

Assoc. Prof. Ersin Sayar

Personal Information

Office Phone: [+90 212 293 1300](tel:+902122931300)

Fax Phone: [+90 212 293 1300](tel:+902122931300)

Other Email: ersin.sayar@itu.edu.tr

Web: <https://avesis.itu.edu.tr/sayare>

Education Information

Doctorate, Drexel University, United States Of America 2009 - 2012

Postgraduate, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği Anabilim Dalı, Turkey 2006 - 2008

Undergraduate, İstanbul Teknik Üniversitesi, Makine Fakültesi, Makine Mühendisliği Bölümü, Turkey 2002 - 2006

Dissertations

Doctorate, Acoustically and electrokinetically driven transport in microfluidic devices, Drexel University, 2012

Postgraduate, Hareketli sıvı kolonunda kaynamanın incelenmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği Anabilim Dalı, 2008

Research Areas

Mechanical Engineering, Energy, Thermodynamics, Engineering and Technology

Academic Titles / Tasks

Lecturer PhD, İstanbul Teknik Üniversitesi, Makine Fakültesi, Makine Mühendisliği Bölümü, 2012 - Continues

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Wearable temperature sensor for human body temperature detection**
Kuzubasoglu B. A. , Sayar E., Cochrane C., Koncar V., Kurşun Bahadır S.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, 2021 (Journal Indexed in SCI)
- II. **Prediction of Heat Transfer in Reciprocating Antifreeze Flow Through a Porous Filter**
Sayar E.
HEAT TRANSFER ENGINEERING, 2020 (Journal Indexed in SCI)
- III. **Experimental development of a Nusselt correlation for forced reciprocating oscillated vertical annular glycerol flow through a porous domain**
Sayar E.
HEAT AND MASS TRANSFER, vol.53, no.7, pp.2351-2361, 2017 (Journal Indexed in SCI)
- IV. **Nusselt correlation to predict heat transfer from an oscillated vertical annular fluid column through a porous domain**
Sayar E., Sari U.

HEAT AND MASS TRANSFER, vol.53, no.4, pp.1135-1142, 2017 (Journal Indexed in SCI)

V. **Heat transfer from an oscillated vertical annular fluid column through a porous domain A thermodynamic analysis of the experimental results**

Sayar E.

ISI Bilimi ve Teknigi Dergisi-Journal of Thermal Science and Technology, vol.0, 2016 (Journal Indexed in SCI)

VI. **Bulk acoustic wave piezoelectric micropumps with stationary flow rectifiers: a three-dimensional structural/fluid dynamic investigation**

Sayar E., Farouk B.

MICROFLUIDICS AND NANOFUIDICS, vol.18, no.3, pp.433-445, 2015 (Journal Indexed in SCI)

VII. **Electroosmotic Augmentation in Flexural Plate Wave Micropumps**

Sayar E., Farouk B.

JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, vol.22, no.2, pp.372-385, 2013 (Journal Indexed in SCI)

VIII. **Multifield analysis of a piezoelectric valveless micropump: effects of actuation frequency and electric potential**

Sayar E., Farouk B.

SMART MATERIALS AND STRUCTURES, vol.21, no.7, 2012 (Journal Indexed in SCI)

IX. **Acoustically generated flows in microchannel flexural plate wave sensors: Effects of compressibility**

Sayar E., Farouk B.

SENSORS AND ACTUATORS A-PHYSICAL, vol.171, no.2, pp.317-323, 2011 (Journal Indexed in SCI)

Articles Published in Other Journals

I. **Bina enerji kullanımının bir boyutlu dinamik ısı modellemesi ve örneklere uygulanması**

SAYAR E.

Tesisat Mühendisliği, vol.27, no.174, pp.59-74, 2019 (Refereed Journals of Other Institutions)

II. **Toplu taşıma sistemlerinde iklimlendirme ve iç hava kalitesi**

SAYAR E.

Tesisat Mühendisliği, vol.27, no.174, pp.75-83, 2019 (Refereed Journals of Other Institutions)

III. **Bina enerji Tüketiminin Isıl Modellenmesi**

KOÇ İ., SAYAR E., PARMAKSIZOĞLU İ. C.

