

Prof. İSMAİL HAKKI TUNCER

Personal Information

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Education Information

Doctorate, Georgia Institute Of Technology, Aerospace Engineering, United States Of America 1984 - 1988

Post Graduate, Purdue University, Mechanical Engineering, United States Of America 1981 - 1983

Under Graduate, Middle East Technical University, Faculty of Engineering, Makine Mühendisliği Bölümü, Turkey 1976 - 1981

Foreign Languages

English, C1 Advanced

Dissertations

Post Graduate, Design of Three-Dimensional Finite Element Grids for Transonic Flows around Wing-body Combinations, Purdue University, Mechanical Engineering, 1983

Doctorate, Unsteady Aerodynamics of Oscillating and Rapidly Pitched Airfoils, Georgia Institute Of Technology, Aerospace Engineering, 1983

Research Areas

Atmospheric Physics, Simulation and Modelling, Parallel Algorithms, Numerical Algorithms, Wind power, Optimization, Numerical Analysis, Aerodynamics

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2005 - Continues

Academic and Administrative Experience

Head of Department, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018 - Continues

Manager of Research and Application Center, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2017 - 2018

Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2006 - 2009

Advising Theses

- Tuncer İ. H. , Yücel H., Development of a Discrete Adjoint-Based Aerodynamic Shape optimization for Natural Laminar Flows, Doctorate, H.Kaya(Student), 2020
- Tuncer İ. H. , Numerical simulations of wind turbine wake interactions using actuator line and LES models, Post Graduate, H.CAN(Student), 2019
- Tuncer İ. H. , Adjoint-based design optimization of a hypersonic inlet, Post Graduate, M.BAŞARAN(Student), 2019
- TUNCER İ. H. , ÖZGEN S., Ice accretion prediction on wind turbine blades and aerodynamic shape optimization for minimizing power production losses, Doctorate, Ö.YIRTICI(Student), 2018
- TUNCER İ. H. , KAYRAN A., Coupling of a multibody simulation tool for the analysis of rotary systems with a panel based flow solver and a navier-stokes flow solver, Post Graduate, S.SOĞANCI(Student), 2018
- TUNCER İ. H. , Unsteady atmospheric flow solutions with OpenFOAM coupled with the numerical weather prediction software, WRF, Doctorate, E.LEBLEBİCİ(Student), 2018
- TUNCER İ. H. , KAYA M., Reconstruction of atmospheric flows based on proper orthogonal decomposition method, Post Graduate, T.Sevine(Student), 2017
- TUNCER İ. H. , Reconstruction of the atmospheric flows based on proper orthogonal decomposition method, Post Graduate, T.SEVİNE(Student), 2017
- TUNCER İ. H. , Investigation of missiles with strake fins and reduction of aerodynamic cross coupling effects by optimization, Post Graduate, E.USTA(Student), 2015
- TUNCER İ. H. , Development of an all speed navier-stokes preconditioner for two and three dimensional flows on hybrid grids, Doctorate, O.BAŞ(Student), 2015
- TUNCER İ. H. , Implementation of K-epsilon turbulence models in a two dimensional parallel Navier-Stokes solver on hybrid grids, Post Graduate, O.OZAN(Student), 2014
- TUNCER İ. H. , Micro-siting of wind turbines using Navier-Stokes solutions coupled with a numerical weather prediction model, Doctorate, G.AHMET(Student), 2014
- TUNCER İ. H. , UZOL O., Experimental and numerical investigation of pressure swirl atomizers, Doctorate, B.SÜMER(Student), 2014
- TUNCER İ. H. , Roll characteristics and shape optimization of the free-to-rotate tail-fins on a canard-controlled missile, Post Graduate, E.FEYZİOĞLU(Student), 2014
- TUNCER İ. H. , UZOL O., Detached eddy simulation of turbulent flow on 2D hybrid grids, Post Graduate, Ö.YIRTICI(Student), 2012
- TUNCER İ. H. , Terrain modeling and atmospheric turbulent flow solutions based on meteorological weather forecast data, Post Graduate, E.LEBLEBİCİ(Student), 2012
- TUNCER İ. H. , SEZER UZOL N., Genetic algorithm based aerodynamic shape optimization of wind turbine rotor blades using a 2-d panel method with a boundary layer solver, Post Graduate, Ö.POLAT(Student), 2011
- TUNCER İ. H. , Implementation of turbulence models on 2d hybrid grids using an explicit/implicit multigrid algorithm, Post Graduate, A.EMRE(Student), 2011
- TUNCER İ. H. , Numerical investigation of flow control over an airfoil with synthetic jets and its optimization, Post Graduate, E.Akçayöz(Student), 2008
- TUNCER İ. H. , Active flow control studies over an elliptical profile, Post Graduate, E.Erler(Student), 2008
- TUNCER İ. H. , Path optimization of flapping airfoils based on unsteady viscous flow solutions, Doctorate, M.KAYA(Student), 2008
- SELÇUK N., TUNCER İ. H. , A non-iterative pressure based algorithm for the computation of reacting radiating flows, Doctorate, A.BİLGE(Student), 2007
- TUNCER İ. H. , Development of an incompressible Navier-Stokes solver with alternating cell direction implicit method on structured and unstructured quadrilateral grids, Post Graduate, O.BAŞ(Student), 2007
- TUNCER İ. H. , Gas-kinetic methods for 3-D inviscid and viscous flow solutions on unstructured/hybrid grids, Doctorate, M.ILGAZ(Student), 2007
- TUNCER İ. H. , Numerical and experimental investigation of flow through a cavitating venturi, Post Graduate, B.YAZICI(Student), 2006
- TUNCER İ. H. , Computation of viscous flows over flapping airfoils and parallel optimization of flapping parameters, Post Graduate, M.KAYA(Student), 2003

