII. **Constructal design of heat sources with different heat generation rates for the hot spot mitigation**
BİRİNCİ S., SAĞLAM M., Sarper B., AYDIN O.
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.163, 2020 (SCI-Expanded)
- VIII. **Natural Convection in an Enclosure with a Pair of Discrete Heat Sources**
SAĞLAM M., Sarper B., AYDIN O.
JOURNAL OF THERMOPHYSICS AND HEAT TRANSFER, vol.33, no.1, pp.234-245, 2019 (SCI-Expanded)
- IX. **Constructal Placement of Discrete Heat Sources With Different Lengths in Vertical Ducts Under Natural and Mixed Convection**
SARPER B., SAĞLAM M., AYDIN O.
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.140, no.12, 2018 (SCI-Expanded)
- X. **Experimental and numerical investigation of natural convection in a discretely heated vertical channel: Effect of the blockage ratio of the heat sources**
Sarper B., SAĞLAM M., AYDIN O.
INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol.126, pp.894-910, 2018 (SCI-Expanded)
- XI. **Natural convection in a parallel-plate vertical channel with discrete heating by two flush-mounted heaters: effect of the clearance between the heaters**
Sarper B., SAĞLAM M., AYDIN O., Avci M.
HEAT AND MASS TRANSFER, vol.54, no.4, pp.1069-1083, 2018 (SCI-Expanded)
- XII. **Natural Convection in an Enclosure with a Discretely Heated Sidewall: Heatlines and Flow Visualization**
Saglam M., Sarper B., Aydin O.
JOURNAL OF APPLIED FLUID MECHANICS, vol.11, no.1, pp.271-284, 2018 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Experimental and numerical convective heat transfer performance analysis of a confined impinging round jet with triangular tabs under crossflow influence**
Sağlam M., Birinci S., Sarper B., Aydın O.
9th European Thermal Sciences Conference, EURO THERM 2024, Bled, Slovenia, 10 - 13 June 2024, vol.2766
- II. **The influence of cold plate height on thermal management of a liquid-cooled battery pack**
BİRİNCİ S., Albayrak M., SAĞLAM M., Sarper B., AYDIN O.
9th European Thermal Sciences Conference, EURO THERM 2024, Bled, Slovenia, 10 - 13 June 2024, vol.2766
- III. **Numerical Investigation of the Thermal Performance of a Liquid Cooled Battery Pack**
Birinci S., Sağlam M., Sarper B., Yazıcı M. Y., Aydın O.
9th International IFS and Contemporary Mathematics and Engineering Conference, Mersin, Turkey, 8 July - 11 October 2023, pp.183-184
- IV. **EFFECT OF SURFACE RADIATION ON JET IMPINGEMENT COOLING OF A CONCAVE SURFACE**
Albayrak M., Sarper B., Birinci S., Saglam M., Aydin O.

Proceedings of CONV-22: Int. Symp. on Convective Heat and Mass Transfer, İzmir, Turkey, 5 - 10 June 2022, pp.512-522

