

Prof. MEHMET METİN YAVUZ

Personal Information

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Education Information

Doctorate, Lehigh University, Makina Muhendisligi, United States Of America 2004 - 2006

Post Graduate, Lehigh University, Makina Muhendisligi, United States Of America 2001 - 2004

Under Graduate, Middle East Technical University, Faculty of Engineering, Makine Mühendisliği Bölümü, Turkey 1996 - 2001

Research Areas

Mechanical Engineering, Energy, Fluid Mechanics, Engineering and Technology

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, 2019 - Continues

Associate Professor, Middle East Technical University, Faculty Of Engineering, Department of Mechanical Engineering, 2014 - 2019

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, 2011 - 2014

Advising Theses

Yavuz M. M. , Effect of bleed opening ratio on flow structure of a nonslender delta wing, Post Graduate, K.KESTEL(Student), 2019

Yozgatligil A., Yavuz M. M. , Flow characterization study and fire experiments in a reduced scaled tunnel, Post Graduate, M.BASIL(Student), 2019

Albayrak K., Yavuz M. M. , Numerical investigation of thickness-to-chord ratio on aerodynamic characteristics and flow field of a low swept delta wing, Post Graduate, İ.SADİ(Student), 2019

Sert C., Yavuz M. M. , Numerical investigation of flow control strategies on delta wings, Post Graduate, A.YILDIRIM(Student), 2019

Yavuz M. M. , ANALYSIS OF FLOW STRUCTURE IN A HELICOPTER CABIN TO IMPROVE THE THERMAL COMFORT USING COMPUTATIONAL FLUID DYNAMICS MODELING, Post Graduate, D.ŞAHİN(Student), 2018

YAVUZ M. M. , Effect of thickness-to-chord ratio on flow structure of a low swept delta wing, Post Graduate, M.Sharifi(Student), 2018

YAVUZ M. M. , EFFECT OF THICKNESS-TO-CHORD RATIO ON AERODYNAMICS OF NONSLENDER DELTA WING, Post Graduate, M.SHARIFI(Student), 2018

YAVUZ M. M. , Control of flow structure on VFE-2 delta wing with passive bleeding using CFD, Post Graduate, S.EMİN(Student), 2018

YAVUZ M. M. , Effect of thickness-to-chord ratio on flow structure of a low swept delta wing, Post Graduate, B.GÜLSAÇAN(Student), 2017

YAVUZ M. M. , Development and implementation of novel flow control techniques for nonslender delta wings, Doctorate, A.ÇELİK(Student), 2017

YAVUZ M. M. , Control of flow structure on 45 degree swept delta wing using passive bleeding, Post Graduate, B.KARAGÖZ(Student), 2017

YAVUZ M. M. , Control of flow structure on 70° swept delta wing with along-the-core blowing using numerical modeling, Post Graduate, İ.CAN(Student), 2016

YAVUZ M. M. , GÜVENÇ YAZICIOĞLU A., Effect of wing heating on flow structure of low swept delta wing, Post Graduate, G.ŞENCAN(Student), 2016

YAVUZ M. M. , Flow characterization of full, partial, and inclined ground effect, Post Graduate, G.KOÇAK(Student), 2016

YAVUZ M. M. , Control of flow structure on low swept delta wing using unsteady leading edge blowing, Post Graduate, C.ÇETİN(Student), 2016

YAVUZ M. M. , Effect of blowing pattern through leading edge on flow structure of 45 degree swept delta wing, Post Graduate, G.GÜNACAR(Student), 2016

YAVUZ M. M. , Control of flow structure on low swept delta wing with steady leading edge blowing, Post Graduate, M.ZHARFA(Student), 2015

YAVUZ M. M. , Control of flow structure on low swept delta wing with steady leading edge blowing, Post Graduate, M.Zharfa(Student), 2014

YAVUZ M. M. , Experimental analysis of flow structure on moderate sweep delta wing, Post Graduate, İ.ÖZTÜRK(Student), 2014

YAVUZ M. M. , Quantifying the effect of flow rate controllers on liquid steel flow in continuous casting mold using CFD modeling, Post Graduate, K.ALİ(Student), 2014

YAVUZ M. M. , AKSEL M. H. , Design and analysis of a vertical axis water turbine for river applications using computational fluid dynamics, Post Graduate, E.DEMİRCAN(Student), 2014

YAVUZ M. M. , Analysis and control of complex flows in U-bends using computational fluid dynamics, Post Graduate, Y.GÜDEN(Student), 2014

