# Prof. ALTAN KAYRAN

## Personal Information

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**International Researcher IDs**
ScholarID: 38vrOsoAAAAJ
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Publons / Web Of Science ResearcherID: ABA-1358-2020
ScopusID: 7003421551
Yoksis Researcher ID: 3233

## Education Information

Doctorate, University of Delaware, Makina Mühendisliği - Katmanlı Kompozit Kabuk Yapılarının Serbest Titreşimi, United States Of America 1985 - 1990

## Foreign Languages

English, C1 Advanced

## Dissertations

Postgraduate, A Preliminary Sizing Tool for Minimum Weight Aircraft Wingbox Structural Design, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018
Postgraduate, The Effect of Structural Layout on the Supersonic Flutter Characteristics of a Fighter Wing, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018
Postgraduate, Design and Analysis of Fixed Crushable Column Type Energy Absorbing Mechanism for a Helicopter Seat,, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018
Postgraduate, Coupling of a Multi-Body Simulation Tool for the Analysis of Rotary Systems with a Panel Based Flow Solver and a Navier-Stokes Flow Solver, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018
Postgraduate, Reduced Order Modeling of Helicopter Substructures for Dynamic Analysis, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018
Doctorate, Aeroelastic Analysis of Composite Wings and Wind Turbine Blades Including Geometrical Nonlinearity and Compressibility, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018

## Research Areas

Aeronautical and Space Engineering, Engineering and Technology

## Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2011 - Continues
Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2006 - 2011
Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2003 - 2006
Assistant Professor, Bogazici University, Faculty Of Engineering, Department Of Mechanıcal Engıneerıng, 1996 - 1997

## Academic and Administrative Experience

Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2017 - Continues
Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2020 - 2022
Rektörlük Akademik Teşvik Değerlendirme Komisyonu Üyesi, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2019 - 2020
Assistant Manager of Research and Application Center, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2017 - 2020
Bölüm Akademik Teşvik Değerlendirme Komisyonu Üyesi, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2018 - 2018

## Advising Theses

KAYRAN A., Optimization of variable stiffness curved composite panels utilizing nurbs reference paths, Postgraduate, K.ÇİMEN(Student), 2022
Şahin M., Kayran A., Nonlinear aeroservoelastic modelling and analysis of aircraft with control surface freeplay, Postgraduate, U.YURTSEVER(Student), 2022
KAYRAN A., Static and dynamic aeroelastic analysis of a very light aircraft, Postgraduate, H.GÜL(Student), 2021
Kayran A., Flutter analysis of fixed and rotary wings, Postgraduate, O.ÇİÇEK(Student), 2019
Kayran A., Vibration fatigue analysis and testing of notched beams, Postgraduate, G.İSMAİL(Student), 2019
Kayran A., Multibody simulation of helicopter rotor with structural flexibility, Postgraduate, B.İHSAN(Student), 2019
Kayran A., Development of a regression model for the fatigue life assessment of open-hole specimens with double through the thickness cracks, Postgraduate, S.SOHRAB(Student), 2019
Kayran A., Structural optimization of composite and aluminum horizontal tail plane of a helicopter, Postgraduate, B.ARPACIOĞLU(Student), 2019
Kayran A., Aeroelastic modeling and analysis of high aspect ratio wings with different fidelity structural models, Postgraduate, G.ÇİÇEK(Student), 2019
KAYRAN A., Design and analysis of fixed load crushable column type energy absorbing mechanism for a helicopter seat, Postgraduate, G.ÖZTÜRK(Student), 2018
KAYRAN A., Development of artificial neural network based design tool for aircraft engine bolted flange connection subject to combined axial and moment load, Postgraduate, T.VOLKAN(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, Postgraduate, S.SOĞANCI(Student), 2018
KAYRAN A., Comparative study of finite element analysis and geometrically exact beam analysis of a composite helicopter blade, Postgraduate, M.NİSA(Student), 2018
KAYRAN A., Post-buckling behaviour of metallic skin-stringer assemblies and buckling of composite flat panels, Postgraduate, E.AYDIN(Student), 2018
KAYRAN A., A preliminary sizing tool for minimum weight aircraft wingbox structural design, Postgraduate, M.MERT(Student), 2018

KAYRAN A., Reduced order modeling of helicopter substructures for dynamic analysis, Postgraduate, U.HAYIRLI(Student), 2018

KAYRAN A., The effect of structural layout on the supersonic flutter characteristics of a fighter wing, Postgraduate, B.OKUMUŞ(Student), 2018

KAYRAN A., Aeroelastic analysis of composite wings and wind turbine blades including geometrical nonlinearity and compressibility, Doctorate, T.FARSADI(Student), 2018

KAYRAN A., Aeroelastic analysis of composite wings and wind turbine blades including geometrical nonlinearity and compressibilty, Doctorate, T.Farsadi(Student), 2018

KAYRAN A., Structural optimization of composite helicopter rotor blades, Postgraduate, A.AYBERK(Student), 2018