- V. **FORCED CONVECTION HEAT TRANSFER ENHANCEMENT IN A RECTANGULAR CHANNEL BY BIOMIMETIC CYLINDRICAL RIBS**
Sağlam M., Birinci S., Sarper B., Aydın O.
23rd Congress on Thermal Science and Technology with International Participation, Gaziantep, Turkey, 8 - 10 September 2021, pp.1767-1773
- VI. **VALIDATION STUDY OF A NATURALLY VENTILATED SOLAR FACADE**
Sarper B., Birinci S., Sağlam M., Aydın O.
5th International Anatolian Energy Symposium, Trabzon, Turkey, 24 - 25 March 2021, pp.239-248
- VII. **NUMERICAL INVESTIGATION OF NATURALLY VENTILATED FACADE WITH PCM LOCATED IN MEDITERRANEAN REGION**
Birinci S., Sağlam M., Sarper B., Yazıcı M. Y., Avcı M., Aydın O.
5th International Anatolian Energy Symposium, Trabzon, Turkey, 24 - 25 March 2021, pp.259-265
- VIII. **EFFECT OF THE CLEARANCE BETWEEN HEATED BLOCKS ON OVERALL COOLING PERFORMANCE IN A HORIZONTAL DUCT**
Birinci S., Sağlam M., Sarper B., Aydın O.
INTERNATIONAL CONFERENCE ON ENERGY, ENVIRONMENT AND STORAGE OF ENERGY, ICEESEN 2020, Kayseri, Turkey, 19 - 21 November 2020, pp.260-267
- IX. **EFFECT OF DIFFERENT CONFIGURATIONS OF INLET POSITIONS ON HEAT TRANSFER IN A DISCRETELY HEATED HORIZONTAL CHANNEL**
Birinci S., Sağlam M., Sarper B., Aydın O.
22nd Congress on Thermal Science and Technology, ULIBTK'19 , Kocaeli, Turkey, 11 - 14 September 2019, vol.1, no.1, pp.526-532
- X. **AYRIK ISI KAYNAKLARIYLA ISITILAN DÜŞEY KANALDA KAYNAK DİZİLİŞLERİNİN ISI TRANSFERİNE ETKİSİ**
SARPER B., SAĞLAM M., BİRİNCİ S., AYDIN O.
IV. Uluslararası Katılımlı Anadolu Enerji Sempozyumu, Edirne, Turkey, 18 - 20 April 2018, vol.1, pp.652-663
- XI. **Resonance Phenomena in a Nanofluid Filled Enclosure Heated Periodically from the Side**
SAĞLAM M., SARPER B., AYDIN O.
Proceedings of the 3 r d World Congress on Momentum, Heat and Mass Transfer (MHMT'18), Budapeşte, Hungary, 12 - 14 April 2018, pp.1-7
- XII. **Thermal Management of Portable Electronics with PCM: Application in Mobile Phone**
YAZICI M. Y., SAĞLAM M.
8th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 22 October 2017, vol.8, pp.1506-1511
- XIII. **BİR YÜZEYİNDE AYRIK ISI KAYNAKLARI BULUNAN EĞİK KARESEL BİR KAPALI ORTAMDA DOĞAL TAŞINIM**
SAĞLAM M., SARPER B., AYDIN O.
21. ULUSAL ISI BİLİMİ VE TEKİNİĞİ KONGRESİ, Çorum, Turkey, 13 - 16 September 2017
- XIV. **CONJUGATE NATURAL CONVECTION IN AN ENCLOSURE SUBJECTED TO PERIODICAL HEATING**
SARPER B., SAĞLAM M., AYDIN O.
SECOND INTERNATIONAL CONFERENCE ON VIABLE ENERGY TRENDS, Helsinki, Finland, 28 - 30 April 2017, pp.198-211
- XV. **NATURAL CONVECTION IN A DISCRETELY HEATED CHANNEL: COMPARISON OF THE TWO AND THREE DIMENSIONAL MODELS**
SARPER B., SAĞLAM M., AYDIN O.
SECOND INTERNATIONAL CONFERENCE ON VIABLE ENERGY TRENDS, Helsinki, Finland, 28 - 30 April 2017, pp.212-224
- XVI. **DİKDÖRTGEN KESİTLİ BİR ORTAMA YERLEŞTİRİLEN AYRIK ISI KAYNAĞININ KONUMUNUN AKIŞ VE ISI TRANSFERİNE ETKİSİ**

SAĞLAM M., AYDIN O., SARPER B.

13. ULUSAL TESİSAT MÜHENDİSLİĞİ KONGRESİ, İzmir, Turkey, 19 - 22 April 2017, pp.1013-1023

XVII. **Düşey Yüzeyinde Ayrık Isı Kaynakları Bulunan Kanalda Yüzey Işınımının Isı Transferine Etkisi**

SARPER B., BİRİNCİ S., SAĞLAM M., AYDIN O., AVCI M.

