

## **Assoc. Prof. ZEYNEP AYTAÇ YILMAZ**

### **Personal Information**

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### **International Researcher IDs**

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Publons / Web Of Science ResearcherID: AAB-8119-2022

ScopusID: 55923798600

Yoksis Researcher ID: 282797

### **Education Information**

Doctorate, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, Turkey 2016 - 2020

Postgraduate, Tobb University Of Economics And Technology, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2012 - 2014

Undergraduate, Tobb University Of Economics And Technology, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2008 - 2012

### **Dissertations**

Doctorate, DESIGN OF A CENTRIFUGAL COMPRESSOR FOR A MINI JET ENGINE WITH THE UTILIZATION OF FLOW AND STRUCTURAL ANALYZES, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2020

Postgraduate, DEVELOPMENT OF A DESIGN METHODOLOGY FOR HYDRAULIC TURBINE GUIDE VANES AND ITS APPLICATION IN FRANCIS TURBINES, Tobb University Of Economics And Technology, Faculty Of Engineering, Department Of Mechanical Engineering, 2014

### **Research Areas**

Fluid Mechanics, Heat and Mass Transfer, Heating, Refrigerating and Air Conditioning, Computational fluid dynamics

### **Academic Titles / Tasks**

Lecturer PhD, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2020 - Continues

Research Assistant, Gazi University, Mühendislik Fakültesi, Makina Mühendisliği, 2018 - 2020

Research Assistant, Tobb University Of Economics And Technology, Faculty Of Engineering, Department Of Mechanical Engineering, 2012 - 2014

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

- I. NUMERICAL AND EXPERIMENTAL ANALYSES OF FLOW AND HEAT TRANSFER CHARACTERISTICS IN A CHEVRON-TYPE CORRUGATED PLATE HEAT EXCHANGER WITH GRAPHENE NANOFUID**

Aytaç Yılmaz Z.

HEAT TRANSFER RESEARCH, vol.54, no.1, pp.1-18, 2022 (SCI-Expanded)

**II. NUMERICAL ANALYSIS OF MICROWAVE CANCER THERAPY USING SINGLE AND DOUBLE SLOT ANTENNAS FOR BREAST AND LIVER TISSUES**

EREN A., YILMAZ F. Z. A., TURGUT O., TIĞLI B.

ISI BILIMI VE TEKNIGI DERGISI/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.42, no.1, pp.37-48, 2022 (SCI-Expanded)

**III. EXPERIMENTAL AND NUMERICAL COMPARATIVE INVESTIGATION OF OPTIMUM WORKING FLUID RATIO FOR THERMOSYPHON HEAT PIPES**

Aytaç Yılmaz Z.

Heat Transfer Research, vol.53, no.6, pp.61-78, 2022 (SCI-Expanded)

**IV. IMPROVING THE THERMAL PERFORMANCE OF CONCENTRIC-TUBE HEAT EXCHANGERS USING MAGNETIC NANOFUIDS**

Ahmed Adeeb Babat R., SÖZEN A., MARTİN K., AYTAÇ YILMAZ Z., VARIYENLİ H. İ.

HEAT TRANSFER RESEARCH, vol.53, no.15, pp.17-38, 2022 (SCI-Expanded)

**V. Numerical and experimental analysis of parallel-pass forced convection solar air heating wall with different plenum and absorber configurations**

Khanlari A., Sözen A., Afshari F., Tuncer A. D., Agbulut U., Aytaç Z.

INTERNATIONAL JOURNAL OF NUMERICAL METHODS FOR HEAT & FLUID FLOW, vol.32, no.3, pp.978-1001, 2022 (SCI-Expanded)

**VI. Wind-related heat transfer from triangular and trapezoidal flat-plate collectors flush mounted on the roof of a house**

Avci G., Aytac Z., TURGUT O., Onur N.

Heat Transfer Research, vol.52, no.9, pp.17-33, 2021 (SCI-Expanded)

## Articles Published in Other Journals

**I. The Investigation of Flow Characteristics in Nanofluids Under Magnetic Field**

Aytaç Yılmaz Z.

JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.25, pp.1-11, 2022 (Peer-Reviewed Journal)

**II. The Investigation of Flow Characteristics and Pressure Drops of h-BN/DCM and SiO<sub>2</sub> Nanofluids**

Aytaç Yılmaz Z.

JOURNAL OF POLYTECHNIC-POLITEKNİK DERGISI, vol.25, pp.427-434, 2022 (ESCI)

**III. Utilization of CFD for the Aerodynamic Analysis of a Subsonic Rocket**

Aytaç Yılmaz Z., Aktaş F.

JOURNAL OF POLYTECHNIC, vol.3, 2020 (Peer-Reviewed Journal)

**IV. Development of a Design Methodology for a Centrifugal Compressor with the Utilization of CFD**

Aytaç Yılmaz Z., Yücel N.

JOURNAL OF POLYTECHNIC, vol.23, no.1, pp.231-239, 2020 (Peer-Reviewed Journal)

**V. Numerical investigation of the effects of design parameters on hydraulic turbine guide vane design**

Çelebioğlu K., Aytaç Yılmaz Z.