KAYRAN A., Nonlinear static aeroelastic behavior of composite missile fin with interlaminar and intralaminar damage, Postgraduate, Ö.Özkaya(Student), 2017

KAYRAN A., Determination of the bending twisting coupling potential of composite materials via digital image correlation and its implementation in wind turbine blades, Postgraduate, Ö.ŞENER(Student), 2017

KAYRAN A., Nonlinear static aeroelastic behaviour of composite missile fins with interlaminar and intralaminar damage, Postgraduate, Z.ÖZGE(Student), 2017

KAYRAN A., The effect of blade torsional elasticity on helicopter flight dynamics, Postgraduate, E.AKEL(Student), 2017

KAYRAN A., Material characterization at high strain rates using modified taylor impact test and velocity interferometry, Postgraduate, L.KESEMEN(Student), 2016

KAYRAN A., Damage analysis and assessment in bridge like structures due to high explosive blast load, Postgraduate, Ö.ERDOLU(Student), 2016

KAYRAN A., Aerodynamic and structural design and analysis of an electric powered mini UAV, Postgraduate, A.DEMİRCAN(Student), 2016

KAYRAN A., Progressive interlaminar failure analysis in composite missile structures, Postgraduate, B.BARTAN(Student), 2016

KAYRAN A., Comparison of experimental study and finite element analysis of bolted flange connections, Postgraduate, S.EMRE(Student), 2015

KAYRAN A., Development of bolted flange design tool based on finite element analysis and artificial neural network, Postgraduate, A.YILDIRIM(Student), 2015

KAYRAN A., VULNERABILITY ASSESSMENT AND SURVIVABILITY ANALYSIS OF AIRCRAFT, Doctorate, H.EMRAH(Student), 2015

KAYRAN A., Investigation of effects of bird strike on wing leading edge by using explicit finite element method, Postgraduate, O.DEDE(Student), 2015

KAYRAN A., Investigation of effects of bird strike problem on wing leading edge by using explicit finite element method, Postgraduate, O.Dede(Student), 2015

KAYRAN A., Load analysis of an aircraft using simplified aerodynamic and structural models, Postgraduate, E.ÜNAY(Student), 2015

KAYRAN A., Comparative study of transient and quasi-steady aeroelastic analysis of composite wind turbine blade in steady wind conditions, Postgraduate, H.SARGIN(Student), 2014

KAYRAN A., ERDAL ERDOĞMUŞ M., Evaluation of effective elastic properties of honeycomb sandwich structures by optimization involving modal behavior, Postgraduate, O.ÇINAR(Student), 2014

KAYRAN A., Investigation of the effect of bending twisting coupling on the loads in wind turbines with superelement blade definition, Postgraduate, M.OZAN(Student), 2014

KAYRAN A., Analysis and optimization of cylindrical structures manufactured by automated fiber placement technique, Postgraduate, S.GÜLDÜ(Student), 2014

KAYRAN A., Design optimization of whiffletree systems for wind turbine blade testing, Postgraduate, S.CEM(Student), 2014

KAYRAN A., Aeroservoelastic modeling of a missile control fin, Postgraduate, M.OZAN(Student), 2013

KAYRAN A., Aeroservoelastic modeling of a missile control, Postgraduate, M.Ozan(Student), 2013

KAYRAN A., Discrete fiber angle and continuous fiber path optimization in composite structures, Postgraduate, H.İnci(Student), 2012

KAYRAN A., Discrete fiber path angle and continuous fiber path optimization in composite structures, Postgraduate,

