

## Asst. Prof. Onur Bař

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-8042-4748

Publons / Web Of Science ResearcherID: G-6419-2018

ScopusID: 55837097000

Yoksis Researcher ID: 279550

### Biography

Onur BAř holds Bachelor, Master of Science and Doctor of Philosophy in Aerospace Engineering from Middle East Technical University. MSc research includes studies on implicit discretization of differential equations whereas the PhD dissertation is based on derivation and implementation of a novel all-speed flow formulation. He worked on several departments in defense industry companies including Propulsion Systems/Systems Engineering in Roketsan Missile Industries Inc. and Aerodynamics/Propulsion Systems in Turkish Aerospace Inc.

### Education Information

Doctorate, Middle East Technical University, Faculty Of Engineering, Department Of Aerospace Engineering, Turkey 2007 - 2015

Postgraduate, Middle East Technical University, Faculty Of Engineering, Department Of Aerospace Engineering, Turkey 2004 - 2007

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Aerospace Engineering, Turkey 2000 - 2004

### Foreign Languages

English

### Academic Titles / Tasks

Other, TED University, Faculty of Engineering, Department of Mechanical Engineering, 2018 - Continues

### Academic and Administrative Experience

Bölüm Tanıtım Komisyonu, 2021 - Continues

Uygulamalı Veri Bilimi Merkezi Akademik Kurulu, 2021 - Continues

Faculty of Engineering Executive Board, 2019 - Continues

## Courses

Pre-thesis Seminar, Postgraduate

Computational Fluid Dynamics, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Introduction to Aeronautics, Undergraduate, 2022 - 2023, 2020 - 2021, 2019 - 2020, 2018 - 2019

Senior Project, Undergraduate, 2021 - 2022

Fluid Mechanics, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

Thermodynamics, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Master's Thesis II, Postgraduate, 2022 - 2023, 2021 - 2022

Computational Fluid Dynamics, Undergraduate, 2022 - 2023, 2021 - 2022

Heat Transfer, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Numerical Methods in Engineering, Undergraduate, 2021 - 2022, 2019 - 2020

Master's Thesis I, Postgraduate, 2021 - 2022

Propulsion Systems, Undergraduate, 2020 - 2021

Propulsion Systems, Postgraduate, 2020 - 2021

Summer Practice II, Undergraduate, 2018 - 2019

Summer Practice I, Undergraduate, 2018 - 2019

Applied Thermal Systems, Undergraduate, 2018 - 2019

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

- I. **Obstruction of infrared signature with cold gases**  
Baş O.  
Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, vol.236, no.16, pp.3531-3539, 2022 (SCI-Expanded)
- II. **A correlation-based algebraic transition model**  
Cakmakcioglu S. C., Baş O., Kaynak U.  
Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, vol.232, no.21, pp.3915-3929, 2018 (SCI-Expanded)
- III. **A Novel Alternating Cell Directions Implicit Method for the Solution of Incompressible Navier Stokes Equations on Unstructured Grids**  
Baş O., Cete A., Mengi S., Tuncer I., Kaynak U.  
JOURNAL OF APPLIED FLUID MECHANICS, vol.10, no.6, pp.1561-1570, 2017 (SCI-Expanded)
- IV. **A Mach-uniform preconditioner for incompressible and subsonic flows**  
Baş O., TUNCER İ. H., Kaynak U.  
International Journal for Numerical Methods in Fluids, vol.74, no.2, pp.100-112, 2014 (SCI-Expanded)

## Books & Book Chapters

- I. **Transition Modeling for Low to High Speed Boundary Layer Flows with CFD Applications**  
Kaynak U., Baş O., Cakmakcioglu S. C., Tuncer I. H., Baş O.  
in: Boundary Layer Flows - Theory, Applications and Numerical Methods, , Editor, 2019

## Refereed Congress / Symposium Publications in Proceedings

- I. **CFD Investigation of RAE-M2129 S-Shaped Intake with Different Softwares**  
Baş O., Erdemli M., Sert İ. O., Yavuz A. G.  
11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE
- II. **CFD Analysis of High Swirling Flow in Gas Cyclones**  
Baş O., Sert İ. O., Uslu S.

11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE

**III. A revised one-equation transitional model for external aerodynamics**

Çakmakçioğlu S. Ç., Baş O., Mura R., KAYNAK Ü.

AIAA AVIATION 2020 FORUM, Virtual, Online, 15 - 19 June 2020, vol.1 PartF

**IV. A 3-D Mach uniform preconditioner for incompressible and subsonic flows**

Baş O., TUNCER İ. H.

Joint 11th World Congress on Computational Mechanics, WCCM 2014, the 5th European Conference on

Computational Mechanics, ECCM 2014 and the 6th European Conference on Computational Fluid Dynamics, ECFD

2014, Barcelona, Spain, 20 - 25 July 2014, pp.6950-6959

**V. A novel intermittency distribution based transition model for low-re number airfoils**

Baş O., Çakmakçioğlu S. Ç., Kaynak Ü.

31st AIAA Applied Aerodynamics Conference, San Diego, CA, United States Of America, 24 - 27 June 2013

## Scientific Refereeing

ISI BİLİMİ VE TEKNİĞİ DERGİSİ/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, May 2021

ISI BİLİMİ VE TEKNİĞİ DERGİSİ/ JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, January 2020

## Scientific Consultations

Virtuson Ltd.Şti., Ted University, Turkey, 2021 - Continues

Türk Havacılık ve Uzay Sanayi A.Ş., Ted University, Turkey, 2021 - Continues

Türk Havacılık ve Uzay Sanayi (TAI), Ted University, Turkey, 2019 - Continues