TUNCER İ. H. , Tuncer İ., Finite volume solutions of 1D Euler equations for high speed flows with finite-rate chemistry, Post Graduate, B.Erdem(Student), 2003
SELÇUK N., TUNCER İ. H. , Parallelization of a transient Navier-Stokes code based on method of lines solution, Post Graduate, C.ERŞAHİN(Student), 2001
TUNCER İ. H. , Application of turbulence models to unsteady cascade flows in a parallel environment, Post Graduate, N.AÇIKGÖZ(Student), 2001

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

- I. **Aerodynamic shape optimization of wind turbine blades for minimizing power production losses due to icing**
Yirtici O., TUNCER İ. H.
COLD REGIONS SCIENCE AND TECHNOLOGY, vol.185, 2021 (Journal Indexed in SCI)
- II. **Investigation of wind turbine wakes and wake recovery in a tandem configuration using actuator line model with LES**
ÖNEL H. C. , TUNCER İ. H.
Computers and Fluids, vol.220, 2021 (Journal Indexed in SCI Expanded)
- III. **Numerical investigation of vortical flows over a close-coupled delta canard-wing configuration**
Yutuk K., Tikenogullari A., TUNCER İ. H.
COMPUTERS & FLUIDS, vol.216, 2021 (Journal Indexed in SCI)
- IV. **Aerodynamic validation studies on the performance analysis of iced wind turbine blades**
YIRTICI Ö., Cengiz K., ÖZGEN S., TUNCER İ. H.
COMPUTERS & FLUIDS, vol.192, 2019 (Journal Indexed in SCI)
- V. **Predictions of ice formations on wind turbine blades and power production losses due to icing**
YIRTICI Ö., ÖZGEN S., TUNCER İ. H.
WIND ENERGY, vol.22, no.7, pp.945-958, 2019 (Journal Indexed in SCI)
- VI. **A Novel Alternating Cell Directions Implicit Method for the Solution of Incompressible Navier Stokes Equations on Unstructured Grids**
Bas O., ÇETE A. R. , Mengi S., TUNCER İ. H. , Kaynak U.
JOURNAL OF APPLIED FLUID MECHANICS, vol.10, no.6, pp.1561-1570, 2017 (Journal Indexed in SCI)
- VII. **A Mach-uniform preconditioner for incompressible and subsonic flows**
Bas O., TUNCER İ. H. , Kaynak U.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS, vol.74, no.2, pp.100-112, 2014 (Journal Indexed in SCI)
- VIII. **Optimization of Flapping Motion Parameters for Two Airfoils in a Biplane Configuration**
Kaya M., TUNCER İ. H. , Jones K. D. , Platzer M. F.
JOURNAL OF AIRCRAFT, vol.46, no.2, pp.583-592, 2009 (Journal Indexed in SCI)
- IX. **A parallel gas-kinetic Bhatnagar-Gross-Krook method for the solution of viscous flows on two-dimensional hybrid grids**
İlgaz M., TUNCER İ. H.
INTERNATIONAL JOURNAL OF COMPUTATIONAL FLUID DYNAMICS, vol.23, no.10, pp.699-711, 2009 (Journal Indexed in SCI)
- X. **A non-iterative pressure based scheme for the computation of reacting radiating flows**
Uygur A. B. , SELÇUK N., TUNCER İ. H.
INTERNATIONAL JOURNAL OF THERMAL SCIENCES, vol.47, no.3, pp.209-220, 2008 (Journal Indexed in SCI)
- XI. **Nonsinusoidal path optimization of a flapping airfoil**
Kaya M., Tuncer İ. H.
AIAA JOURNAL, vol.45, no.8, pp.2075-2082, 2007 (Journal Indexed in SCI)
- XII. **Optimization of flapping airfoils for maximum thrust and propulsive efficiency**
Tuncer İ., Kaya M.

