Res. Asst. Ahmet Gültekin

Personal Information

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International Researcher IDs
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ORCID: 0000-0002-1307-9016
Publons / Web Of Science ResearcherID: J-4720-2016
ScopusID: 57189694966
Yoksis Researcher ID: 180963

Biography

Dr. Ahmet Gültekin received his mechanical engineering bachelor's degree from Uludağ University in 2010, and then he received his MSc and Ph.D. degrees from ITU Energy Institute in 2014 and 2021, respectively. He joined Nuclear Engineering and Management Department, Tokyo University as a visiting researcher in 2019-2020. He was awarded a one year scholarship to carry on his doctoral study at Tokyo University by TUBITAK (The Scientific and Technological Research Council of Turkey). His research experience is focused on Ground Source Heat Pumps (GSHP), spray cooling and droplet dynamics, Particle Image Velocimetry (PIV), quantitative image analysis and Computational Fluid Dynamics (CFD). He has published several articles in prestigious journals and international conference papers in his field; these publications have been cited more than 130 times.

Education Information

Doctorate, Istanbul Technical University, Enerji Enstitüsü, Turkey 2014 - 2021
Postgraduate, Istanbul Technical University, Enerji Enstitüsü, Turkey 2011 - 2014
Undergraduate, Bursa Uludağ University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey 2005 - 2010

Foreign Languages

English, C2 Mastery
German, A2 Elementary
Japanese, A1 Beginner

Dissertations

Doctorate, Experimental and numerical investigation of single and multiple droplet interactions with high-temperature surfaces, Istanbul Technical University, Enerji Enstitüsü, 2021
Postgraduate, Experimental and computational investigation of the effect of distance between boreholes on performance in Ground Source Heat Pump Systems, Istanbul Technical University, Enerji Enstitüsü, 2014

Research Areas

Mechanical Engineering, Energy, Fluid Mechanics, Renewable Energy Systems, Energy storage technologies, Thermodynamics, Heat and Mass Transfer, Heating, Refrigerating and Air Conditioning, Computational fluid dynamics, Thermal Systems, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Istanbul Technical University, Enerji Enstitüsü, Yenilenebilir Enerji , 2012 - 2021
Research Assistant, Tokyo University, Faculty of Engineering , Nuclear Engineering and Management, 2019 - 2020

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Simultaneous multiple droplet impact and their interactions on a heated surface**
Gültekin A., Erkan N., Ozdemir E., Çolak Ü., Suzuki S.
EXPERIMENTAL THERMAL AND FLUID SCIENCE, vol.120, 2021 (SCI-Expanded)

II. **PIV measurement inside single and double droplet interaction on a solid surface**
Gültekin A., Erkan N., Çolak Ü., Suzuki S.
EXPERIMENTS IN FLUIDS, vol.61, no.10, 2020 (SCI-Expanded)

III. **Effects of arrangement geometry and number of boreholes on thermal interaction coefficient of multi-borehole heat exchangers**
Gültekin A., Aydin M., Sisman A.
APPLIED ENERGY, vol.237, pp.163-170, 2019 (SCI-Expanded)

IV. **Thermal performance analysis of multiple borehole heat exchangers**
Gültekin A., Aydın M., Sisman A.
ENERGY CONVERSION AND MANAGEMENT, vol.122, pp.544-551, 2016 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

I. **Interaction phenomena of simultaneous multiple droplet on a heated surface**
GÜLTEKİN A., Erkan N., Özdemir E., ÇOLAK Ü.
The 12th Joint Symposium on Nuclear Science and Technology, 1 - 04 December 2019

II. **Numerical Investigation of a Single Droplet Impact onto Hot Surface by VOF Method at High Weber Numbers**
ALLAF M., GÜLTEKİN A., ÇOLAK Ü.
International Conference for Nuclear Energy in New Europe, Portoroz, Slovenia, 10 - 13 September 2018

III. **Optimum waiting duration between Thermal Response Tests inborehole heat exchangers**
AYDIN M., GÜLTEKİN A.
14th International Conference on Energy Storage, 25 - 28 April 2018