Pamukkale University Journal of Engineering Sciences, vol.26, no.4, pp.666-673, 2019 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

**I. Investigation Of The Effect Of Nanofluid Utilization On Heat Transfer In A Longitudinal Finned Pipe**

Aytaç Yılmaz Z.

2. INTERNATIONAL MEDITERRANEAN SCIENTIFIC RESEARCH AND INNOVATION CONGRESS , Girne, Cyprus

(Kktc), 30 - 31 July 2022, pp.499

- II. **Effect of Reynolds Number and Mixing Element Structure in Kenics Static Mixers**  
Aytaç Yılmaz Z.  
5th International Congress on Life, Social, and Health Sciences in a Changing World, İstanbul, Turkey, 26 - 27 March 2022, pp.88
- III. **Determination of the Optimum Fluid Charge Rate According to the Use of Different Working Fluids in Maximum Efficiency Conditions for Thermosyphon Heat Pipes**  
Aytaç Yılmaz Z.  
8th International İstanbul Scientific Research Congress, İstanbul, Turkey, 12 March - 13 April 2022, pp.399-404
- IV. **Design of an Adaptive Power Regulation Mechanism and a Nozzle for a Hydroelectric Power Plant Turbine Test Rig**  
Mert B., Aytaç Yılmaz Z., Taşcıoğlu Y., Çelebioğlu K., Aradağ Çelebioğlu S.  
67th Annual Meeting of the APS Division of Fluid Dynamics, California, United States Of America, 23 November 2014, pp.1-7
- V. **Design of a Flow Diverter Mechanism and a Nozzle for a Hydro Turbine Experimental Test Rig**  
Çetintürk H., Aytaç Yılmaz Z., Taşcıoğlu Y., Çelebioğlu K., Aradağ Çelebioğlu S.  
ASME 2014 12th Biennial Conference on Engineering Systems Design and Analysis, Kobenhavn, Denmark, 25 July 2014, pp.1-7
- VI. **TOBB ETU Hydro Research Center: Capabilities and Challenges**  
Aytaç Yılmaz Z., Kavurmacı B., Çelebioğlu K., Ayancık Cinoğlu F., Çelebioğlu K., Aradağ Çelebioğlu S.  
The International Congress and Trade Fair on Small Hydropower 2014, İstanbul, Turkey, 13 May 2014, pp.1-5
- VII. **Design and analyses of a pressure reducing valve integrated to a Francis turbine for a pre-existing penstock**  
Kavurmacı B., Aytaç Yılmaz Z., Akn H., Ayancık F., Çelebioğlu K., Aradağ Çelebioğlu S.  
The International Congress and Trade Fair on Small Hydropower 2014, İstanbul, Turkey, 13 May 2014, pp.1-6
- VIII. **Utilization of CFD Tools for the Rehabilitation of an Existing Hydroelectric Power Plant**  
Aytaç Yılmaz Z., Özkaya Öge E., Akn H., Ayancık Cinoğlu F., Çelebioğlu K., Aradağ Çelebioğlu S., Özmen A., Adaş A., Pala R., Kemikli M., et al.  
7th International Advanced Technologies Symposium , Antalya, Turkey, 30 October 2013, pp.1-4
- IX. **Su Türbini Tasarımı ve Testleri Merkezi**  
Aylı İnce Ü. E., Kavurmacı B., Akn H., Aytaç Yılmaz Z., Ayancık Cinoğlu F., Aradağ U., Mert B., Çelebioğlu K., Aradağ Çelebioğlu S., Ünver H. Ö., et al.  
Ulusal Isı Bilimi ve Tekniği Konferansı, Samsun, Turkey, 13 May 2013, pp.1-6
- X. **A CFD aided hydraulic turbine design methodology applied to Francis turbines**  
Akn H., Aytaç Yılmaz Z., Ayancık Cinoğlu F., Özkaya Öge E., Arıöz E., Çelebioğlu K., Aradağ Çelebioğlu S.  
4th International Conference on Power Engineering, Energy and Electrical Drives, İstanbul, Turkey, 13 May 2013, pp.694-699
- XI. **Design and Manufacturing of Flow Control Blades for Hydraulic Turbines**  
Ayancık Cinoğlu F., Aytaç Yılmaz Z., Gür B., Akyol M. V., Çakmak A. Y., Çelebioğlu K., Ünver H. Ö., Aradağ Çelebioğlu S.  
International Conference on Machine Design and Production, Denizli, Turkey, 19 June 2012, pp.1-13

## Metrics

Publication: 22

Citation (WoS): 28

Citation (Scopus): 28

H-Index (WoS): 1

H-Index (Scopus): 1

## **Awards**

Aytaç Yılmaz Z., Koç M., TEKNOFEST - TÜRBLİ MOTORLARDA SOĞUTMA TASARIM, T3 Vakfı, September 2020

Aytaç Yılmaz Z., Koç M., TEKNOFEST - MİNİ JET KOMPRESÖR TASARIM YARIŞMASI, T3 Vakfı, September 2019

## **Non Academic Experience**

TUBITAK, TEYDEB