- AIAA JOURNAL, vol.43, no.11, pp.2329-2336, 2005 (Journal Indexed in SCI)
- XIII. **Viscous flow solutions over CN-235 cargo aircraft**
Uygun M., Tuncer I.
JOURNAL OF AIRCRAFT, vol.41, no.4, pp.940-944, 2004 (Journal Indexed in SCI)
- XIV. **Parallelization of a transient method of lines Navier-Stokes code**
Ersahin C., Tarhan T., Tuncer I., Selcuk N.
INTERNATIONAL JOURNAL OF COMPUTATIONAL FLUID DYNAMICS, vol.18, no.1, pp.81-92, 2004 (Journal Indexed in SCI)
- XV. **Thrust generation caused by flapping airfoils in a biplane configuration**
Tuncer I., Kaya M.
JOURNAL OF AIRCRAFT, vol.40, no.3, pp.509-515, 2003 (Journal Indexed in SCI)
- XVI. **Computational investigation of flow through a louvered inlet configuration**
Tuncer I., Platzer M.
JOURNAL OF AIRCRAFT, vol.39, no.5, pp.903-906, 2002 (Journal Indexed in SCI)
- XVII. **Computational study of flapping airfoil aerodynamics**
Tuncer I., Platzer M.
JOURNAL OF AIRCRAFT, vol.37, no.3, pp.514-520, 2000 (Journal Indexed in SCI)
- XVIII. **Investigation of periodic boundary conditions in multipassage cascade flows using overset grids**
Tuncer İ. H. , Weber S., Sanz W.
JOURNAL OF TURBOMACHINERY-TRANSACTIONS OF THE ASME, vol.121, no.2, pp.341-347, 1999 (Journal Indexed in SCI)
- XIX. **Computational study of subsonic flow over a delta canard-wing-body configuration**
Tuncer İ. H. , Platzer M.
JOURNAL OF AIRCRAFT, vol.35, no.4, pp.554-560, 1998 (Journal Indexed in SCI)
- XX. **Potential flow solutions with wakes over an ogive cylinder**
Tuncer İ. H. , Platzer M.
JOURNAL OF SPACECRAFT AND ROCKETS, vol.35, no.3, pp.273-277, 1998 (Journal Indexed in SCI)
- XXI. **Navier-Stokes analysis of subsonic flowfields over a missile configuration**
Tuncer İ. H. , Platzer M., VanDyken R.
JOURNAL OF SPACECRAFT AND ROCKETS, vol.35, no.2, pp.127-131, 1998 (Journal Indexed in SCI)
- XXII. **Two-dimensional unsteady Navier-Stokes solution method with moving overset grids**
Tuncer İ. H.
AIAA JOURNAL, vol.35, no.3, pp.471-476, 1997 (Journal Indexed in SCI)
- XXIII. **Thrust generation due to airfoil flapping**
Tuncer İ. H. , Platzer M.
AIAA JOURNAL, vol.34, no.2, pp.324-331, 1996 (Journal Indexed in SCI)
- XXIV. **Viscous-inviscid interaction method for unsteady low-speed airfoil flows**
Tuncer İ. H. , Ekaterinaris J. A. , Platzer M. F.
AIAA Journal, vol.33, no.1, pp.151-153, 1995 (Journal Indexed in SCI)
- XXV. **UNSTEADY AERODYNAMIC CHARACTERISTICS OF A DUAL-ELEMENT AIRFOIL**
TUNCER İ. H. , SANKAR L.
JOURNAL OF AIRCRAFT, vol.31, no.3, pp.531-537, 1994 (Journal Indexed in SCI)
- XXVI. **NUMERICAL-SIMULATION OF 3-DIMENSIONAL SUPERSONIC FREE SHEAR LAYERS**
TUNCER İ. H. , SANKAR L.
AIAA JOURNAL, vol.30, no.4, pp.871-872, 1992 (Journal Indexed in SCI)
- XXVII. **THEORETICAL AND NUMERICAL-STUDIES OF OSCILLATING AIRFOILS**
TUNCER İ. H. , WU J., WANG C.
AIAA JOURNAL, vol.28, no.9, pp.1615-1624, 1990 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **A comparative study of wake interactions between wind-aligned and yawed wind turbines using LES and actuator line models**
ÖNEL H. C. , TUNCER İ. H.
Journal of Physics: Conference Series, vol.1618, 2020 (Refereed Journals of Other Institutions)
- II. **Parallel processing of two-dimensional euler equations for compressible flows**
Doğru K., Aksel M., TUNCER İ. H.
Modelling, Measurement and Control B, vol.77, pp.50-70, 2008 (Refereed Journals of Other Institutions)

Books & Book Chapters

- I. **Transition Modeling for Low to High Speed Boundary Layer Flows with CFD Applications**
TUNCER İ. H. , BAŞ O., KAYNAK Ü., Çakmakcioğlu S. C.
in: Boundary Layer Flows - Theory, Applications and Numerical Methods, Vallampati Ramachandra Prasad, Editor, IntechOpen, London, pp.1-21, 2020
- II. **Non-sinusoidal Path Optimization of Flapping Airfoils in Biplane Configuration,**
KAYA M., TUNCER İ. H.
in: Lecture Notes in Computational Science and Engineering, Ismail H. Tuncer, Ulgen Gulcat, David Emerson, Kenichi Matsuno, Editor, Springer, Berlin, pp.59-66, 2009

Refereed Congress / Symposium Publications in Proceedings

- I. **Adjoint Based Multi-Objective Optimization of Submerged Subsonic Intake**
Ahmed A., TUNCER İ. H.
18th International Bhurban Conference on Applied Sciences and Technologies, IBCAST 2021, Virtual, Islamabad, Pakistan, 12 - 16 January 2021, pp.788-795
- II. **Estimation of Wake Induced Power Loss in Wind Turbines Using Actuator Line Model**
ÖNEL H. C. , TUNCER İ. H.
AIAA AVIATION 2020 FORUM, Nevada, United States Of America, 15 - 19 June 2020
- III. **Aerodynamic Performance Analyses of Iced Wind Turbine Blade Profile with Transitional DDES**
YALÇIN Ö., YIRTICI Ö., ÖZYÖRÜK Y., TUNCER İ. H.
10th Ankara International Aerospace Conference, 18 - 20 September 2019
- IV. **DEVELOPMENT OF A 2D DISCRETE TURBULENT ADJOINT SOLVER USING AUTOMATIC DIFFERENTIATION**
Kaya H., TUNCER İ. H. , Tiftikci H.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, 18 - 20 September 2019
- V. **OPENFOAM SIMULATION OF DUAL IN-LINE WIND TURBINES BASED ON ACTUATOR LINE**
ÖNEL H. C. , TUNCER İ. H.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, 18 - 20 September 2019
- VI. **WIND FIELD SIMULATION IN A WIND FARM USING OPENFOAM AND ACTUATOR LINE MODEL**
ÖNEL H. C. , TUNCER İ. H.
31. International Conference on Parallel Computational Fluid Dynamics, 14 - 17 May 2019
- VII. **DESIGN OPTIMIZATION OF A 2-D SCRAMJET INLET**
başaran M., LEBLEBİCİ E., TUNCER İ. H.
31st International Conference on Parallel Computational Fluid Dynamics, 14 - 17 May 2019
- VIII. **Aerodynamic Shape Optimization for Reducing Ice Induced Losses on Wind Turbine Blades**
YIRTICI Ö., TUNCER İ. H.
31st International Conference on Parallel Computational Fluid Dynamics, 14 - 17 May 2019

