

## **Res. Asst. HÜRREM AKBIYIK**

### **Personal Information**

**Email:** hakbiyik@cu.edu.tr

**Address:** Çukurova Üniversitesi, Mühendislik ve Mimarlık Fakültesi, Makine Mühendisliği Bölümü, Makine Mühendisliği Lab.

### **International Researcher IDs**

ORCID: 0000-0002-1880-052X

Publons / Web Of Science ResearcherID: G-2892-2018

Yoksis Researcher ID: 38774

### **Education Information**

Doctorate, Cukurova University, Fen Bilimleri Enstitüsü, Makine Mühendisliği Bölümü-Makine Teorisi Ve Dinamiği Anabilimdalı, Turkey 2014 - Continues

Postgraduate, Niğde Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği Bölümü, Turkey 2012 - 2014

Undergraduate, Niğde Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Turkey 2006 - 2012

### **Foreign Languages**

English, B1 Intermediate

### **Certificates, Courses and Trainings**

IT, Orkun Bilişim, Özel Eğitim Kurumu, 2004

### **Dissertations**

Postgraduate, Control of flow around a circular cylinder by using active and passive control methods, Niğde Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği Bölümü, 2014

### **Research Areas**

Mechanical Engineering, Energy, Fluid Mechanics, Machine Theory and Dynamics, Mechatronics, Aeronautical and Space Engineering, Aeronautical Engineering , Flight Sciences, Aerodynamics, Engineering and Technology

### **Academic Titles / Tasks**

Research Assistant, Niğde Üniversitesi, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2012 - 2014

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

- I. **Aerodynamic and energy-efficiency-based assessment of plasma actuator's position on a NACA0015 airfoil**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
CONTRIBUTIONS TO PLASMA PHYSICS, vol.60, no.2, 2020 (SCI-Expanded)
- II. **A Study on the Plasma Actuator Electrode Geometry Configurations for Improvement of the Aerodynamic Performance of an Airfoil**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
STROJNISKI VESTNIK-JOURNAL OF MECHANICAL ENGINEERING, vol.64, no.12, pp.719-725, 2018 (SCI-Expanded)
- III. **Comparison of the Linear and Spanwise-Segmented DBD Plasma Actuators on Flow Control Around a NACA0015 Airfoil**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
IEEE TRANSACTIONS ON PLASMA SCIENCE, vol.45, no.11, pp.2913-2921, 2017 (SCI-Expanded)
- IV. **Active control of flow around a circular cylinder by using intermittent DBD plasma actuators**  
AKBIYIK H., AKANSU Y. E., YAVUZ H.  
FLOW MEASUREMENT AND INSTRUMENTATION, vol.53, pp.215-220, 2017 (SCI-Expanded)

### **Refereed Congress / Symposium Publications in Proceedings**

- I. **Active tuning based fuzzy logic control of a heaving wave energy converter in irregular seas**  
YAVUZ H., BURGAÇ A., AKBIYIK H.  
Renewable Energy Sources ? Research and Business (RESRB 2018), Brüksel, Belgium, 18 - 20 June 2018, pp.1
- II. **The Effects of 3D Flow Structure on the Aerodynamic Forces of an Aircraft Wing**  
AKBIYIK H., YAVUZ H., BURGAÇ A.  
1st International Advanced Researches Engineering Congress, Osmaniye, Turkey, 16 November - 18 June 2017, pp.711
- III. **Flow Control Around a NACA0015 Airfoil with DBD Plasma Actuator Placed at an Angle to Chord Direction as a Vortex Generator**  
GÜNAYDIN R., AKANSU Y. E., AKBIYIK H., SEYHAN M.  
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017, pp.1-7
- IV. **Investigation of Flow Characteristics of Synthetic Jet Driven by Duty Cycle Signal**  
AKANSU Y. E., SARIOĞLU M., SEYHAN M., AKBIYIK H.  
10th International Conference on Sustainable Energy and Environmental Protection, BLED, Slovenia, 27 - 30 June 2017, pp.345-354
- V. **INVESTIGATION OF THE ELECTRODE GEOMETRY CONFIGURATIONS OF PLASMA ACTUATORS**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
10th International Conference on Sustainable Energy and Environmental Protection, BLED, Slovenia, 27 - 30 June 2017, pp.9-16
- VI. **Assesment of Plasma Actuator's Position on Stall Angle for an Airfoil**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
10TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY AND ENVIRONMENTAL PROTECTION, Bled, Slovenia, 27 - 30 June 2017, pp.1-8
- VII. **Assesment of Plasma Actuator's Position on Stall Angle for an Airfoil**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
10TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY AND ENVIRONMENTAL PROTECTION, Bled, Slovenia, 27 - 30 June 2017, pp.1-8
- VIII. **Assesment of Plasma Actuator's Position on Stall Angle for an Airfoil**  
YAVUZ H., AKBIYIK H., AKANSU Y. E.  
10TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY AND ENVIRONMENTAL PROTECTION, Bled, Slovenia, 27 - 30 June 2017, pp.1-8
- IX. **Vortex shedding frequency estimation of a Circular Cylinder with Splitter Plate at Incidence Using**

## **ANN**

SEYHAN M., SARIOĞLU M., AKANSU Y. E., AKBIYIK H.

