

# Prof. ABDURRAHMAN ALPER ÖZALP

## Personal Information

**Email:** aozalp@uludag.edu.tr

**Web:** <https://avesis.uludag.edu.tr/aozalp>

## Education Information

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, Makine Mühendisliği (Dr), Turkey 1996 - 2001

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Makine Mühendisliği (YI) (Tezli), Turkey 1994 - 1996

Undergraduate, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, Turkey 1990 - 1994

## Foreign Languages

English, C1 Advanced

## Research Areas

Thermodynamics

## Academic Titles / Tasks

Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2011 - Continues

Associate Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2006 - 2011

Assistant Professor, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2002 - 2006

Lecturer PhD, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 2001 - 2002

Research Assistant, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, MAKİNA MÜHENDİSLİĞİ, 1997 - 2001

Research Assistant, Middle East Technical University, Faculty Of Engineering, Makine Mühendisliği Bölümü, 1994 - 1997

## Advising Theses

ÖZALP A. A., Thermal criteria and condensation focused a new generation vehicle lighting system design and prototype manufacturing, Doctorate, S.BODUROĞLU(Student), 2016

ÖZALP A. A., Investigation of the nozzle spring length variation influences over the diesel piezo injector injection characteristics, Postgraduate, Ö.AYAN(Student), 2015

ÖZALP A. A., Channel flow with high blockage around two tandem circular cylinders, Postgraduate, N.GÜNEŞ(Student), 2015

ÖZALP A. A., Effects of nozzle geometry to the injector spray characteristic in diesel engines, Postgraduate, O.ÖZTÜRK(Student), 2015

ÖZALP A. A., Channel flow with medium blockage around two tandem circular cylinders, Postgraduate, M.ÇIBIK(Student), 2015

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

- I. **Single Track Geometry Prediction of Laser Metal Deposited 316L-Si Via Multi-Physics Modelling and Regression Analysis with Experimental Validation**  
Biyikli M., Karagoz T., Calli M., Muslim T., ÖZALP A. A., BAYRAM A.  
METALS AND MATERIALS INTERNATIONAL, vol.29, no.3, pp.807-820, 2023 (SCI-Expanded)
- II. **Experimental investigation of optimum thermal performance and pressure drop of water-based Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub> and ZnO nanofluids flowing inside a circular microchannel**  
TOPUZ A., ENGİN T., ÖZALP A. A., Erdogan B., Mert S., Yeter A.  
JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY, vol.131, no.3, pp.2843-2863, 2018 (SCI-Expanded)
- III. **A computational and experimental investigation of the metallisation effects on the thermal characteristics of an automotive exterior lighting lamp**  
Boduroglu S., ÖZALP A. A.  
INTERNATIONAL JOURNAL OF VEHICLE DESIGN, vol.71, pp.279-299, 2016 (SCI-Expanded)
- IV. **Numerical modeling of the momentum and thermal characteristics of air flow in the intercooler connection hose**  
Uysal A., ÖZALP A. A., Korgavus A., Korgavus O.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.60, pp.811-824, 2012 (SCI-Expanded)
- V. **Laminar-transitional micropipe flows: energy and exergy mechanisms based on Reynolds number, pipe diameter, surface roughness and wall heat flux**  
Ozalp A. A.  
HEAT AND MASS TRANSFER, vol.48, no.1, pp.17-34, 2012 (SCI-Expanded)
- VI. **Laminar Boundary Layer Development Around a Circular Cylinder: Fluid Flow and Heat-Mass Transfer Characteristics**  
ÖZALP A. A., Dincer I.  
JOURNAL OF HEAT TRANSFER-TRANSACTIONS OF THE ASME, vol.132, no.12, 2010 (SCI-Expanded)
- VII. **Hydrodynamic-thermal boundary layer development and mass transfer characteristics of a circular cylinder in confined flow**  
ÖZALP A. A., Dincer I.  
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.49, no.9, pp.1799-1812, 2010 (SCI-Expanded)
- VIII. **Combined Effects of Pipe Diameter, Reynolds Number and Wall Heat Flux and on Flow, Heat Transfer and Second-Law Characteristics of Laminar-Transitional Micro-Pipe Flows**  
Ozalp A. A.  
ENTROPY, vol.12, no.3, pp.445-479, 2010 (SCI-Expanded)
- IX. **Entropy analysis of laminar-forced convection in a pipe with wall roughness**  
Ozalp A. A.  
INTERNATIONAL JOURNAL OF EXERGY, vol.6, no.2, pp.249-275, 2009 (SCI-Expanded)
- X. **1st and 2nd Law Characteristics in a Micropipe: Integrated Effects of Surface Roughness, Heat Flux and Reynolds Number**  
Ozalp A. A.  
HEAT TRANSFER ENGINEERING, vol.30, no.12, pp.973-987, 2009 (SCI-Expanded)
- XI. **Roughness induced forced convective laminar-transitional micropipe flow: energy and exergy analysis**  
Ozalp A. A.  
HEAT AND MASS TRANSFER, vol.45, no.1, pp.31-46, 2008 (SCI-Expanded)
- XII. **Parallel effects of acceleration and surface heating on compressible flow: Simulation of an aerospace propulsion nozzle with a medium amount of surface wear**  
Ozalp A. A.  
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.53, no.1, pp.3-12, 2007 (SCI-Expanded)
- XIII. **Fluid flow and heat transfer in transitional boundary layers: effects of surface curvature and free**