- IX. Buzlanmış Rüzgar Türbini Palasında Performans Kayıp Analizi**
YIRTICI Ö., ÖZGEN S., TUNCER İ. H.
7. Ulusal Havacılık ve Uzay Konferansı, Samsun, Turkey, 12 - 14 September 2018
- X. OTOMATİK TÜREV ARAÇLARI İLE AYRIK ADJOINT ÇÖZÜCÜ GELİŞTİRİLMESİ**
Tuncer İ. H. , Kaya H., Tiftikçi H.
7. Havacılık ve Uzay Konferansı, Samsun, Turkey, 12 - 14 September 2018, pp.1-12
- XI. AKTÜATÖR ÇİZGİ METODU İLE BİR RÜZGAR TÜRBİNİNİN MODELLENMESİ VE HESAPLAMALI AKIŞ ÇÖZÜMÜ SONUÇLARININ DOĞRULANMASI**
Tuncer İ. H. , Önel H. C.
7. Ulusal Havacılık ve Uzay Konferansı, Samsun, Turkey, 12 - 14 September 2018, pp.0-8
- XII. Wind Turbine Performance Losses Due to the Ice Accretion on the Turbine Blades**
YIRTICI Ö., SEVİNE T., ÖZGEN S., TUNCER İ. H.
AIAA 2018 Joint Thermophysics and Heat Transfer Conference, Atlanta, United States Of America, 25 - 29 June 2018
- XIII. Aerodynamic Shape Optimization of Wind Turbine Blades for Reducing Icing Related Power Losses**
YIRTICI Ö., ÖZGEN S., TUNCER İ. H.
26th Annual Conference of the CFD Society of Canada, Winnipeg, Canada, 10 - 12 June 2018
- XIV. Performance Degradation Analysis of an Iced Turbine Blade by Using Detached-Eddy Simulation**
YIRTICI Ö., Cengiz K., TUNCER İ. H.
Parallel CFD 2018, Indianapolis, United States Of America, 14 - 17 May 2018
- XV. WIND POTENTIAL/POWER ESTIMATION BASED ON UNSTEADY OpenFOAM SOLUTIONS COUPLED WITH WRF**
TUNCER İ. H.
15th International Bhurban Conference on Applied Sciences Technology - IBCAST, Islamabad, Pakistan, 9 - 12 January 2018
- XVI. GRADIENT BASED AERODYNAMIC SHAPE OPTIMIZATION**
TUNCER İ. H.
15th International Bhurban Conference on Applied Sciences Technology - IBCAST, Islamabad, Pakistan, 9 - 12 January 2018
- XVII. The Effect of Static Stability on the Short Range Flight Trajectory of a Countermunition**
Bent M., Dikbaş E., Tuncer İ. H.
2018 AIAA Atmospheric Flight Mechanics Conference, Florida, United States Of America, 8 - 12 January 2018
- XVIII. Wind turbine power production losses due to ice accretion on turbine blades**
Yirtici O., Sevine T., ÖZGEN S., TUNCER İ. H.
12th AIAA/ASME Joint Thermophysics and Heat Transfer Conference, 2018, [state] GA, United States Of America, 25 - 29 June 2018
- XIX. Coupling of a multibody simulation tool for rotary systems with an unsteady viscous flow solver**
Soğancı S., KAYRAN A., TUNCER İ. H.
AIAA Aerospace Sciences Meeting, 2018, Florida, United States Of America, 8 - 12 January 2018
- XX. ICING ON WIND TURBINE BLADE UNDER VARIOUS ATMOSPHERIC CONDITIONS**
YIRTICI Ö., ÖZGEN S., TUNCER İ. H.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXI. RECONSTRUCTION OF WINDSIM FLOWFIELDS BASED ON PROPER ORTHOGONAL DECOMPOSITION METHOD**
SEVİNE T., TUNCER İ. H.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXII. Validation of Parallel WRF Downscaling Methodology using OpenFOAM**
LEBLEBİCİ E., TUNCER İ. H.
Wind Energy Science Conference 2017, Lyngby, Denmark, 26 - 29 June 2017
- XXIII. Reconstruction of Atmospheric Flow Field and Wind Resource Estimation based on Proper Orthogonal Decomposition Method**