13. Ulusal Tesisat Mühendisliği Kongresi, İzmir, Turkey, 19 - 22 April 2017, vol.1, pp.1027-1035

XVIII. **Dikdörtgen Kapalı Bir Ortama Yerleştirilen Ayrık Isı Kaynağının Konumunun Akış Ve Isı Transferine Etkisi**

SAĞLAM M., SARPER B., AYDIN O.

13. Ulusal Tesisat Mühendisliği Kongresi, İzmir, Turkey, 19 - 22 April 2017, vol.1, pp.1013-1023

XIX. **Natural Convection Inside A Rectangular Enclosure With Two Discrete Heat Sources Placed On Its Bottom Wall**

SAĞLAM M., SARPER B., AYDIN O.

Proceedings of the 2 nd World Congress on Momentum, Heat and Mass Transfer (MHMT'17), Barselona, Spain, 6 - 08 April 2017, pp.1-8

XX. **Natural Convection Heat Transfer from Discretely Heated Vertical Channel: Effect of the Surface Radiation**

SARPER B., SAĞLAM M., AYDIN O., AVCI M.

Proceedings of the 2nd World Congress on Momentum, Heat and Mass Transfer (MHMT'17), Barselona, Spain, 6 - 08 April 2017

XXI. **Düşey yüzeyine ayrık ısıtıcılar yerleştirilmiş kapalı ortamda periyodik doğal taşınım**

SARPER B., SAĞLAM M., AYDIN O.

ULIBTK'15 20. Ulusal Isı Bilimi ve Tekniği Kongresi, Balıkesir, Turkey, 2 - 05 September 2015

Supported Projects

2024 - Continues	Araştırma Faaliyetleri ve Endüstriyel Taleplere Cevap Verebilecek Hızlı Prototipleme Laboratuvar Alt Yapısının Oluşturulması, Project Supported by Higher Education Institutions
2019 - 2021	5th International Anatolian Energy Symposium, Project Supported by Higher Education Institutions
2018 - 2020	Faz Değiştiren Madde İlaveli Batarya Termal Kontrol Sistemi Üretimi, TUBITAK Project
2017 - 2020	Taşınabilir elektronik cihazların termal kontrolü FDM ilaveli termal kontrol ünitesi ve kılıf tasarımı, Project Supported by Higher Education Institutions
2014 - 2017	Hava ile Elektronik Soğutmada Optimum Geometri ve İşletme Parametrelerinin Araştırılması, TUBITAK Project

Patent

2024	Composite battery thermal management system developed with the use of phase change material and graphite matrix: a new design for cooling and preheating, Patent, CHAPTER H Electricity, The Invention Registration Number: 0 , Standard Registration, 2024
2020	Sağlam M., Elektronik Cihazlar Ve Akıllı Telefonların Termal Kontrolünü Sağlayan Faz Değiştiren Madde İlaveli Yeni Bir Kılıf Yapısı, Patent, CHAPTER H Electricity, The Invention Registration Number: 2017 22655 , Standard Registration, 2020

Tasks In Event Organizations

24 Mart 2021	Çuhadaroğlu B., SAĞLAM M., 5th International Anatolian Energy Symposium , Scientific Congress, Trabzon, Turkey
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Metrics

Publication: 34

Citation (WoS): 148

Citation (Scopus): 169

H-Index (WoS): 7

H-Index (Scopus): 8

Congress and Symposium Activities

2024	The 41st UIT International Heat Transfer Conference, Attendee, Naples, Italy
2024	9th European Thermal Sciences Conference, Attendee, Ljubljana, Slovenia
2018	Proceedings of the 3rd World Congress on Momentum, Heat and Mass Transfer (MHMT'18), Attendee, Budapest, Hungary
2017	21. ULUSAL ISI BİLİMİ VE TEKNİĞİ KONGRESİ, Attendee, Çorum, Turkey
2017	SECOND INTERNATIONAL CONFERENCE ON VIABLE ENERGY TRENDS, Audience, Helsinki, Finland
2017	Attendee, İzmir, Turkey
2017	Proceedings of the 2nd World Congress on Momentum, Heat and Mass Transfer (MHMT'17), Attendee, Barcelona, Spain