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

- I. **Control of flow structure over a non-slender delta wing using passive bleeding**
KESTEL K, Ramazanl B, YAVUZ M. M.
AEROSPACE SCIENCE AND TECHNOLOGY, vol.106, 2020 (Journal Indexed in SCI)
- II. **Biomechanical Investigation of Disturbed Hemodynamics-Induced Tissue Degeneration in Abdominal Aortic Aneurysms Using Computational and Experimental Techniques**
Salman H. E. , Ramazanli B, Yavuz M. M. , Yalcin H. C.
FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY, vol.7, 2019 (Journal Indexed in SCI)
- III. **Effect of thickness-to-chord ratio on aerodynamics of non-slender delta wing**
Ghazijahani M. S. , Yavuz M. M.
AEROSPACE SCIENCE AND TECHNOLOGY, vol.88, pp.298-307, 2019 (Journal Indexed in SCI)
- IV. **Effect of fan and shroud configurations on underhood flow characteristics of an agricultural tractor**
Ozturk I., Cetin C., Yavuz M. M.
ENGINEERING APPLICATIONS OF COMPUTATIONAL FLUID MECHANICS, vol.13, pp.506-518, 2019 (Journal Indexed in SCI)
- V. **Effect of Thickness-to-Chord Ratio on Flow Structure of a Low Swept Delta Wing**
Gulsacan B., Sencan G., Yavuz M. M.
AIAA JOURNAL, vol.56, pp.4657-4668, 2018 (Journal Indexed in SCI)
- VI. **Control of Flow Structure over a Nonslender Delta Wing Using Periodic Blowing**
Cetin C., Celik A., Yavuz M. M.
AIAA JOURNAL, vol.56, pp.90-99, 2018 (Journal Indexed in SCI)

