

## Assoc. Prof. ERMAN ASLAN

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Sakarya University, Institute Of Science, Turkey 2006 - 2012

Postgraduate, Sakarya University, Institute Of Science, Turkey 2004 - 2006

Undergraduate, Sakarya University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2000 - 2004

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Farklı geometri karayolu taşıtlarında hava direnci katsayısının lattice boltzmann metodu (LBM) ile belirlenmesi, Sakarya University, Institute Of Science, 2012

Postgraduate, Çekme kalıplarında süzdürme çubuk ve kanal tasarımının konstrüktif açıdan incelenmesi, Sakarya University, Institute Of Science, 2006

### Research Areas

Energy, Fluid Mechanics, Thermodynamics, Heat and Mass Transfer, Computational fluid dynamics

### Academic Titles / Tasks

Associate Professor, Kocaeli University, Mühendislik Fakültesi, Makina Mühendisliği, 2021 - Continues

### Advising Theses

Aslan E., Doğal taşınım problemlerinin Lattice Boltzmann metodu ile modellenmesi, Postgraduate, Ö.YALÇIN(Student), 2023

Aslan E., Ortognatik cerrahide solunum yolu deęişimlerinin hesaplamalı akışkanlar dinamięi (HAD) analizi ile incelenmesi, Doctorate, İ.İNAN(Student), 2022

Aslan E., Isı deęiştiricilerde farklı delikli konik halkaların ısı transferi ve basınç düşümüne etkisinin sayısal yöntemlerle incelenmesi, Postgraduate, M.BURAK(Student), 2021

Aslan E., Coşkun G., Toluen referans yakıtı kullanılan bir HCCI motorun CFD simülasyonunda kullanılmak üzere uygun kimyasal kinetik modelin tespiti, Postgraduate, G.GİZEM(Student), 2020

Özcan O., Aslan E., Sekiz başlangıç spiralli tüpün akış karakteristięi ve termal analizi, Postgraduate, N.CANER(Student), 2019

Karım S. A., Aslan E., Investigating the flow seperation due to grooves over a cylindrical shape, Postgraduate, M.KIRMIZI(Student), 2019

Aslan E., Boru demet taşıyıcı levhalarında ısı taşınım katsayısının ve basınç düşüşünün nümerik olarak incelenmesi, Postgraduate, M.ENGİN(Student), 2018

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Investigation of upper airway changes in orthognathic surgery with computational fluid dynamics analysis**  
Inan I., Aslan E., Karkazi F., Acar Y. B., Körbahti B., Güven H. R.  
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.24, no.2, pp.100-111, 2024 (SCI-Expanded)
- II. **LBM curved boundary treatments for pulsatile flow on convective heat transfer and friction factor in corrugated channels**  
ASLAN E., ÖZSABAN M., KUCUR M., KÖRBAHTI B., Guven H. R.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART C-JOURNAL OF MECHANICAL ENGINEERING SCIENCE, vol.238, no.6, pp.2489-2512, 2024 (SCI-Expanded)
- III. **Numerical and experimental investigation of tube bundle heat exchanger arrangement effect on heat transfer performance in turbulent flows**  
Aslan E., Taymaz I., Çakır K., Eker Kahveci E.  
ISI BILIMI VE TEKNIGI DERGISI/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.43, no.2, pp.175-190, 2023 (SCI-Expanded)
- IV. **Airflow characteristics in differently elevated Schneiderian membranes: a computational fluid dynamics analysis**  
KUNDAKÇIOĞLU A., ASLAN E., AYHAN M., KASAPOĞLU M. B.  
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.22, no.3, pp.187-195, 2022 (SCI-Expanded)
- V. **A Numerical Analysis of Convection Heat Transfer and Friction Factor for Oscillating Corrugated Channel Flows**  
Aslan E., Ozsaban M., Ozcelik G., Guven H. R.  
HEAT TRANSFER ENGINEERING, vol.42, pp.181-190, 2021 (SCI-Expanded)
- VI. **Computational investigation of the velocity and temperature fields in corrugated heat exchanger channels using RANS based turbulence models with experimental validation**  
ASLAN E., Taymaz I., Islamoglu Y., Engin M., Colpan I., Karabas G., Ozcelik G.  
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.18, no.1, pp.33-45, 2018 (SCI-Expanded)
- VII. **Finite volume simulation for convective heat transfer in wavy channels**  
ASLAN E., Taymaz I., Islamoglu Y.  
HEAT AND MASS TRANSFER, vol.52, no.3, pp.483-497, 2016 (SCI-Expanded)
- VIII. **Numerical investigation of the heat transfer and pressure drop on tube bundle support plates for inline and staggered arrangements**  
Asian E.  
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.16, no.1, pp.38-47, 2016 (SCI-Expanded)
- IX. **Investigation of LBM curved boundary treatments for unsteady flows**  
ASLAN E., Taymaz I., Benim A. C.

