

Asst. Prof. ÖZGÜR UĞRAŞ BARAN

Personal Information

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Education Information

Doctorate, Vrije Universiteit Brussel, Natural And Applied Sciences, Mechanical Engineering, Belgium 2002 - 2005

Postgraduate, Middle East Technical University, Faculty Of Engineering, Civil Engineering, Turkey 1996 - 1999

Undergraduate, Middle East Technical University, Faculty Of Engineering, Civil Engineering, Turkey 1991 - 1996

Foreign Languages

English, C1 Advanced

French, B1 Intermediate

Dissertations

Doctorate, Control Methodologies in Hexahedral Mesh generation, Vrije Universiteit Brussel, Natural And Applied Sciences, Mechanical Engineering, 2005

Postgraduate, Experimental and Numerical Analysis of Liquid Slug Motion in a Voided Line, Middle East Technical University, Faculty Of Engineering, Civil Engineering, 1999

Research Areas

Technical Sciences, Computer Sciences, algorithms, Simulation and Modelling, Numerical Algorithms, Mechanical Engineering, Energy, Fluid Mechanics, Aeronautical and Space Engineering, Aeronautical Engineering , Space Engineering, Flight Sciences, Aerospace Propulsion, Aerodynamics, Flight Dynamics and Stability, Analysis techniques

Courses

Advanced Gas Dynamic, Postgraduate, 2020 - 2021

Gas Turbine Theory, Undergraduate, 2020 - 2021

Gas Dynamics, Undergraduate, 2019 - 2020

ME 351 Thermodynamics of Heat Power, Undergraduate, 2018 - 2019

Advising Theses

Aksel M. H. , Baran Ö. U. , development od Cartesian-based mesh generator with body fitted boundary layers, Postgraduate, M.Özkan(Student), 2019

Çadırcı S., Baran Ö. U. , Full Non-matching Boundary conditions Applied on Multistage Axial Compressor rotor-stator

interface Implemented on SU2 solver, Postgraduate, N.Bordbar(Student), 2019

BARAN Ö. U. , A 6DOF simulation tool for autonomous underwater vehicles with a novel method for added mass-inertia calculation, Postgraduate, O.TAŞ(Student), 2018

Aksel M. H. , Baran Ö. U. , Development of an automatic design and analysis tool for axial compressors, Postgraduate, N.ANIL(Student), 2017

BARAN Ö. U. , AKSEL M. H. , On the applicability of progress variable approach for large eddy simulation of premixed flames, Postgraduate, B.TEKGÜL(Student), 2017

UZOL O., BARAN Ö. U. , Passive flow control in boundary layer ingesting semi submerged inlet, Postgraduate, U.CAN(Student), 2015

BARAN Ö. U. , SERT C., Design of a grid fin aerodynamic control device for transonic flight regime, Postgraduate, E.DİKBAŞ(Student), 2015

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **CNNFOIL: convolutional encoder decoder modeling for pressure fields around airfoils**
DURU C., ALEMDAR H., BARAN Ö. U.
Neural Computing and Applications, vol.33, no.12, pp.6835-6849, 2021 (Journal Indexed in SCI)
- II. **DEVELOPMENT OF AN AUTOMATIC DESIGN AND ANALYSIS TOOL FOR AXIAL FLOW COMPRESSORS**
Kundes N. A. , AKSEL M. H. , BARAN Ö. U.
ISI BILIMI VE TEKNIGI DERGISI-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, vol.39, no.2, pp.179-190, 2019 (Journal Indexed in SCI)
- III. **Simplified Numerical Approach for the Prediction of Aerodynamic Forces on Grid Fins**
DİKBAS E., Baran O. U. , SERT C.
JOURNAL OF SPACECRAFT AND ROCKETS, vol.55, no.4, pp.887-898, 2018 (Journal Indexed in SCI)
- IV. **Experimental and numerical analysis of transient liquid slug motion in a voided line**
Bozkus Z., BARAN Ö. U. , GER M.
JOURNAL OF PRESSURE VESSEL TECHNOLOGY-TRANSACTIONS OF THE ASME, vol.126, no.2, pp.241-249, 2004 (Journal Indexed in SCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **Automatic Mesh Generator Integrated Missile Design Tool Development**
Köseömur O. Z. , Baran Ö. U.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 18 - 20 September 2019, pp.1-12
- II. **PERFORMANCE COMPARISON OF SU2 REAL GAS MODELS AND TESTING FOR A COLD GAS THRUSTER**
Özden A., Baran Ö. U. , Aksel M. H.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 18 - 20 September 2019, pp.1-21
- III. **Unsteady Solution of 2D Converging-Diverging Nozzle Using Linearized Harmonic Method**
Karshenass A., Baran Ö. U. , Aksel M. H.
18th International Conference on Machine Design and Production (UMTIK 2018), Eskişehir, Turkey, 3 - 06 July 2018, pp.74
- IV. **A Cartesian Based Mesh Generator with Body Fitted Boundary Layers**
Özkan M., Baran Ö. U. , Aksel M. H.
18th International Conference on Machine Design and Production (UMTIK 2018), Eskişehir, Turkey, 3 - 06 July 2018, pp.72
- V. **Implementation of SU2 Solver with Cell-Based Data Structure for 3D RANS Equations**
Saatloo M. M. , Baran Ö. U. , Aksel M. H.
American Institute of Aeronautics and Astronautics 2018 Fluid Dynamics Conference, Georgia, United States Of America, 25 June - 29 November 2018, pp.1-15

- VI. **A modeling and simulation tool for safe store separation envelope generation using monte carlo simulations**
Unal K., Baran Ö. U.
AIAA Modeling and Simulation Technologies Conference, 2018, Florida, United States Of America, 8 - 12 January 2018
- VII. **Passive Flow Control in Boundary Layer Ingesting Semi Submerged Inlet**
küçük u. c. , BARAN Ö. U. , UZOL O.
51st AIAA/SAE/ASEE Joint Propulsion Conference, 27 - 29 July 2015
- VIII. **Design And Optimisation Of High Speed Projectile Nose For Maximum Effectiveness And Stability**
Başoğlu O., Baran Ö. U.
7. Ankara International Aerospace Conference, Ankara, Turkey, 11 - 13 September 2013, pp.1-8
- IX. **Static Aeroelastic calculations for a wing under large deformations**
Atik H., Baran Ö. U. , Tüzün A.
30th AIAA Applied Aerodynamics Conference 2012, New Orleans, LA, United States Of America, 25 - 28 June 2012, pp.245-253
- X. **Fluid-structure interaction model for hydroplaning simulations**
Dinescu C., Hirsch C., Leonard B., Baran Ö. U. , Platschorre A., Alessio R., Belluzzo D.
2006 SAE World Congress, Detroit, MI, United States Of America, 3 - 06 April 2006
- XI. **Numerical simulation of groundwater contamination**
Ger M., Baran O., Irfanoglu B.
8th International Conference on Hydraulic Engineering Software (Hydrosoft 2000), Lisbon, Portugal, 12 - 14 June 2000, vol.7, pp.315-323

Citations

Total Citations (WOS):15

h-index (WOS):2