- VII. **Effect of Passive Bleeding on Flow Structure over a Nonslender Delta Wing**
Celik A., Cetin C., Yavuz M. M.
AIAA JOURNAL, vol.55, pp.2555-2565, 2017 (Journal Indexed in SCI)
- VIII. **Effect of Edge Modifications on Flow Structure of Low Swept Delta Wing**
Celik A., Yavuz M. M.
AIAA JOURNAL, vol.54, pp.1789-1797, 2016 (Journal Indexed in SCI)
- IX. **Flow Structure on Nonslender Delta Wing: Reynolds Number Dependence and Flow Control**
Zharfa M., Ozturk I., Yavuz M. M.
AIAA JOURNAL, vol.54, pp.880-897, 2016 (Journal Indexed in SCI)
- X. **Effect of Flow Rate Controllers and their Opening Levels on Liquid Steel Flow in Continuous Casting Mold**
Gursoy K. A. , Yavuz M. M.
ISI JOURNAL, vol.56, pp.554-563, 2016 (Journal Indexed in SCI)
- XI. **Transformation of flow structure on a delta wing of moderate sweep angle during pitch-up maneuver**
YAVUZ M. M.
JOURNAL OF FLUIDS AND STRUCTURES, vol.33, pp.59-69, 2012 (Journal Indexed in SCI)
- XII. **Liquid steel flow in continuous casting machine: Modelling and measurement**
YAVUZ M. M.
Ironmaking and Steelmaking, vol.38, no.6, pp.453-463, 2011 (Journal Indexed in SCI Expanded)
- XIII. **Liquid steel flow in continuous casting machine: modelling and measurement**
YAVUZ M. M.
IRONMAKING & STEELMAKING, vol.38, no.6, pp.453-463, 2011 (Journal Indexed in SCI)
- XIV. **The Effects of Electromagnetic Brake on Liquid Steel Flow in Thin Slab Caster**
YAVUZ M. M.
STEEL RESEARCH INTERNATIONAL, vol.82, no.7, pp.809-818, 2011 (Journal Indexed in SCI)
- XV. **Identification and control of three dimensional separation on low swept delta wing**
Yavuz M. M. , Rockwell D.
AIAA JOURNAL, vol.44, no.11, pp.2805-2811, 2006 (Journal Indexed in SCI)
- XVI. **Control of flow structure on delta wing with steady trailing-edge blowing**
Yavuz M. M. , Rockwell D.
AIAA JOURNAL, vol.44, no.3, pp.493-501, 2006 (Journal Indexed in SCI)
- XVII. **Near-surface topology of unmanned combat air vehicle planform: Reynolds number dependence**
Elkhoury M., Yavuz M. M. , Rockwell D.
JOURNAL OF AIRCRAFT, vol.42, no.5, pp.1318-1330, 2005 (Journal Indexed in SCI)
- XVIII. **Near-surface topology and flow structure on a delta wing**
Yavuz M. M. , Elkhoury M., Rockwell D.
AIAA JOURNAL, vol.42, no.2, pp.332-340, 2004 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Nozzle Design for Dofasco's No 1 Continuous Caster for Minimizing Sliver Defects**
Sengupta J., Yavuz M. M.
Iron and Steel Technology Magazine, vol.7, pp.39-47, 2011 (Refereed Journals of Other Institutions)
- II. **Nozzle design for ArcelorMittal Dofasco's No. 1 continuous caster for minimizing sliver defects**
Sengupta J., YAVUZ M. M.
Iron and Steel Technology, vol.8, no.7, pp.39-47, 2011 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **ANALYSIS OF FLOW STRUCTURE IN A HELICOPTER CABIN TO IMPROVE THE THERMAL COMFORT USING CFD MODELING**
Şahin D., Yavuz M. M.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 18 - 20 September 2019, pp.1-12
- II. **Effect of thickness-to-chord ratio on flow structure of nonslender delta wing**
Gülsaçan B., Ghazijahani M. S. , Şencan G., Yavuz M. M.
71st Annual Meeting of the APS Division of Fluid Dynamics, Georgia, United States Of America, 18 - 20 November 2018, pp.1
- III. **Control of Flow Structure on Nonslender Delta Wing using Passive Bleeding: Effects of Orientation, Angle, and Solidity Ratio**
Yavuz M. M. , Ramazanli B., Kestel K.
71st Annual Meeting of the APS Division of Fluid Dynamics, Georgia, United States Of America, 18 - 20 November 2018, pp.1
- IV. **Control of Three-dimensional Separation on Nonslender Delta Wings Using Passive Bleeding**
Ramazanli B., Kestel K., Yavuz M. M.
12th European Fluid Mechanics Conference, Vienna, Austria, 9 - 14 September 2018
- V. **Kalınlık-Veter Oranının Düşük Ok Açılı Delta Kanat Üzerindeki Akış Yapısına Etkisinin Nümerik İncelenmesi**
Cesur I. S. , Yavuz M. M. , Albayrak K.
VII. Ulusal Havacılık ve Uzay Konferansı, Samsun, Turkey, 12 - 14 September 2018, no.47, pp.1-9
- VI. **Düşük ve Orta Ok Açılı Delta Kanatlar Üzerindeki Akışın Pasif Akıtma Yöntemi ile Kontrolü**
Ramazanli B., Kestel K., Yavuz M. M.
VII. Ulusal Havacılık ve Uzay Konferansı, Samsun, Turkey, 12 - 14 September 2018, no.114, pp.1-8
- VII. **Kalınlık-Veter Oranının Düşük Ok Açılı Delta Kanat Üzerindeki Akış Yapısına Etkisi**
Gülsaçan B., Şencan G., Yavuz M. M.
VII. Ulusal Havacılık ve Uzay Konferansı, Samsun, Turkey, 12 - 14 September 2018, no.112, pp.1-8
- VIII. **Effectiveness of Passive Bleeding as a Flow Control Method for the Flow Structure on Low to Moderate Swept Delta Wings**
Kestel K., Ramazanli B., Yavuz M. M.
9th International Conference on Mechanical and Aerospace Engineering (ICMAE), Budapest, Hungary, 10 - 13 July 2018, pp.1
- IX. **Effect of Different Ground Scenarios on Flow Structure of a Rotor at Hover Condition**
Koçak G., Nalbantoğlu V., Yavuz M. M.
70th Annual Meeting of the APS Division of Fluid Dynamics, Colorado, United States Of America, 19 - 21 November 2017
- X. **Effect of Wing Heating of Flow Structure of Low Swept Delta Wing**
ŞENCAN G., GÜVENÇ YAZICIOĞLU A., YAVUZ M. M.
9th. Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XI. **Kanat Isıtmasının Düşük Ok Açılı Delta Kanat Üzerindeki Akış Yapısına Etkisi**
Şencan G., Güvenç Yazicioğlu A., Yavuz M. M.
21. Ulusal Isı Bilimi ve Tekniği Kongresi, Çorum, Turkey, 13 - 16 September 2017
- XII. **Flow Characterization of Full, Partial and Inclined Ground Effect**
Koçak G., Nalbantoğlu V., Yavuz M. M.
8th International Conference on Mechanical and Aerospace Engineering, Praha, Czech Republic, 22 - 25 July 2017
- XIII. **Control of Flow Structure on Non Slender Delta Wing Bio inspired Edge Modifications Passive Bleeding and Pulsed Blowing**
Yavuz M. M. , Çelik A., Çetin C.
69th Annual Meeting of the APS Division of Fluid Dynamics, Oregon, United States Of America, 20 - 22 November 2016, vol.61