- SEVİNE T., LEBLEBİCİ E., KAYA M., TUNCER İ. H.
Wind Energy Science Conference, Lyngby, Denmark, 26 - 29 June 2017
- XXIV. **OpenFOAM Solutions Coupled with WRF for Wind Power Estimation**
LEBLEBİCİ E., TUNCER İ. H.
AIAA Aviation Forum, Denver, United States Of America, 5 - 09 June 2017
- XXV. **Parallel OpenFOAM - WRF Coupling Methodology and Comparison with Wind Mast Data**
LEBLEBİCİ E., TUNCER İ. H.
5th Symposium on OpenFOAM in Wind Energy, Pamplona, Spain, 26 - 28 April 2017
- XXVI. **Aerodynamic Shape Optimization of Wind Turbine Blades for Reducing Power Production Losses due to Ice Accretion**
YIRTICI Ö., TUNCER İ. H., ÖZGEN S.
AIAA Scitech Conference, Dallas, United States Of America, 9 - 13 January 2017
- XXVII. **Ice Accretion Prediction on Wind Turbines and Consequent Power Losses**
YIRTICI Ö., TUNCER İ. H., ÖZGEN S.
Conference on Science of Making Torque from Wind (TORQUE), Munich, Germany, 5 - 07 October 2016, vol.753
- XXVIII. **RANS VE PAL ELEMENLARI YÖNTEMİ İLE YATAY EKSENLİ RÜZGAR TÜRBİNİ PERFORMANS ANALİZİ**
YIRTICI Ö., TUNCER İ. H.
6. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016
- XXIX. **OPENFOAM'UN WRF İLE AKUPLE EDİLMESİ VE RÜZGAR POTANSİYELİ TAHMİNİ**
LEBLEBİCİ E., TUNCER İ. H.
6. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016
- XXX. **SES-ÜSTÜ KANARD KONTROLLÜ FÜZELER İÇİN SERBEST DÖNEN KUYRUĞUN ŞEKİL OPTİMİZASYONU**
Feyzioğlu E., TUNCER İ. H.
6. Ulusal Havacılık ve Uzay Konferansı, Turkey, 28 - 30 September 2016
- XXXI. **ATMOSFERİK AKIŞLARIN NÜMERİK ÇÖZÜMÜ VE POD YÖNTEMİYLE YENİDEN OLUŞTURULMASI**
SEVİNE T., LEBLEBİCİ E., KAYA M., TUNCER İ. H.
6. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016
- XXXII. **HELİKOPTER PALLERİNİN ÇOKLU KÜTLELİ BENZETİM ARACI VE İKİ BOYUTLU PANEL TABANLI AKIŞ ÇÖZÜCÜSÜ İLE ETKİLEŞİMLİ ANALİZİ**
Soğancı S., KAYRAN A., TUNCER İ. H.
6. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016
- XXXIII. **Development of OpenFOAM - WRF Coupling Methodology for Wind Power Production Estimations**
LEBLEBİCİ E., TUNCER İ. H.
SOWE 2016 The Fourth Symposium on OpenFOAM in Wind Energy, Delft, Netherlands, 2 - 05 May 2016
- XXXIV. **Ice Accretion Prediction on Wind Turbine Blades Under Atmospheric Icing Conditions**
Yırtıcı Ö., ÖZGEN S., TUNCER İ. H.
11. EAWE PhD Seminar on Wind Energy in Europe, Stuttgart, Germany, 23 - 25 September 2015
- XXXV. **AERODYNAMIC SHAPE OPTIMIZATION OF WIND TURBINE BLADES BASED ON BEM METHODOLOGY AND GENETIC ALGORITHM**
TUNCER İ. H.
IBCAST 2016 - 13th International Bhurban Conference on Applied Sciences and Technology, Islamabad, Pakistan, 12 - 16 January 2016
- XXXVI. **MICRO-SCALE ATMOSPHERIC FLOW SOLUTIONS COUPLED WITH A MESO-SCALE WEATHER PREDICTION MODEL**
TUNCER İ. H.
IBCAST 2016 - 13th International Bhurban Conference on Applied Sciences and Technology, Islamabad, Pakistan, 12 - 16 January 2016
- XXXVII. **Wind Power Estimations using OpenFOAM Coupled with WRF**
LEBLEBİCİ E., TUNCER İ. H.
11th EAWE PhD Seminar on Wind Energy in Europe, 23 - 25 September 2015
- XXXVIII. **ICE ACCRETION PREDICTION ON HORIZONTAL AXIS WIND TURBINE BLADES**

YIRTICI Ö., ÖZGEN S., TUNCER İ. H.

EAWC 2015, 22 - 25 September 2015

- XXXIX. **MODELING OF STORE SEPARATION BEHAVIOR BASED ON A NEURAL NETWORK AND UNSTEADY FLOW SOLUTIONS**
Erinç E., TUNCER İ. H.
Ankara International Aerospace Conference, 10 - 12 September 2015
- XL. **ICE ACCRETION PREDICTION ON HORIZONTAL AXIS WIND TURBINE BLADES**
YIRTICI Ö., ÖZGEN S., TUNCER İ. H.
Ankara International Aerospace Conference, 10 - 12 September 2015
- XLI. **FLUID STRUCTURE INTERACTION BASED ON PANEL METHOD AND GEOMETRICALLY NONLINEAR STRUCTURAL ANALYSIS**
Sedat Ö., KAYRAN A., TUNCER İ. H.
Ankara International Aerospace Conference, 10 - 12 September 2015
- XLII. **AERODYNAMIC DESIGN ANALYSIS OF MISSILES WITH STRAKE CONFIGURATIONS AT SUPERSONIC MACH NUMBERS**
Usta E., Kıvanç A., TUNCER İ. H.
Ankara International Aerospace Conference, 10 - 12 September 2015
- XLIII. **METUWIND Gateway A Science Gateway for the METU Center for Wind Energy**
KOCAİR Ç., ŞENER C., TUNCER İ. H.
IWSG 2015 - 7th International Workshop on Science Gateways, Budapest, Hungary, 3 - 05 June 2015
- XLIV. **A 3-D Mach uniform preconditioner for incompressible and subsonic flows**
Bas 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
- XLV. **Genetic Algorithm based aerodynamic shape optimization tool for wind turbine blades and its implementation to helicopter blades**
Polat Ö., Sezer-Uzol N., TUNCER İ. H.
70th American Helicopter Society International Annual Forum 2014, Montreal, Canada, 20 - 22 May 2014, vol.4, pp.2774-2785
- XLVI. **Aerodynamic shape optimization of wind turbine blades using a parallel genetic algorithm**
Polat O., TUNCER İ. H.
25th International Conference on Parallel Computational Fluid Dynamics, 20 - 24 May 2013, vol.61, pp.28-31
- XLVII. **Atmospheric turbulent flowsolutions coupled with a mesoscale weather prediction model**
Leblebici E., Ahmet G., TUNCER İ. H.
3rd South-East European Conference on Computational Mechanics, SEECCM 2013, Kos Island, Greece, 12 - 14 June 2013, pp.127-136
- XLVIII. **Aerodynamic shape optimization of wind turbine blades using a 2-D panel method with a boundary layer solver and a Genetic Algorithm**
Polat O., Sezer-Uzol N., TUNCER İ. H.
6th European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS 2012, Vienna, Austria, 10 - 14 September 2012, pp.6263-6278
- XLIX. **Experimental and numerical investigation of a pressure swirl atomizer**
Sumer B., Erkan N., UZOL O., TUNCER İ. H.
12th International Conference on Liquid Atomization and Spray Systems, ICLASS 2012, Heidelberg, Germany, 2 - 06 September 2012
- L. **Path optimization of dual airfoils flapping in a biplane configuration with RSM in a parallel computing environment**
Kaya M., TUNCER İ. H.
20th International Series of Meetings on Parallel Computational Fluid Dynamics, CFD 2008, Lyon, France, 19 - 22 May 2008, pp.83-90