Tesisat Mühendisliği, vol.25, no.163, pp.84-92, 2018 (Refereed Journals of Other Institutions)

Books & Book Chapters

I. **Isı Taşınımına Giriş (Tüm bölümün tek çevirmeni olarak)**

ALTUNTOP N., HORUZ İ., ÜNAL A., ÖZALP A. A. , SAYAR E., ARSLANTÜRK C., DALOĞLU A. C. , YILDIZ S., İNCE İ. T. in: ISI TRANSFERİ - Heat Transfer (toplam 9 çevirmenden biri olarak), Prof.Dr. İlhami Horoz, Editor, NOBEL Akademik Yayıncılık, Ankara, pp.277-325, 2014

Refereed Congress / Symposium Publications in Proceedings

I. **NANOLİF Katkılı Nonwoven Kumaşların Yalıtım Özellikleri**

Karaca N., Özkan Hacıoğulları S., Günel S. R. , Geygel B., SAYAR E., ÖNEN H. A. , SOLAK N., UÇAR M., Kırbış C., UÇAR N.

İTÜ Ulusal Tekstil Kongresi II. AR-GE Günü, Turkey, 2 - 03 April 2020

II. **Thermal Insulation Properties of Glass Fiber Epoxy Composite with Stonewool Fiber, Nanofiber Web, Silica Aerogel Layers**

Günel S. R. , SAYAR E., Geygel B., Özkan Hacıoğulları S., Karaca N., UÇAR M., SELVER E., SOLAK N., BAYDOĞAN M.,

ÖNEN H. A. , et al.

6. International Fiber and Polymer Research Symposium, 24 - 25 January 2020, vol.1, pp.67-69

- III. **BİNA ENERJİ TÜKETİMİNİN DİNAMİK YAKLAŞIMLA ISIL MODELLENMESİ**
SAYAR E., PARMAKSIZOĞLU İ. C.
ULIBTK'17 21. Ulusal Isı Bilimi ve Tekniği Kongresi, Çorum, Turkey, 13 - 16 September 2017
- IV. **Bina enerji tüketiminin ısı modellemesi**
KOÇ İ., SAYAR E., PARMAKSIZOĞLU İ. C.
13. Ulusal Tesisat Mühendisliği Kongresi, İzmir, Turkey, 19 - 22 April 2017, pp.1989-1999
- V. **EXPERIMENTAL INVESTIGATION OF THE TOTAL MELTING TIME AT VARIOUS HEAT FLUXES IN AN ANNULAR CYLINDRICAL CONCENTRIC PHASE CHANGE MATERIAL**
ALTINOLUK T., Talabazar F. R. , SAYAR E.
INTERNATIONAL CONFERENCE ON ENERGY AND THERMAL ENGINEERING, 25 - 28 April 2017
- VI. **BİNA ENERJİ TÜKETİMİNİN ISIL MODELLENMESİ**
KOÇ İ., SAYAR E., PARMAKSIZOĞLU İ. C.
13. ULUSAL TESİSAT MÜHENDİSLİĞİ KONGRESİ, İzmir, Turkey, 19 - 22 April 2017
- VII. **BOILING HEAT TRANSFER FROM AN OSCILLATED WATER COLUMN THROUGH A POROUS DOMAIN: A SIMPLIFIED THERMODYNAMIC ANALYSIS**
Sayar E.
ASME International Mechanical Engineering Congress and Exposition (IMECE2016), Arizona, United States Of America, 11 - 17 November 2016
- VIII. **ON THE HYDRODYNAMIC ANALYSIS AND HEAT TRANSFER INVESTIGATION OF FORCED OSCILLATED VERTICAL ANNULAR FLUID COLUMN**
Sayar E.
ASME International Mechanical Engineering Congress and Exposition (IMECE2016), Arizona, United States Of America, 11 - 17 November 2016
- IX. **EFFECTS OF THE STRUCTURAL LAYER MATERIAL AND ITS THICKNESS ON POSITIVE DISPLACEMENT PIEZOELECTRIC MICROPUMP PERFORMANCE**
Sayar E., Farouk B.
ASME International Mechanical Engineering Congress and Exposition (IMECE2015), Texas, United States Of America, 13 - 19 November 2015
- X. **A Computational Study on The Effect of Electrical Input Signal Characteristics In A Bulk Acoustic Wave Piezoelectric Valveless Micropumps**
SAYAR E., Farouk B.
IEESE 7, 7th International Ege Energy Symposium and Exhibition, 18 - 20 June 2014
- XI. **Analysis of The Fluid Flow and Material Deformation In A Bulk Acoustic Wave Piezoelectric Micropump Effects of Structural Damping Parameters**
SAYAR E., Farouk B.
IEESE 7, 7th International Ege Energy Symposium and Exhibition, 18 - 20 June 2014
- XII. **SENSITIVITY TO PUMPING BACK PRESSURE IN A BULK ACOUSTIC WAVE PIEZOELECTRIC POSITIVE DISPLACEMENT MICROPUMP**
SAYAR E., Farouk B.
Proceeding of Proceedings of CONV-14: International Symposium on Convective Heat and Mass Transfer. June 8 - 13, 2014, Kusadasi, Turkey, Antalya, Turkey, 13 - 19 June 2014
- XIII. **A COMPUTATIONAL STUDY ON TRANSDUCER MATERIAL SELECTION IN BULK ACOUSTIC WAVE PIEZOELECTRIC VALVELESS MICROPUMPS**
SAYAR E., Farouk B.
Proceeding of Proceedings of CONV-14: International Symposium on Convective Heat and Mass Transfer. June 8 - 13, 2014, Kusadasi, Turkey, Antalya, Turkey, 13 - 19 June 2014
- XIV. **DYNAMIC ANALYSIS OF BULK ACOUSTIC WAVE PIEZOELECTRIC MICROPUMPS: EFFECTS OF INLET-OUTLET PORT ANGLES AND OVERALL PUMP SIZE**
Sayar E., Farouk B.