EUROPEAN JOURNAL OF MECHANICS B-FLUIDS, vol.51, pp.68-74, 2015 (SCI-Expanded)

- X. **NUMERICAL INVESTIGATION OF INCOMPRESSIBLE FLUID FLOW AND HEAT TRANSFER ACROSS A BLUFF BODY IN A CHANNEL FLOW**  
Taymaz I., Aslav E., Benim A. C.  
THERMAL SCIENCE, vol.19, no.2, pp.537-547, 2015 (SCI-Expanded)
- XI. **A note on modelling non-rectangular boundaries by the Lattice Boltzmann Method**  
Asian E., Nahavandi A., Taymaz I., Benim A. C.  
PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, vol.12, no.6, pp.433-438, 2012 (SCI-Expanded)
- XII. **Lattice Boltzmann Method for Laminar Forced Convection in a Channel with a Triangular Prism**  
Benim C., ASLAN E., Taymaz I.  
HEAT TRANSFER RESEARCH, vol.42, no.4, pp.359-377, 2011 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Analytical and Numerical Investigation of Two-Dimensional Heat Transfer with Periodic Boundary Conditions**  
BAĞLAN İ., ASLAN E.  
Computation, vol.12, no.1, 2024 (ESCI)
- II. **Investigation of the Effect of Hot Fluid on Deformation in T-Shaped Pipes by FSI Method Using Different Material**  
Kepekçi H., Aslan E.  
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.27, no.3, pp.660-669, 2023 (Peer-Reviewed Journal)
- III. **CFD Analysis of Convection Heat Transfer in Corrugated Channels for Different Inclination Angle**  
Kepekçi H., Aslan E.  
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.25, no.2, pp.333-341, 2022 (Peer-Reviewed Journal)
- IV. **Investigation of Convective Heat Transfer and Friction Factor in Corrugated Channels with Different Inclination Angles Using Computational Fluid Dynamics**  
ASLAN E., Kepekçi İ. H.  
Journal of Advanced Thermal Science Research, vol.8, pp.21-29, 2021 (Peer-Reviewed Journal)
- V. **Design of Heat Pipe Assisted Thermoelectric Generator and Experimental Investigaton of the Power Performance**  
İSLAMOĞLU Y., PARMAKSIZOĞLU İ. C., TAYMAZ İ., ÖZSOY M., ASLAN E.  
Sakarya Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.24, no.5, pp.872-881, 2020 (Peer-Reviewed Journal)
- VI. **Numerical Investigation of incompressible forced convection in a channel with a rectangular prism**  
ÖZSABAN M., ASLAN E., GÜVEN H. R.  
Sakarya University of Journal Science, vol.24, no.1, pp.10-18, 2020 (Peer-Reviewed Journal)
- VII. **Enerji Sorununun Çözümünde Yenilenemez ve Yenilenebilir Enerji Kaynaklarının Yeri ve Önemi**  
AKBULUT Ç. İ., İNAN İ., ASLAN E.  
Türk Dünyası Araştırmaları Dergisi, vol.120, no.237, pp.11-40, 2018 (Peer-Reviewed Journal)
- VIII. **Numerical investigation for convective heat transfer and friction factor under pulsatile flow conditions**  
ASLAN E.  
Sakarya University Journal of Science, vol.22, no.5, pp.1449-1457, 2018 (Peer-Reviewed Journal)
- IX. **Numerical Analysis of Flow Around Bluff Bodies with 4th and 2nd order compact formulations**  
ASLAN E., İNAN İ., KANDEMİR İ., GÜVEN H. R.  
Sakarya University Journal of Science, vol.22, no.5, pp.1234-1252, 2018 (Peer-Reviewed Journal)
- X. **Investigation of the Lattice Boltzmann SRT and MRT Stability for Lid Driven Cavity Flow**  
E A., I T., A. C B.  
