

## Assoc. Prof. Nurullah KAYACI

### Personal Information

**Office Phone:** [+90 212 383 7070](tel:+902123837070)

**Email:** [nurullah.kayaci@yildiz.edu.tr](mailto:nurullah.kayaci@yildiz.edu.tr)

**Other Email:** [kayaci@yildiz.edu.tr](mailto:kayaci@yildiz.edu.tr)

**Web:** <https://avesis.yildiz.edu.tr/kayaci>

**Address:** YTÜ, Yıldız Kampüsü, Barbaros Bulvarı 34349, Beşiktaş / İSTANBUL

### International Researcher IDs

ScholarID: lv6LL-AAAAAJ

ORCID: 0000-0002-8843-8191

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

ScopusID: 55645106500

Yoksis Researcher ID: 137265

### 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 TiO<sub>2</sub>-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 TiO<sub>2</sub> 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)

## Refereed Congress / Symposium Publications in Proceedings

- 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

## Metrics

Publication: 41

Citation (WoS): 309

Citation (Scopus): 352

H-Index (WoS): 10

H-Index (Scopus): 10