### **stream velocity**

Umur H., Ozalp A. A.

HEAT AND MASS TRANSFER, vol.43, no.1, pp.7-15, 2006 (SCI-Expanded)

- XIV. **Slider-bearing design with micro-machined wavy-cavity: Parametric characterization of thermohydrodynamic-operation-scheme**  
Ozalp B. T., Ozalp A. A.  
JOURNAL OF MECHANICAL SCIENCE AND TECHNOLOGY, vol.20, no.10, pp.1590-1606, 2006 (SCI-Expanded)
- XV. **Optimum surface profile design and performance evaluation of inclined slider bearings**  
Ozalp A. A., Umur H.  
CURRENT SCIENCE, vol.90, no.11, pp.1480-1491, 2006 (SCI-Expanded)
- XVI. **Nonadiabatic and frictional constant area duct flow: A visual software based simulation for compressible systems**  
Ozalp A. A.  
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.14, no.1, pp.64-75, 2006 (SCI-Expanded)
- XVII. **Numerical analysis of choked converging nozzle flows with surface roughness and heat flux conditions**  
Ozalp A. A.  
SADHANA-ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES, vol.31, pp.31-46, 2006 (SCI-Expanded)
- XVIII. **A computational approach on the multitask optimization of inclined slider bearing performance with upper-surface-waviness**  
Ozalp B. T., Ozalp A. A.  
LARGE-SCALE SCIENTIFIC COMPUTING, vol.3743, pp.526-534, 2006 (SCI-Expanded)
- XIX. **A computational study to predict the combined effects of surface roughness and heat flux conditions on converging-nozzle flows**  
Ozalp A. A.  
TRANSACTIONS OF THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING, vol.29, no.1, pp.67-80, 2005 (SCI-Expanded)
- XX. **Laminar and turbulent forced convection in accelerating and decelerating curved flows**  
Umur H., Ozalp A. A.  
CURRENT SCIENCE, vol.87, no.9, pp.1237-1244, 2004 (SCI-Expanded)
- XXI. **An interactive software package for the investigation of hydrodynamic-slider bearing-lubrication**  
Ozalp A. A., Ozel S.  
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.11, no.3, pp.103-115, 2003 (SCI-Expanded)
- XXII. **An experimental investigation of the combined effects of surface curvature and streamwise pressure gradients both in laminar and turbulent flows**  
Ozalp A. A., Umur H.  
HEAT AND MASS TRANSFER, vol.39, no.10, pp.869-876, 2003 (SCI-Expanded)
- XXIII. **Flow and heat transfer measurements in laminar and turbulent convex surface boundary layers**  
Ozalp A. A., Umur H.  
INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, vol.29, no.6, pp.841-851, 2002 (SCI-Expanded)
- XXIV. **A computer-assisted approach to industrial gas turbine performance calculation**  
Ozalp A. A.  
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.7, no.3, pp.171-179, 1999 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **Dizel Enjektör Yakıt Deliğinin Aşındırıcı Akış ile İşlenmesi (AFM) Sonrası Kalıntı Macundan Temizlenmesine Yönelik Makinenin Geliştirilmesinde Kullanılacak Kompakt Isı Eşanjörü Tasarım Analizi**