International Journal of Materials, Mechanics and Manufacturing, vol.2, no.4, 2014 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **A study on the improvement of convective heat transfer by using dimpled geometries at different depths and angles in heat sinks**  
Kopuz S., Eker Kahveci E., Aslan E.  
3rd International Conference on Scientific and Academic Research, Konya, Turkey, 25 - 26 December 2023, pp.429-432
- II. **INVESTIGATION OF THE EFFECT OF CONICAL RING PIPES ON THERMAL PERFORMANCE IN HEAT EXCHANGERS BY CFD METHOD**  
Kalfa M. B., Kepekçi İ. H., Aslan E.  
24th CONGRESS ON THERMAL SCIENCE AND TECHNOLOGY WITH INTERNATIONAL PARTICIPATION, Ankara, Turkey, 06 September 2023 - 08 January 2024, vol.2, pp.885-892
- III. **Numerical Investigation of 2D Heat Transfer with Periodic Boundary Conditions**  
Bağlan İ., Aslan E.  
The 14 th International Conference on Computational Heat and Mass Transfer, Düsseldorf, Germany, 4 - 08 September 2023, pp.11-29
- IV. **NUMERICAL INVESTIGATION OF CONVECTIVE HEAT TRANSFER AND FRICTION FACTOR IN CORRUGATED CHANNELS**  
ASLAN E., Kepekçi İ. H.  
23RD CONGRESS ON THERMAL SCIENCE AND TECHNOLOGY WITH INTERNATIONAL PARTICIPATION, Gaziantep, Turkey, 08 September 2021, pp.1920-1927
- V. **PÜRÜZLÜ SİLİNDİR ETRAFINDAKİ TÜRBÜLANSLI AKIŞIN SAYISAL OLARAK İNCELENMESİ**  
ÖZTÜRK E., ÖZCAN O., ASLAN E., KAYA K.  
4. ULUSLARARASI ERCİYES BİLİMSEL ARAŞTIRMALAR KONGRESİ, Kayseri, Turkey, 16 - 17 October 2020, pp.139-150
- VI. **Numerical Investigation of Heat Transfer and Pressure Drop on Fin-Tube Heat Exchangers**  
ASLAN E., Yıldız Ö., Kartun H., Güngör G.  
8th European Conference on Renewable Energy Systems, İstanbul, Turkey, 24 August 2020, pp.49-54
- VII. **A CFD MODELLING OF 3-D SINGLE SERPENTINE PEM FUEL CELL STACK**  
EKER KAHVECİ E., TAYMAZ İ., ASLAN E.  
INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING, İstanbul, Turkey, 19 - 21 December 2018
- VIII. **Effect of two square grooves on the flow past a circular cylinder**  
KIRMIZI M., Abdul Karım S., ASLAN E.  
International Eurasian Conference on Science, Engineering and Technology (EurasianSciEnTech 2018), Ankara, Turkey, 22 - 23 November 2018, pp.1754-1761
- IX. **Experimental and numerical investigation of the heat transfer and pressure drop on the tube bundle support plates**  
ASLAN E., TAYMAZ İ., ÇAKIR K.  
International Eurasian Conference on Science, Engineering and Technology (EurasianSciEnTech 2018), Ankara, Turkey, 22 - 23 November 2018, pp.1162-1173
- X. **MODELLING OF THE BOUNDARY CONDITION FOR MICROCHANNELS WITH USING LATTICE BOLTZMANN METHOD (LBM)**  
ÇOLPAN İ., ASLAN E., GÜVEN H. R.  
56th Science Conference of Ruse University, Ruse, Bulgaria, 26 - 29 October 2017, pp.60-65
- XI. **Numerical investigation for convective heat transfer and friction factor under pulsating flow conditions**  
ASLAN E., Ozsaban M., Ozcelik G., Guven H. R.  
11th International Conference on Computational Heat, Mass and Momentum Transfer (ICCHM2T), Cracow, Poland, 21 - 24 May 2018, vol.240
- XII. **Dalgalı Yüzeyle Isı Değiştirici Kanallarında Hız ve Sıcaklık Alanlarının "RANS" Tabanlı Türbülans**