- LI. **Development of a quadtree based agglomeration method for a multigrid viscous flow solver on unstructured grids**
Mahmutyazicioglu E., TUNCER İ. H. , Aksel H.
48th AIAA Aerospace Sciences Meeting Including the New Horizons Forum and Aerospace Exposition, Orlando, FL, United States Of America, 4 - 07 January 2010
- LII. **Parallel Computation of 3-D Viscous Flows on Hybrid Grids**
Ilgaz M., TUNCER İ. H.
Parallel Computational Fluid Dynamics, Parallel CFD 2007, Antalya, Turkey, 21 - 24 May 2007, pp.67-74
- LIII. **Non-sinusoidal path optimization of dual airfoils flapping in a biplane configuration**
KAYA M. Ç. , TUNCER İ. H.
Parallel Computational Fluid Dynamics, Parallel CFD 2007, Antalya, Turkey, 21 - 24 May 2007, pp.59-66
- LIV. **Parallel implementation of a gas-kinetic BGK method on unstructured grids for 3-D inviscid missile flows**
Ilgaz M., TUNCER İ. H.
Parallel Computational Fluid Dynamics, Parallel CFD 2007, Antalya, Turkey, 21 - 24 May 2007, pp.449-456
- LV. **Optimization of horizontal axis wind turbines by using BEM theory and genetic algorithm**
Ceyhan Ö., SEZER UZOL N., TUNCER İ. H.
5th AIAC, 17 - 19 August 2009
- LVI. **Numerical & experimental investigation of flow through a cavitating venturi**
Yazici B., TUNCER İ. H. , Ak M. A.
3rd International Conference on Recent Advances in Space Technologies, İstanbul, Turkey, 14 - 16 June 2007, pp.236-237
- LVII. **Optimization of flapping motion of airfoils in biplane configuration for maximum thrust and/or efficiency**
Kaya M., TUNCER İ. H. , Jones K. D. , Platzer M. F.
45th AIAA Aerospace Sciences Meeting 2007, Reno, NV, United States Of America, 8 - 11 January 2007, vol.9, pp.5812-5822
- LVIII. **A gas-kinetic BGK scheme for parallel solution of 3-D viscous flows on unstructured hybrid grids**
Ilgaz M., TUNCER İ. H.
18th AIAA Computational Fluid Dynamics Conference, Miami, FL, United States Of America, 25 - 28 June 2007, vol.2, pp.2080-2092
- LIX. **Optimization of aeroelastic flapping motion of thin airfoils in a biplane configuration for maximum thrust**
Kaya M., TUNCER İ. H. , Jones K. D. , Platzer M. F.
37th AIAA Fluid Dynamics Conference, Miami, FL, United States Of America, 25 - 28 June 2007, vol.3, pp.1758-1766
- LX. **Computation of turbulent flows around rotating bodies using unstructured grids**
Gönç L., Ak M., TUNCER İ. H. , Aksel M.
24th AIAA Applied Aerodynamics Conference, San Francisco, CA, United States Of America, 5 - 08 June 2006, vol.1, pp.125-137
- LXI. **Parallel implementation of gas-kinetic BGK scheme on unstructured hybrid grids**
Ilgaz M., TUNCER İ. H.
36th AIAA Fluid Dynamics Conference, San Francisco, CA, United States Of America, 5 - 08 June 2006, vol.4, pp.2793-2805
- LXII. **Flow separation control of an elliptical wing by pulsating jet**
Sohn M. H. , Chung H. S. , TUNCER İ. H.
23rd AIAA Applied Aerodynamics Conference, Toronto, Canada, 6 - 09 June 2005, vol.1, pp.410-422
- LXIII. **Thrust and efficiency of propulsion by oscillating foils**
Young J., Lai J. C. S. , KAYA M. Ç. , TUNCER İ. H.
3rd International Conference on Computational Fluid Dynamics, Toronto, Canada, 12 - 16 July 2004, pp.313-314
- LXIV. **Parallel optimization of flapping airfoils in a biplane configuration for maximum thrust**
Tuncer I., Kaya M.