ASME International Mechanical Engineering Congress and Exposition (IMECE2013), California, United States Of America, 15 - 21 November 2013

XV. DYNAMIC ANALYSIS OF PIEZOELECTRIC VALVELESS MICROPUMPS: EFFECTS OF PIEZOELECTRIC TRANSDUCER MATERIAL

Sayar E., Farouk B.

ASME International Mechanical Engineering Congress and Exposition (IMECE2013), California, United States Of America, 15 - 21 November 2013

XVI. Three Dimensional Dynamic Analysis of a Piezoelectric Valveless Micropump Effects of Working Fluid

SAYAR E., Farouk B.

Volume 8: Mechanics of Solids, Structures and Fluids, Houston, Texas, USA, 9 - 11 November 2012

XVII. Acoustically Generated Flows in Flexural Plate Wave Sensors: a Multifield Analysis

SAYAR E., Farouk B.

4th Annual Meeting of the American Physical Society's Division of Fluid Dynamics (DFD), Baltimore, Maryland, United States Of America, 20 - 22 October 2011

XVIII. Multifield Analysis of a Piezoelectric Valveless Micropump

SAYAR E., Farouk B.

Volume 8: Mechanics of Solids, Structures and Fluids; Vibration, Acoustics and Wave Propagation, Denver, Colorado, USA, 1 - 03 January 2011

XIX. Modeling of Acoustically Augmented Electroosmotic Flows in Microchannels

SAYAR E., Farouk B.

Volume 10: Micro and Nano Systems, Vancouver, British Columbia, Canada, 1 - 03 January 2010

Supported Projects

Sayar E., Project Supported by Higher Education Institutions, Gözenekli ortamın kendinden veya zorlanmış salınlı akış/havuz kaynamasına etkisinin deneysel incelenmesi, 2016 - 2021

Sayar E., Project Supported by Higher Education Institutions, Piezoelektrik Malzemenin Yarattığı Titreşimlerin Doğal Taşınımında Sıcaklık Dağılımına Etkisinin İncelenmesi, 2015 - 2021

Sayar E., Project Supported by Higher Education Institutions, Boiling Heat Transfer From an Oscillated Water Column Through a Porous Domain: A Simplified Thermodynamic Analysis, 2016 - 2018

Sayar E., Project Supported by Higher Education Institutions, EFFECTS OF THE STRUCTURAL LAYER MATERIAL AND ITS THICKNESS ON POSITIVE DISPLACEMENT PIEZOELECTRIC MICROPUMP PERFORMANCE, 2015 - 2018

Sayar E., Project Supported by Higher Education Institutions, Dynamic analysis of bulk acoustic wave piezoelectric micropumps effects of inlet outlet port angles and overall pump size, 2013 - 2018

Sayar E., Project Supported by Other Private Institutions, Enerji verimliliği için ısı yalıtımına yönelik aerojel ve nanokompozit malzeme içerikli kaplamaların geliştirilmesi projesine dış hizmet temini, 2015 - 2016

Sayar E., Project Supported by Higher Education Institutions, Gözenekli ortam oluşturularak hareketli bir sıvı kolonunda kaynamanın deneysel incelenmesi, 2014 - 2015

Sayar E., Project Supported by Higher Education Institutions, Piezoelektrik Mikropompanın Elektromekanik Özelliklerine Sıcaklığın Etkisi, 2014 - 2015

Citations

Total Citations (WOS):50

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