BÜYÜKBAYRAKTAR A., KINAGU H. M., ALTIN İ., ÖZALP A. A., ÖĞÜT E., SALİHOĞLU N. K., Deniz G., ALAN S., POYRAZ A. G., ATAK M., et al

Avrupa Bilim ve Teknoloji Dergisi, no.36, pp.243-254, 2022 (Peer-Reviewed Journal)

II. **Preparation And Stability Analysis Of Water Based Al<sub>2</sub>O<sub>3</sub>, Tio<sub>2</sub> And Zno Nanofluids**

TOPUZ A., ENGİN T., ÖZALP A. A., ERDOĞAN B., mert s., yeter a.

EJENS European Journal of Engineering and Natural Sciences, vol.2, no.1, pp.70-78, 2017 (Peer-Reviewed Journal)

III. **Yüksek Blokajlı Kanal İçinde Art Arda İki Silindiretrafında Sürekli Laminer Akış İçin Isı ve Akış Karakteristiklerinin Nümerik Olarak İncelenmesi**

GÜNEŞ N., ÖZALP A. A.

Mühendis ve Makina, vol.56, no.667, pp.53-63, 2015 (Peer-Reviewed Journal)

IV. **YÜKSEK BLOKAJLI KANAL İÇİNDE ART ARDA İKİ SİLİNDİRETRAFINDA SÜREKLİ LAMİNER AKIŞ İÇİN ISI VE AKIŞKARAKTERİSTİKLERİNİN NÜMERİK OLARAK İNCELENMESİ**

GÜNEŞ N., ÖZALP A. A.

MÜHENDİS VE MAKİNA, vol.56, no.667, pp.53-63, 2015 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

I. **ACTIVE AIR GUIDE SHUTTER DESIGN AND DEVELOPMENT FOR A PASSENGER CAR**

Balçık Y., Kahraman A., ÖZALP A. A., GÜDÜ T.

OTEKON 2018, 7 - 08 May 2018

II. **The Effects of Reynolds Number on the laminar flow past two tandem cylinders with High Blockage in a Channel**

KARAGÖZ İ., GÜNEŞ N., ÖZALP A. A.

8th INTERNATIONAL ADVANCEDTECHNOLOGIES SYMPOSIUM, Elazığ, Turkey, 19 - 22 October 2017

III. **Modelling of velocity profile and pressure drop of flowing water based nanofluids and pure water in the microchannels with CFD**

TOPUZ A., ENGİN T., ÖZALP A. A., ERDOĞAN B., AYCAN O., YETER A.

2nd International Energy and Engineering Conference, Gaziantep, Turkey, 12 - 13 October 2017, pp.489-497

IV. **Modelling Of Velocity Profile And Pressure Drop Of Flowing Water Based Nanofluids And Pure Water In The Microchannels With Cfd**

ENGİN T., TOPUZ A., ÖZALP A. A., mert s., ERDOĞAN B., yeter a.

2nd International Energy And Engineering Conference, Gaziantep, Turkey, 12 - 13 October 2017

V. **Modelling Of Cooling Load With Cfd According to Ethylene Glycol Pure Water By Using Nanofluid In The Automobile Radiators**

TOPUZ A., ÖZALP A. A., ENGİN T., ERDOĞAN B., AYCAN O., yeter a.

