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International Researcher IDs

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Publons / Web Of Science ResearcherID: GRS-4033-2022

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Education Information

Doctorate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, Turkey
2012 - 2018

Research Areas

Geothermal energy, Thermodynamics, Heat and Mass Transfer, Heating, Refrigerating and Air Conditioning, Thermal Systems

Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2023 - Continues

Assistant Professor, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2023 - 2023

Assistant Professor, Tekirdağ Namik Kemal University, Faculty Of Engineering, 2019 - 2023

Research Assistant, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2011 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. The effect of internal blinds on thermal comfort: An experimental analysis in an office room with radiant panels**
DOĞAN A., KAYACI N., DEMİR H.
Indoor and Built Environment, vol.33, no.8, pp.1397-1414, 2024 (SCI-Expanded)
- II. An artificial neural network-based numerical estimation of the boiling pressure drop of different refrigerants flowing in smooth and micro-fin tubes**
Çolak A. B., Bacak A., KAYACI N., DALKILIÇ A. S.

Kerntechnik, vol.89, no.1, pp.15-30, 2024 (SCI-Expanded)

- III. **Experimental Investigation of Mean Radiant Temperature Trends for a Ground Source Heat Pump-Integrated Radiant Wall and Ceiling Heating System**
Dogan A., Kayaci N., Kanbur B. B., Demir H.
Buildings, vol.13, no.10, 2023 (SCI-Expanded)
- IV. **Prediction of heat transfer characteristics in a microchannel with vortex generators by machine learning**
Gönül A., Çolak A. B., Kayaci N., Okbaz A., Dalkılıç A. S.
Kerntechnik, vol.88, no.1, pp.80-99, 2023 (SCI-Expanded)
- V. **Numerical and Economic Analysis of Hydronic-Heated Anti-Icing Solutions on Underground Park Driveways**
Kayaci N., Kanbur B. B.
SUSTAINABILITY, vol.15, no.3, pp.25-64, 2023 (SCI-Expanded)
- VI. **An experimental comparison of radiant wall and ceiling cooling system integrated with ground source heat pump and direct expansion fan coil system in a highly glazed office room**
Doğan A., Kayaci N., Demir H., Kemal Sevindir M. K.
Energy and Buildings, vol.273, 2022 (SCI-Expanded)
- VII. **Flow optimization in a microchannel with vortex generators using genetic algorithm**
Gonul A., Okbaz A., Kayaci N., DALKILIÇ A. S.
APPLIED THERMAL ENGINEERING, vol.201, 2022 (SCI-Expanded)
- VIII. **Energy and exergy analysis and thermo-economic optimization of the ground source heat pump integrated with radiant wall panel and fan-coil unit with floor heating or radiator**
Kayaci N.
Renewable Energy, vol.160, pp.333-349, 2020 (SCI-Expanded)
- IX. **Comparative performance analysis of building foundation Ground heat exchanger**
Kayaci N., Demir H.
Geothermics, vol.83, 2020 (SCI-Expanded)
- X. **Experimental and numerical investigation of ground heat exchangers in the building foundation**
Kayaci N., Demir H., Kanbur B. B., Atayılmaz Ş. Ö., Ağra Ö., Acet R. C., Gemici Z.
ENERGY CONVERSION AND MANAGEMENT, vol.188, pp.162-176, 2019 (SCI-Expanded)
- XI. **Numerical modelling of transient soil temperature distribution for horizontal ground heat exchanger of ground source heat pump**
Kayaci N., Demir H.
Geothermics, vol.73, pp.33-47, 2018 (SCI-Expanded)
- XII. **Long time performance analysis of ground source heat pump for space heating and cooling applications based on thermo-economic optimization criteria**
Kayaci N., DEMİR H.
Energy and Buildings, vol.163, pp.121-139, 2018 (SCI-Expanded)
- XIII. **Numerical investigation for the calculation of TiO₂-water nanofluids' pressure drop in plain and enhanced pipes**
Celen A., Kayaci N., Cebi A., Demir H., Dalkılıç A. S., Wongwises S.
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.53, pp.98-108, 2014 (SCI-Expanded)
- XIV. **Determination of the Single-Phase Forced Convection Heat Transfer Characteristics of TiO₂ Nanofluids Flowing in Smooth and Micro-Fin Tubes by Means of CFD and ANN Analyses**
Kayaci N., Balcilar M., Tabatabaei M., Celen A., Yıldız O., Dalkılıç A. S., Wongwises S.
CURRENT NANOSCIENCE, vol.9, pp.61-80, 2013 (SCI-Expanded)
- XV. **Forced Convective Heat Transfer of Nanofluids - A Review of the Recent Literature**
DALKILIÇ A. S., Kayaci N., Celen A., Tabatabaei M., Yıldız O., Daungthongsuk W., Wongwises S.
CURRENT NANOSCIENCE, vol.8, no.6, pp.949-969, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **Numerical Modelling of Anti-icing System on Underground Car Park Road Surfaces Using Hydronic Heating Pavement**
KAYACI N.
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.11, no.1, pp.322-334, 2022 (Peer-Reviewed Journal)
- II. **Experimental investigation of thermal comfort performance of a radiant wall and ceiling panel system**
DOĞAN A., Kayaci N., DEMİR H., SEVİNDİR M. K.
Journal of Thermal Engineering, vol.8, no.4, pp.551-561, 2022 (Scopus)