16th International Conference on Parallel Computational Fluid Dynamics, Las Palmas Gran Canaria, Spain, 24 - 27 May 2004, pp.137-144

- LXV. **Optimization of flapping airfoils for maximum thrust**
TUNCER İ. H. , KAYA M.
41 st AIAA Aerospace Sciences Meeting & Exhibit, 6 - 08 January 2003
- LXVI. **A computational study of subsonic flows over a medium range cargo aircraft**
Uygun M., TUNCER İ. H.
21st AIAA Applied Aerodynamics Conference 2003, Orlando, FL, United States Of America, 23 - 26 June 2003
- LXVII. **Parallel computation of flows around flapping airfoils in biplane configuration**
Tuncer I., Kaya M.
International Parallel Computational Fluid Dynamics Conference, KANSAI SCI CITY, Japan, 20 - 22 May 2002, pp.523-530
- LXVIII. **Computational investigation of flow through a louvered inlet configuration**
TUNCER İ. H. , Platzer M. F.
19th AIAA Applied Aerodynamics Conference 2001, Anaheim, CA, United States Of America, 11 - 14 June 2001
- LXIX. **Influence wave mode computations of multi-passage cascade flows**
TUNCER İ. H. , Weber S.
ASME Turbo Expo 2000: Power for Land, Sea, and Air, GT 2000, Munich, Germany, 8 - 11 May 2000, vol.4
- LXX. **A computational study of flow separation characteristics and wake profiles behind a flapping airfoil**
TUNCER İ. H. , Platzer M. F.
37th Aerospace Sciences Meeting and Exhibit, 1999, Nevada, United States Of America, 11 - 14 January 1999
- LXXI. **A computational study on the dynamic stall of a flapping airfoil Search within citing articles**
TUNCER İ. H. , Walz R., Platzer M. F.
AIAA Paper, 15 - 19 June 1998
- LXXII. **Investigation of periodic boundary conditions in multi-passage cascade flows using overset grids**
Tuncer İ. H. , Weber S., Sanz W.
ASME 1998 International Gas Turbine and Aeroengine Congress and Exhibition, GT 1998, Stockholm, Sweden, 2 - 05 June 1998, vol.1
- LXXIII. **A computational study on the dynamic stall of a flapping airfoil**
TUNCER İ. H. , Walz R., Platzer M. F.
16th AIAA Applied Aerodynamics Conference, 1998, New Mexico, United States Of America, 15 - 18 June 1998, pp.219-225
- LXXIV. **Investigation of periodic boundary conditions in multi-passage cascade flows using overset grids**
Tuncer İ. H. , Weber S., Sanz W.
Proceedings of the 1998 International Gas Turbine & Aeroengine Congress & Exhibition, Stockholm, Sweden, 2 - 05 June 1998
- LXXV. **A computational study of flow entrainment over a stationary/flapping airfoil combination in tandem**
Tuncer İ. H. , Lai J. C. , Platzer M. F.
36th AIAA Aerospace Sciences Meeting and Exhibit, 1998, Nevada, United States Of America, 12 - 15 January 1998
- LXXVI. **Computation of multi-passage cascade flows with overset and deforming grids**
Tuncer İ. H. , Sanz W.
Proceedings of the 1997 International Gas Turbine & Aeroengine Congress & Exposition, Orlando, FL, USA, 2 - 05 June 1997
- LXXVII. **Computational Study of Subsonic Flowfields Over a Missile Configuration**
Uygun M., TUNCER İ. H.
35th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, 6 - 09 January 1997
- LXXVIII. **Unsteady aerodynamics of stationary/flapping airfoil combination in tandem**
TUNCER İ. H. , Lai J., Ortiz M., Platzer M. F.
35th Aerospace Sciences Meeting and Exhibit, Reno, United States Of America, 1 - 05 January 1997
- LXXIX. **Simple method for particle tracing in 2-D unsteady flows**
Tuncer İ. H.

Proceedings of the 1997 ASME Fluids Engineering Division Summer Meeting, FEDSM'97. Part 16 (of 24), Vancouver, Canada, 22 - 26 June 1997, vol.13