IV. **Modeling of Horizontal Ground Heat Pump for Greenhouse Heating**
AYDIN M., GÜLTEKİN A.
2017 COMSOL Conference, Rotterdam, Netherlands, 18 - 20 October 2017

V. **The effects of test temperature and duration on the results of constant temperature thermal response test**
aydın m., GÜLTEKİN A., ŞİŞMAN H. O. A.
12nd IEA Heat Pump Conference, 15 - 18 May 2017

VI. **An investigation on thermal interaction coefficient for multiple borehole heat exchangers**
GÜLTEKİN A., aydın m., ŞİŞMAN H. O. A.

12nd IEA Heat Pump Conference, 15 - 18 May 2017

VII. **Thermal Performance Investigation of Borehole Heat Exchangers for a Commercial Building In Istanbul**
GÜLTEKİN A.
ENTECH 'xx16 / IV. International Energy Technologies Conference, İstanbul, Turkey, 15 - 16 December 2016

VIII. **An Experimental Performance Comparison between Different Shallow Ground Heat Exchangers**
AYDIN M., ŞİŞMAN H. O. A., GÜLTEKİN A., DEHGHAN B.
World Geothermal Congress, 19 - 25 April 2015

IX. **Determination of Optimal Distance Between Boreholes**
GÜLTEKİN A., AYDIN M., ŞİŞMAN H. O. A.
Thirty-NinthWorkshop on Geothermal Reservoir Engineering, 24 - 26 February 2014, pp.1092-1100

X. **Long Term Performance Prediction of a Borehole and Determination of Optimal Thermal Response Test Duration**
AYDIN M., ŞİŞMAN H. O. A., GÜLTEKİN A.
THIRTY NINTH WORKSHOPGEOTHERMAL RESERVOIR ENGINEERING, 24 - 26 February 2014, pp.1072-1083

XI. **Experimental measurement and long term predictions of a multi U tube borehole performance for ground source heat pumps**
AYDIN M., ŞİŞMAN H. O. A., GÜLTEKİN A., DİNÇER Ş., ERDOGAN C.
11th IEA Heat Pump Conference, 12 May - 16 February 2014

XII. **An experimental investigation of the effects of some design and operational parameters on heat transfer rate per unit borehole length**
GÜLTEKİN A., AYDIN M., ŞİŞMAN H. O. A., DİNCER S., ERDOGAN C.
11th IEA Heat Pump Conference, 12 May - 16 February 2014

XIII. **Toprak Kaynaklı Isı Pompalarında Isıl Cevap Testi ve Kuyu Performansının Analitik Öngörüsü**
AYDIN M., ŞİŞMAN H. O. A., DİNÇER Ş., ERDOĞAN C., GÜLTEKİN A.
TESKON, İzmir, Turkey, 17 April 2013

Scientific Refereeing

APPLIED THERMAL ENGINEERING, Journal Indexed in SCI-E, June 2017
ENERGY CONVERSION AND MANAGEMENT, Journal Indexed in SCI-E, June 2017

Scientific Research / Working Group Memberships

Yeni Enerji Teknolojileri Araştırma Grubu, Istanbul Technical University, Turkey,
http://enerji.itu.edu.tr/arastirma/arastirma-gruplari/yeni-enerji-teknolojileri-arastirma-grubu, 2012 - Continues

Metrics

Publication: 19
Citation (WoS): 74
Citation (Scopus): 81
H-Index (WoS): 4
H-Index (Scopus): 4

Scholarships

TUBITAK/2214-A , TUBITAK, 2019 - 2020

Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT), Official Institutions of Foreign Countries, 2017 - 2017
JASSO Student Exchange Support Program , Official Institutions of Foreign Countries, 2017 - 2017
BSUN Joint Master Degree Study Program on the Management of Renewable Energy Sources – ARGOS , European Commission, 2013 - 2013
BSUN Joint Master Degree Study Program on the Management of Renewable Energy Sources – ARGOS , European Commission, 2012 - 2012

Non Academic Experience

The University of Tokyo