Papers Published in Refereed Scientific Meetings

- I. **AIR DEMAND AND SMOKE CONTROLS FOR VENTILATION OF A ROAD TUNNEL**
KAYACI N., SEVİNDİR M. K., DEMİR H., EFECAN Ö.
5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, 17 - 19 December 2019
- II. **CFD SIMULATION FOR WIND COMFORT AND SAFETY IN TRANSITION ZONES: A CASE STUDY**
KAYACI N., SEVİNDİR M. K., DEMİR H., DİZDAR İ.
5TH INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, 17 - 19 December 2019
- III. **Uzun zamanlı çalıştırılan toprak kaynaklı ısı pompasının enerji ve ekserji analizlerinin incelenmesi**
KAYACI N., DEMİR H., TRAK E., DOĞAN A., OKBAZ A.
CTST'19 22th Congress of Thermal Sciences and Technology, Kocaeli, Turkey, 11 - 14 September 2019
- IV. **BİNA TEMELİNE UYGULANAN YATAY TOPRAK ISI DEĞİŞTİRİCİSİNİN PERFORMANSINA ISI İLETİM KATSAYISININ VE BORU ÇAPININ ETKİSİNİN İNCELENMESİ**
KAYACI N.
CTST'19 22th Congress of Thermal Sciences and Technology, 11 - 14 September 2019
- V. **BİNA TEMELİNE VE ALTINDAKİ TOPRAĞA UYGULANAN TOPRAK KAYNAKLI ISI POMPASI SİSTEMİNİN DENEYSEL ÇALIŞMASI**
KAYACI N., DEMİR H., ATAYILMAZ Ş. Ö., AĞRA Ö., Acet R. C., Gemici Z.
4. Uluslararası Katılımlı Anadolu Enerji Sempozyumu, Edirne, Turkey, 18 April 2018, pp.1
- VI. **BİNA TEMELİNE UYGULANAN TOPRAK KAYNAKLI ISI POMPASI SİSTEMİNİN UZUN ZAMANLI TERMO-EKONOMİK OPTİMİZASYONU**
KAYACI N., DEMİR H., Yıldız S., Sağlık E., Tuzcu C.
4. Uluslararası Katılımlı Anadolu Enerji Sempozyumu, Edirne, Turkey, 18 April 2018, pp.1
- VII. **Experimental setup for the determination of heat transfer inside the soil region in ground source heat pump**
KAYACI N., DEMİR H., ATAYILMAZ Ş. Ö., AĞRA Ö.
Proceedings of 2nd International Conference on Mechanical and Aeronautical Engineering, in Bangkok, 13 - 14 July 2016
- VIII. **The economic comparison of seawater source heat pump application and electric heating on bridge heating in winter**
SEVİNDİR M. K., DEMİR H., ATAYILMAZ Ş. Ö., KAYACI N., GÖNÜL A.
Proceedings of 2nd International Conference on Mechanical and Aeronautical Engineering, BANGKOK, 13 - 14 July 2016
- IX. **Design and numerical analysis of a vehicle amour again bullets and shaped charges**
KAYKI M. Ö., KAYACI N., ÖZBEYAZ K.
ASME 2015 International Mechanical Engineering Congress Exposition, TEKSAS, United States Of America, 13 - 19 November 2015
- X. **Effects Of Surface Conditions For Different Climatic Zones In Turkey On Temperature Distribution In The Soil**