2nd International Energy And Engineering Conference, Gaziantep, Turkey, 12 - 13 October 2017

VI. **Experimental Investigation Of Cooling Performance And Pressure Drop In A Car Radiator By Using Ethylene Glycol-Water Based Al<sub>2</sub>O<sub>3</sub> Nanofluid As Coolant**

ENGİN T., TOPUZ A., ÖZALP A. A., mert s., ERDOĞAN B., yeter a.

InVenT'2017 2nd International Conference on Viable Energy Trends, Helsinki, Finland, 27 - 30 April 2017

VII. **YÜKSEK BLOKAJLI KANAL İÇİNDE LAMİNER SÜREKLİ AKIŞ İÇİN ART ARDA İKİ SİLİNDİRETRAFINDA AKIŞ VE ISIKARAKTERİSTİKLERİNİN NÜMERİK OLARAK İNCELENMESİ**

GÜNEŞ N., ÖZALP A. A.

TESKON 2015 / SİMÜLASYON VE SİMÜLASYON TABANLI ÜRÜN GELİŞTİRME SEMPOZYUMU, İZMİR, Turkey, 8 - 11 April 2015

VIII. **YÜKSEK BLOKAJ ETKİSİNDE ( b=0.6 ) ART ARDA SİLİNDİRLER ETRAFINDAN LAMİNER AKIŞ İÇİN ISI VE AKIŞ KARAKTERİSTİKLERİNİN İNCELENMESİ**

GÜNEŞ N., ÖZALP A. A.

ULUDAĞ ÜNİVERSİTESİ IV. BİLGİLENDİRME VE ARGE GÜNLERİ, Bursa, Turkey, 11 - 13 November 2014

IX. **Numerical Investigation of Heat and Flow Characteristics of Laminar Steady Flow across two**

## **Tandem Cylinders**

KORUKÇU M. Ö., ÖZALP A. A.

7. International Ege Energy Symposium and Exhibition, Uşak, Turkey, 18 - 20 June 2014, pp.946-957

X. **Otomobillerin Ön Ve Yan Camlarında Oluşan Buz Ve Buğu Probleminin Nümerik İncelenmesine Yönelik Bir Yazılımın Geliştirilmesi**

ÖZALP B. T., ÖZALP A. A., ÇİÇEK E.

Otekon 2012 6. OTOMOTİV TEKNOLOJİLERİ KONGRESİ, Bursa, Turkey, 04 June 2012

XI. **Concave surface velocity and heat transfer measurements in accelerating and decelerating boundary layers**

ÖZALP A. A., YEMENİCİ O., UMUR H.

1st Int. Exergy, Energy and Environment Symposium, 13 - 17 July 2003

XII. **Newtonian and non-Newtonian laminar, transitional and turbulent flows with eccentricity of unity**

Umur H., Ozalp A. A.

2nd Trabzon International Energy and Environment Symposium, Trabzon, Turkey, 26 - 29 July 1998, pp.391-395

## **Patent**

Özalp A. A., GURSOY G., BURHAN M., ALTAY O., İNOKSAN MUTFAK SANAYİ VE TİCARET ANONİM ŞİRKETİ, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2019/04765 , Standard Registration, 2022

Özalp A. A., EFELER E., GURSOY G., BURHAN M., ALTAY O., İNOKSAN MUTFAK SANAYİ VE TİCARET ANONİM ŞİRKETİ, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Registration Number: 2019/18636 , Standard Registration, 2022

Özalp A. A., ATEŞ F., ERHUY C. G., KINAGU H. M., MUTLU M., ERMETAL OTOMOTİV VE EŞYA SANAYİ TİCARET ANONİM ŞİRKETİ, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Registration Number: 2017/01828 , Standard Registration, 2021

## **Metrics**

Publication: 41

Citation (WoS): 118

Citation (Scopus): 129

H-Index (WoS): 7

H-Index (Scopus): 7

## **Non Academic Experience**

TEMAS AR-GE