- LXXX. **PMARC potential flow solutions with wakes over an ogive cylinder at high incidence**
Tuncer İ. H. , Platzert M. F.
28th Fluid Dynamics Conference, 1997, Colorado, United States Of America, 29 June - 02 July 1997
- LXXXI. **A computational study of a close-coupled delta canard-wing-body configuration**
TUNCER İ. H. , PLATZER M. F. , VANDYKEN R. B.
AIAA 14th Applied Aerodynamics Conference, United States Of America, 20 - 24 June 1996
- LXXXII. **2-D Navier-Stokes solution method with overset moving grids**
Tuncer İ. H.
Proceedings of the 1996 International Gas Turbine and Aeroengine Congress & Exhibition, Birmingham, UK, 10 - 13 June 1996
- LXXXIII. **A 2-D unsteady Navier-Stokes solution method with overlapping/overset moving grids**
Tuncer İ. H.
34th Aerospace Sciences Meeting and Exhibit, 1996, Nevada, United States Of America, 15 - 18 January 1996
- LXXXIV. **Numerical investigation of subsonic flow over a typical missile forebody**
Tuncer İ. H. , Marvin R., Platzer M. F.
34th Aerospace Sciences Meeting and Exhibit, 1996, Nevada, United States Of America, 15 - 18 January 1996
- LXXXV. **Passive control of flow separation over delta wings at high angle-of-attack**
Van Dyken R., Yu K., Gutmark E., Tuncer İ. H. , Platzer M., McLachlan B., Bell J.
34th Aerospace Sciences Meeting and Exhibit, 1996, Nevada, United States Of America, 15 - 18 January 1996
- LXXXVI. **A 2-0 navier-stokes solution method with overset moving grids**
Tuncer İ. H.
ASME 1996 International Gas Turbine and Aeroengine Congress and Exhibition, GT 1996, Birmingham, England, 10 - 13 June 1996, vol.1
- LXXXVII. **Analysis of unsteady airfoil interference effects using a zonal Navier-Stokes solver**
Tuncer İ. H. , Platzert M. F.
33rd Aerospace Sciences Meeting and Exhibit, 1995, Nevada, United States Of America, 9 - 12 January 1995
- LXXXVIII. **Computational analysis of flapping airfoil aerodynamics**
Tuncer İ. H. , Platzert M. F. , Ekaterinaris J. A.
Proceedings of the 1994 ASME Fluids Engineering Division Summer Meeting. Part 9 (of 18), Lake Tahoe, NV, USA, 19 - 23 June 1994, vol.196, pp.9-18
- LXXXIX. **A viscous-inviscid interaction method for 2-D unsteady, compressible flows**
Tuncer İ. H. , Ekaterinaris J. A. , Platzert M. F.
AIAA 23rd Fluid Dynamics, Plasmadynamics, and Lasers Conference, 1993, Florida, United States Of America, 6 - 09 July 1993
- XC. **Zonal viscous-inviscid interaction method for 2-D compressible flows**
Tuncer İ. H. , Ekaterinaris J. A. , Platzert M. F.
Fluids Engineering Conference, Washington, Kiribati, 20 - 24 June 1993, vol.147, pp.19-25
- XCI. **Unsteady aerodynamics of rapidly pitched airfoils**
Wu J. C. , TUNCER İ. H. , Wang C.
AIAA paper, United States Of America, 1 - 04 May 1986
- XCII. **BLOCK-STRUCTURED FINITE ELEMENT GRID GENERATION SCHEME FOR THE ANALYSIS OF THREE-DIMENSIONAL TRANSONIC FLOWS.**
Ecer A., Spyropoulos J., Tuncer İ. H.
AIAA 22nd Aerospace Sciences Meeting, Reno, NV, USA

Supported Projects

TUNCER İ. H. , TUBITAK Project, Hava Tahmin Yazılımı İle Akuple Edilmiş Rüzgar Çiftliği Simülasyonu Ve Kısa Süreli Enerji

ÜretimTahmini, 2019 - Continues

Tuncer İ. H. , Company, Kanard/Kanat Konfigürasyonu için Adjoint tabanlı Aerodinamik Tasarım Optimizasyonu, 2018 - 2020

Tuncer İ. H. , Project Supported by Defense Industry, Dış Geometri Aerodinamik Optimizasyonu Yazılım Aracı Geliştirilmesi, 2016 - 2020

Activities in Scientific Journals

Computers & Fluids, Special Issue Editor, 2019 - Continues

Scientific Refereeing

INTERNATIONAL JOURNAL OF AEROSPACE ENGINEERING, Journal Indexed in SCI-E, August 2019

COMPUTERS & FLUIDS, SCI Journal, June 2019

IEEE ACCESS, SCI Journal, June 2019

Ankara International Aerospace Conference, Conference Paper (Abstract), June 2019

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Middle East Technical University, Turkey, June 2019

COMPUTERS & FLUIDS, SCI Journal, April 2019

COMPUTERS & FLUIDS, SCI Journal, January 2019

16th IBCAST , Conference Paper (Full Text), November 2018

APPLIED BIONICS AND BIOMECHANICS, SCI Journal, August 2018

TUBITAK Project, 1512 - Progressive Support Program for Entrepreneurship, UP ROBOTİK L.Ş., Turkey, July 2018

AEROSPACE SCIENCE AND TECHNOLOGY, SCI Journal, June 2018

GAZİ ÜNİVERSİTESİ MÜHENDİSLİK MİMARLIK FAKÜLTESİ DERGİSİ, National Scientific Refreed Journal, March 2018

Wind Energy Science, Other Indexed Journal, February 2018

Scientific Consultations

TUSAŞ A.Ş., Scientific Consultancy, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, Turkey, 2018 - Continues

Tasks In Event Organizations

Tuncer İ. H. , Yaman Y., Kayran A., Uzol O., Gürses E., Perçin M., 10th Ankara International Aerospace Conference (AIAC2019), Scientific Congress, Ankara, Turkey, Eylül 2019

Tuncer İ. H. , 31st International Conference on Parallel Computational Fluid Dynamics, Scientific Congress, Antalya, Turkey, Mayıs 2019

Mısırlıoğlu A., Tuncer İ. H. , Yükselen A., 7. Ulusak Havacılık ve Uzay Konferansı, Scientific Congress, Samsun, Turkey, Eylül 2018

Mobility Activity

Erasmus Programme, Lecturing, Grand Valley State University, United States Of America, 2018 - 2018

Erasmus Programme, Lecturing, Technische Universitaet Graz, Austria, 2018 - 2018

Edit Congress and Symposium Activities

AIAA 2018 Joint Thermophysics and Heat Transfer Conference, Working Group, Georgia, United States Of America, 2018

30th International Conference on Parallel Computational Fluid Dynamics, Working Group, Indiana, United States Of America, 2018

15th International Bhurban Conference on Applied Sciences & Technology - IBCAST, Invited Speaker, Islamabad, Pakistan, 2018

Citations

Total Citations (WOS):391

h-index (WOS):9

Invited Talks

KSCFE 25th Conference, Conference, Korean Society for Computational Fluid Engineering, South Korea, October 2020