- XIV. **Düşük Ok Açılı Delta Kanat Akışının Zamana Bağlı Üfleme Tekniği ile Kontrolü**
Çetin C., Çelik A., Yavuz M. M.
VI. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016, no.71, pp.1-8
- XV. **Döner Kanatlar için Yer Etkisinin Deneysel Olarak İncelenmesi**
Koçak G., Nalbantoğlu V., Yavuz M. M.
VI. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016, no.81, pp.1-7
- XVI. **Düşük Ok Açılı Delta Kanat Üzerindeki Akışın Pasif Akıtma Yöntemiyle Kontrolü**
Çelik A., Çetin C., Yavuz M. M.
VI. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016, no.85, pp.1-7
- XVII. **Kenar Değişikliklerinin Düşük Ok Açılı Delta Kanat Üzerindeki Akış Yapılarına Etkileri**
Çelik A., Çetin C., Yavuz M. M.
VI. Ulusal Havacılık ve Uzay Konferansı, Kocaeli, Turkey, 28 - 30 September 2016, no.84, pp.1-9
- XVIII. **Orta Süpürme Açılı Delta Kanat Etrafındaki Akışın Deneysel Olarak İncelenmesi**
ÖZTÜRK İ., Zharfa M., Erkal B., YAVUZ M. M.
UHUK, Kayseri, Turkey, 8 - 10 September 2014, pp.10
- XIX. **Analysis and Control of Complex Flows in U-Bends using Computational Fluid Dynamics**
Guden Y., YAVUZ M. M.
4th ASME Joint US-European Fluids Engineering Division Summer Meeting, Illinois, United States Of America, 3 - 07 August 2014
- XX. **Effect of Slide Gate Opening on Mold Flow Structure**
Gursoy K. A. , YAVUZ M. M.
AISTech, 5 - 08 May 2014, vol.2, pp.1631-1640
- XXI. **Dikey Eksenli Darrieus Tip Su Turbinlerinin Hesaplamalı Akiskanlar Dinamiki ile Analizi**
DEMİRCAN E., AKSEL M. H. , YAVUZ M. M.
8. Pompa Vana Konferansı, İstanbul, Turkey, 2 - 04 May 2013, vol.1
- XXII. **Orta Süpürme Açısına Sahip Delta Kanat Üzerindeki Akış Yapısının Kalkış Manevrası Sırasında Değişimi**
ÖZTÜRK İ., Çelik A., Tunc H. C. , YAVUZ M. M.
UHUK, İstanbul, Turkey, 12 - 14 September 2012, pp.10
- XXIII. **Mathematical Modeling of Liquid Steel Flow in Continuous Casting Machine**
YAVUZ M. M. , Gursoy K. A.
IISS International Iron and Steel Symposium, Karabük, Turkey, 16 - 18 April 2012, vol.1, pp.99-105
- XXIV. **Effects of stopper rod movement on mold fluid flow at Arcelormittal Dofasco's No. 1 Continuous Caster**
Liu R., Sengupta J., Crosbie D., Yavuz M. M. , Thomas B.
AISTech 2011 Iron and Steel Technology Conference, Indianapolis, IN, United States Of America, 2 - 05 May 2011, pp.1619-1631
- XXV. **Effects of Stopper Rod Movement on Mold Fluid Flow and Sliver Formation at ArcelorMittal Dofasco s No 1 Continuous Caster**
Liu R., Sengupta J., Crosbie D., Yavuz M. M. , Thomas B.
AISTech, Indiana, United States Of America, 2 - 05 May 2011, vol.1, pp.1619-1631
- XXVI. **Analysis of Mold Flow Structure under the Influence of Electromagnetic Brake at ArcelorMittal Riverdale Thin Slab Caster**
YAVUZ M. M. , Blazek K., Thacker J., Neale K., Fiegle S., Fritz C., Kaurich T.
AISTech, Indianapolis, United States Of America, 2 - 05 May 2011, vol.1, pp.1497-1506
- XXVII. **Analysis of Mold Flow Structure at ArcelorMittal Indiana Harbor No 1 Slab Caster**
YAVUZ M. M. , Thacker J.
AISTech, Indianapolis, United States Of America, 2 - 05 May 2011, vol.2, pp.453-461
- XXVIII. **Nozzle design for ArcelorMittal Dofasco's No. 1 continuous caster for minimizing sliver defects**
Yavuz M. M. , Sengupta J.
AISTech 2010 Iron and Steel Technology Conference, Pittsburgh, PA, United States Of America, 3 - 06 May 2010,