KAYACI N., DEMİR H., ATAYILMAZ Ö., AĞRA Ö.

ASME 2015 International Mechanical Engineering Congress & Exposition (2015), November 13-19, 01 November 2015

- XI. **Long term simulation of horizontal Ground Heat Exchanger for ground source Heat Pump**
Kayaci N., ATAYILMAZ Ş. Ö., DEMİR H., AĞRA Ö.
ASME 2015 International Mechanical Engineering Congress and Exposition, IMECE 2015, Texas, United States Of America, 13 - 19 November 2015
- XII. **Numerical investigation of the single phase forced convection heat transfer characteristics of Nanofluid flowing in circular and noncircular tubes**
Kayaci N., Dalkılıç A. S., Malazı M. T., Wongwises S.
ASME 2015 International Mechanical Engineering Congress and Exposition, IMECE 2015, Texas, United States Of America, 13 - 19 November 2015
- XIII. **Thermo economical optimization of ground source heat pump with horizontal ground heat exchangers for a heating season in Istanbul: A case study**
DEMİR H., GÖNÜL A., KAYACI N., ATAYILMAZ Ş. Ö., AĞRA Ö.
4th Joint US-European Fluids Engineering Summer Meeting FEDSM2014, Chicago, United States Of America, 3 - 07 August 2014
- XIV. **Smoke control of a car park by means of CFD analyses using jet fans**
Celen A., Kundu B., Dalkılıç A. S., Atayılmaz Ş. Ö., Kayaci N., Wongwises S.
ASME 2014 4th Joint US-European Fluids Engineering Division Summer Meeting, FEDSM 2014, Collocated with the ASME 2014 12th International Conference on Nanochannels, Microchannels, and Minichannels, Illinois, United States Of America, 3 - 07 August 2014
- XV. **EFFECT OF THE HEAT RECOVERY SYSTEM TO THE PERFORMANCE OF AIR HANDLING UNIT OF A SHOPPING CENTRE**
Kelasovali F., Celen A., Kayaci N., DALKILIÇ A. S., Wongwises S.
ASME International Mechanical Engineering Congress and Exposition, Texas, United States Of America, 9 - 15 November 2012, pp.685-691
- XVI. **A critical review on the numerical methods of two-phase flows**
Balcılar M., DALKILIÇ A. S., Çelen A., Kayaci N., WONGWISES S.
ASME 2012 International Mechanical Engineering Congress and Exposition, IMECE 2012, Houston, TX, United States Of America, 9 - 15 November 2012, vol.7, pp.289-302
- XVII. **The design of a yacht-Type chiller**
KAYKI M., Celen A., Kayaci N., DALKILIÇ A. S., WONGWISES S.
ASME 2012 International Mechanical Engineering Congress and Exposition, IMECE 2012, Houston, TX, United States Of America, 9 - 15 November 2012, vol.7, pp.1533-1541

Supported Projects

DALKILIÇ A. S., GÖNÜL A., CELEN A., AKYOL E., KIRBOĞA OKUMUŞ S., WONGWISES S., Akgül D., MERCAN H., AÇIKGÖZ Ö., KAYACI N., et al., Project Supported by Higher Education Institutions, Tek ve İki Fazlı Akışlarda Üç Borulu Isı Değiştiricilerinde Isı Transferi Karakteristiklerinin Deneysel Olarak Araştırılması, 2021 - 2023

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