3rd International Researchers, Statisticians and Young Statisticians Congress, Konya, Turkey, 24 - 26 May 2017, pp.92

- X. **Aerodynamic Force Estimation of a NACA0015 Airfoil with DBD Plasma Actuator Using ANN**  
AKBIYIK H., SEYHAN M., AKANSU Y. E., YAVUZ H., SARIOĞLU M.  
3rd International Researchers, Statisticians and Young Statisticians Congress, Konya, Turkey, 24 - 26 May 2017, pp.93
- XI. **Aerodynamic Force Estimation of A NACA 0015 Airfoil with DBD Plasma Actuator Using Artificial Neural Network**  
AKBIYIK H., SEYHAN M., AKANSU Y. E., YAVUZ H., SARIOĞLU M.  
3rd INTERNATIONAL RESEARCHERS, STATISTICIANS AND YOUNG STATISTICIANS CONGRESS, 24 - 26 May 2017
- XII. **Investigation of the effect of the plasma actuators vertically placed on the spanwise of NACA0015 airfoil**  
AKBIYIK H., YAVUZ H., AKANSU Y. E.  
IEEEES, 8th International Exergy, Energy and Environment Symposium, Antalya, Turkey, 1 - 04 May 2016, pp.1-5
- XIII. **Effect of plasma actuator and splitter plate on drag coefficient of a circular cylinder**  
AKBIYIK H., Akansu Y. E., YAVUZ H., Bay A. E.  
10th Anniversary International Conference on Experimental Fluid Mechanics, Prague, Czech Republic, 17 - 20 November 2015, vol.114
- XIV. **Effect of the duty cycle on the spark-plug plasma synthetic jet actuator**  
SEYHAN M., Akansu Y. E., Karakaya F., Yesildag C., AKBIYIK H.  
10th Anniversary International Conference on Experimental Fluid Mechanics, Prague, Czech Republic, 17 - 20 November 2015, vol.114
- XV. **Investigation of the Flow Characteristics around the Circular Cylinder by Means of Intermittent DBD Plasma Actuators**  
AKBIYIK H., AKANSU Y. E., KARAKAYA F.  
The 13th International Symposium on Fluid Control, Measurement and Visualization, Doha, Qatar, 15 - 18 November 2015, pp.392-397
- XVI. **Dynamic Simulation of Automobile Crank Shaft**  
Uluocak İ., Yavuz H., Özarslan H., Burgaç A., Akbiyik H., Conker Ç.  
International Conference and Exhibition on Automobile Engineering, Valencia, Spain, 1 - 02 September 2015, vol.4, pp.38
- XVII. **Flow control around the circular cylinder using plasma actuators placed on the splitter plate**  
AKBIYIK H., AKANSU Y. E., KARAKAYA F.  
1st International Plasma Technologies Congress, Kayseri, Turkey, 28 - 30 April 2014, pp.1

## **Supported Projects**

YAVUZ H., BURGAÇ A., AKBIYIK H., Project Supported by Higher Education Institutions, Bir dalga enerjisi konvertörü modelinin enerji üretimi ve kontrol uygulamasının incelenmesi, 2018 - 2019

YAVUZ H., BURGAÇ A., AKBIYIK H., Project Supported by Higher Education Institutions, Plazma Aktüatör Elektrot Geometrisi Konfigürasyonunun NACA0015 Uçak Kanadı Etrafındaki Akış Yapısına Etkisinin İncelenmesi, 2017 - 2018

YAVUZ H., AKBIYIK H., BURGAÇ A., Project Supported by Higher Education Institutions, Plazma Aktüatör ve Ayırıcı Plaka Kullanılarak Dairesel Silindirin Hücum Açısının Sürüklenme Katsayısı Üzerine Etkisinin İncelenmesi, 2016 - 2016

TUBITAK Project, Elektrohidrokinamik Yöntemler ile Aerodinamik Yapılı Cisimler Etrafındaki Akış Kontrolü, 2010 - 2013

## **Metrics**

Publication: 22  
Citation (WoS): 15  
Citation (Scopus): 32  
H-Index (WoS): 2  
H-Index (Scopus): 2

## **Congress and Symposium Activities**

8th International Exergy, Energy and Environment Symposium, Attendee, Antalya, Turkey, 2016  
Experimental Fluid Mechanics, Attendee, Praha, Czech Republic, 2015  
The 13th International Symposium on Fluid Control, Measurement and Visualization, Attendee, Dukhân, Qatar, 2015  
II.KOP BÖLGESEL KALKINMA SEMPOZYUMU, Attendee, Niğde, Turkey, 2014  
UMTS 2011, Attendee, Niğde, Turkey, 2011

## **Non Academic Experience**

Kecskemet College