### **Modelleri ile Sayısal İncelenmesi ve Deneysel Doğrulaması**

ASLAN E., TAYMAZ İ., İSLAMOĞLU Y., PARMAKSIZOĞLU İ. C., ENGİN M., ÇOLPAN İ., GÖKHAN K., ÖZÇELİK G.  
13. ULUSAL TESİSAT MÜHENDİSLİĞİ KONGRESİ, İzmir, Turkey, 19 - 22 April 2017, vol.1, pp.959-976

XIII. **CFD Simulation for Convection Heat Transfer in Corrugated Channel Paper No 121**

ASLAN E., ENGİN M., ÖZÇELİK G., ÇOLPAN I., KARABAŞ G., TAYMAZ İ., İSLAMOĞLU Y.

8th International Conference on Computational Heat and Mass Transfer (ICCHMT 2015), İstanbul, Turkey, 25 - 28 May 2015, pp.1-8

XIV. **A Study on Representing Irregular Boundaries by the Lattice Boltzmann Method**

ASLAN E., NAHAVANDI A., TAYMAZ İ., BENİM A. C.

10th WSEAS International Conference on Fluid Mechanics (FLUIDS' 13), Milan, Italy, 9 - 11 January 2013, pp.19-26

XV. **LBM Analysis of Heat and Fluid Flow**

BENİM A. C., ASLAN E., NAHAVANDI A., TAYMAZ İ.

1st International Symposium on Naval Architecture and Maritime (INT-NAM 2011), İstanbul, Turkey, 24 - 25 October 2011, pp.725-734

XVI. **LBM Investigation of Laminar Forced Convection in a Channel with a Built In Triangular Prism Paper No 129**

BENİM A. C., ASLAN E., NAHAVANDI A., TAYMAZ İ.

7th International Conference on Computational Heat and Mass Transfer (ICCHMT 2011), İstanbul, Turkey, 18 - 22 July 2011, pp.1-8

XVII. **Lattice Boltzmann Analysis of Laminar Forced Convection in a Plane Channel with a Built In Triangular Prism**

BENİM A. C., ASLAN E., TAYMAZ İ.

7th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT 2010), Antalya, Turkey, 19 - 21 July 2010, pp.1659-1664

XVIII. **Application of the Lattice Boltzmann Method to Steady Incompressible Laminar High Re Flows**

Benim A. C., ASLAN E., Taymaz I.

7th IASME/WSEAS International Conference on Fluid Mechanics and Aerodynamics (FMA'09), Moscow, Russia, 20 - 22 August 2009, pp.220-221

### **Supported Projects**

SOYLU Ş., DÜLGER Z., ASLAN E., GÜVEN E. A., AYTİMUR E. E., BOLAT F. Ç., Project Supported by Higher Education Institutions, Motorlu ve Hibrit Elektrikli Taşıtların Performans Testlerinin Sarf Malzeme İhtiyacının Karşılınması Projesi, 2023 - Continues

ASLAN E., EKER KAHVECİ E., Project Supported by Higher Education Institutions, Dikdörtgen Kanalda Karışık Çukurlu Geometrilerin Taşınımsal Isı Transferi ve Sürtünme Faktörüne Etkisinin Sayısal İncelenmesi, 2022 - 2023

### **Activities in Scientific Journals**

SAKARYA UNIVERSITY JOURNAL OF SCIENCE, Committee Member, 2022 - Continues

Journal of Thermal Engineering, Assistant Editor/Section Editor, 2018 - Continues

### **Scientific Refereeing**

JOURNAL OF APPLIED FLUID MECHANICS, Journal Indexed in SCI-E, January 2023

PROGRESS IN COMPUTATIONAL FLUID DYNAMICS, Journal Indexed in SCI-E, November 2022

## **Metrics**

Publication: 41

Citation (WoS): 75

Citation (Scopus): 84

H-Index (WoS): 5

H-Index (Scopus): 5

## **Awards**

Aslan E., AFT FAN TURBOFAN MODÜLÜ TASARIMI, Teknofest-2022, October 2022