pp.41-51

XXIX. Optimization of a Submerged Entry Nozzle Design to Reduce Non Metallic Inclusions in Line Pipe Steel

Forman B., YAVUZ M. M. , Tahcker J., Tsai T.

AISTech, Pittsburgh, United States Of America, 3 - 06 May 2010, vol.2, pp.53-62

XXX. Mold Flow Modeling of ArcelorMittal Riverdale and POSCO Thin Slab Casters

YAVUZ M. M. , Cho M., Lee S. M. , Neale K.

AISTech, Pittsburgh, United States Of America, 3 - 06 May 2010, vol.1, pp.1291-1302

XXXI. CFD modeling of Indiana Harbor 2 Steel Producing 2 and 3 Slab Casters

YAVUZ M. M. , Besich R.

AISTech, St. Louis, United States Of America, 4 - 07 May 2009, vol.1, pp.1163-1170

XXXII. Quantitative Imaging of Flow Structure Interactions Origin of Unsteady Loading and Vibration

Rockwell D., Elkhoury M., Saelim N., Sever Ç., Yang Y., YAVUZ M. M.

8th International Conference on Flow-Induced Vibration, 3 - 05 August 2004, vol.2, pp.457-462

Supported Projects

YAVUZ M. M. , ÇELİK A., Project Supported by Higher Education Institutions, Doğadan Esinlenerek Değiştirilmiş Düşük Süpürme Açılı Delta Kanatlarda Akış Yapısının Pasif Akıtma Tekniği ile Kontrolü, 2016 - Continues

YOZGATLIGİL A., ABUAIŞEH M. B. A. M. , YAVUZ M. M. , Project Supported by Higher Education Institutions, Farklı Tünel Yangın Senaryoları İçin Rüzgar Tüneli Geliştirme Çalışması, 2018 - 2019

YAVUZ M. M. , Project Supported by Other Private Institutions, Tarımsal Traktörlerde Fan, Radyatör ve Diğer Elemanları İçeren Motor Soğutma Sistemi Performansının Optimizasyonu Ar-Ge Projesi, 2016 - 2017

YAVUZ M. M. , Project Supported by Other Private Institutions, Bina Rüzgar Analizleri için yapılan Rüzgar Tüneli nin Sınır Tabaka Koşullarının Analizi, 2015 - 2015

AKSEL M. H. , YAVUZ M. M. , DEMİRCAN E., Project Supported by Higher Education Institutions, Değişik Kanat Profillerinin Darrieus tipi Su Türbinlerinin Performansına Etkisinin Deneysel Olarak İncelenmesi, 2013 - 2015

YAVUZ M. M. , TUBITAK Project, Düşük Süpürme Açısına Sahip Delta Kanadın Akış Yapısının Aktif Akış Kontrol Tekniği ile Düzenlenmesi, 2012 - 2015

YAVUZ M. M. , Project Supported by Higher Education Institutions, Sürekli Döküm Makinelerindeki Sıvı Çelik Akışının Sayısal Hesaplamalı Akışkanlar Dinamiği Yöntemiyle Modellenmesi, 2012 - 2014

YAVUZ M. M. , Project Supported by Higher Education Institutions, Düşük Süpürme Açısına Sahip Delta Kanatların Akış Yapılarının Deneysel Tekniklerle İncelenmesi., 2012 - 2014

Scientific Refereeing

AEROSPACE SCIENCE AND TECHNOLOGY, Journal Indexed in SCI-E, October 2018

Engineering Applications Of Computational Fluid Mechanics, Journal Indexed in SCI-E, September 2018

AEROSPACE SCIENCE AND TECHNOLOGY, Journal Indexed in SCI-E, June 2018

Citations

Total Citations (WOS):114

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