H.İNCİ(Student), 2012
KAYRAN A., Design optimization of truss structures using genetic algorithms, Postgraduate, D.ÜNALMIŞ(Student), 2012
KAYRAN A., GÜRBÜZ R., Determination of stress intensity factors in cracked panels reinforced with riveted stiffeners, Postgraduate, M.BURAK(Student), 2012
KAYRAN A., Flutter analysis and simulated flutter test of wings, Postgraduate, T.BİRTAN(Student), 2012
KAYRAN A., Linear and nonlinear progressive failure analysis of laminated composite aerospace structures, Postgraduate, M.GÜNEL(Student), 2012
KAYRAN A., Determination of prying load on bolted connections, Postgraduate, M.ATASOY(Student), 2012
KAYRAN A., ALEMDAROĞLU H. N., Structural and aeroelastic analyses of a composite tactical unmanned air vehicle, Postgraduate, S.ÖZÖZTÜRK(Student), 2011
KAYRAN A., Design, analysis and optimization of thin walled semi-monocoque wing structures using different structural idealizations in the preliminary design phase, Postgraduate, O.DABABNEH(Student), 2011
KAYRAN A., Development of a closely coupled approach for solution of static and dynamic aeroelastic problems, Postgraduate, E.BAŞKUT(Student), 2010
KAYRAN A., Investigation of the effect of semi-geodesic winding on the vibration characteristics of filament wound shells of revolution, Postgraduate, C.SERKAN(Student), 2010
KAYRAN A., Low velocity impact analysis of a composite mini unmanned air vehicle during belly landing, Postgraduate, S.YÜKSEL(Student), 2009
KAYRAN A., Structural optimization strategies via different optimization and solver codes and aerospace applications, Postgraduate, M.EKREN(Student), 2008
KAYRAN A., Electronic packaging and environmental test and analysis of an EMI shielded electronic unit for naval platform, Postgraduate, Y.DEVELLİOĞLU(Student), 2008
KAYRAN A., ALEMDAROĞLU H. N., Structural design, analysis and composite manufacturing applications for a tactical unmanned air vehicle, Postgraduate, S.SOYSAL(Student), 2008
KAYRAN A., Semi analytical study of stress and deformation analysis of anisotropic shells of revolution including first order transverse shear deformation, Postgraduate, Ö.SİNAN(Student), 2008
KAYRAN A., Development of Lagrangian Hydrocode High Speed Impact Analysis and Its Experimental Verification, Postgraduate, H.EMRAH(Student), 2008
KAYRAN A., Investigation of design and analyses principles of honeycomb structures, Postgraduate, İ.AYDINCAK(Student), 2007
KAYRAN A., Manufacturing and structural analysis of a lightweight sandwich composite UAV wing, Postgraduate, T.TURGUT(Student), 2007
KAYRAN A., Stacking sequence optimization of a composite pressure vessel by genetic algorithm, Postgraduate, H.KUTAY(Student), 2007
KAYRAN A., Development of a sabot design tool for aeroballistic range testing, Postgraduate, K.EFE(Student), 2006
KAYRAN A., Thermodynamic and structural design and analysis of a novel turbo rotary engine, Postgraduate, T.ERCAN(Student), 2005
KAYRAN A., Free vibration analysis of anisotropic laminated composite shells of revolution, Postgraduate, E.YAVUZBALKAN(Student), 2005
YAMAN Y., KAYRAN A., Structural analysis of airborne, stiffened, cylindrical external store, Postgraduate, C.TAŞ(Student), 2002

## Taught Courses And Trainings

Uzol O., Çöker D., Kayran A., Sezer Uzol N., Oğuz E., Huvaj Sarıhan N., Keysan O., Perçin M., Rüzgar Türbin Teknolojileri Temel Eğitimi , 2021 - 2021
Uzol O., Kayran A., Sezer Uzol N., Çöker D., Huvaj Sarıhan N., Oğuz E., Keysan O., Perçin M., Rüzgar Enerjisi ve Rüzgar Türbini Teknolojileri Temel Eğitimi, 2019 - 2019

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

I. **High Aspect Ratio Composite Wings: Geometrically Nonlinear Aeroelasticity, Multi-Disciplinary Design Optimization, Manufacturing, and Experimental Testing**
Farsadi T., Ahmadi M., ŞAHİN M., Haddad Khodaparast H., KAYRAN A., Friswell M. I.
Aerospace, vol.11, no.3, 2024 (SCI-Expanded)

II. **Development of a prediction model using fully connected neural networks in the analysis of composite structures under bird strike**
Hasilci Z., BOĞOÇLU M. E., DALKILIÇ A. S., KAYRAN A.
JOURNAL OF MECHANICAL SCIENCE AND TECHNOLOGY, vol.36, no.2, pp.709-722, 2022 (SCI-Expanded)

III. **Improvement of structural characteristics of composite thin-walled beams using variable stiffness concept via curvilinear fiber placement**
Farsadi T., Bozkurt M. O., ÇÖKER D., KAYRAN A.
Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, vol.235, no.14, pp.2017-2032, 2021 (SCI-Expanded)

IV. **Flutter Optimization of a Wing-Engine System with Passive and Active Control Approaches**
Asadi D., Farsadi T., KAYRAN A.
AIAA JOURNAL, vol.59, no.4, pp.1422-1440, 2021 (SCI-Expanded)

V. **Flutter study of flapwise bend-twist coupled composite wind turbine blades**
Farsadi T., KAYRAN A.
WIND AND STRUCTURES, vol.32, no.3, pp.267-281, 2021 (SCI-Expanded)

VI. **Classical flutter analysis of composite wind turbine blades including compressibility**
Farsadi T., KAYRAN A.
WIND ENERGY, vol.24, no.1, pp.69-91, 2021 (SCI-Expanded)

VII. **Reduced order nonlinear aeroelasticity of swept composite wings using compressible indicial unsteady aerodynamics**
Farsadi T., Rahmanian M., KAYRAN A.
JOURNAL OF FLUIDS AND STRUCTURES, vol.92, 2020 (SCI-Expanded)

VIII. **Development of Bolted Flange Design Tool Based on Artificial Neural Network**
Yildirim A., Akay A. A., Gülasik H., Çöker D., Gürses E., Kayran A.
Journal of Pressure Vessel Technology, Transactions of the ASME, vol.141, 2019 (SCI-Expanded)

IX. **Geometrically nonlinear aeroelastic behavior of pretwisted composite wings modeled as thin walled beams**
Farsadi T., Rahmanian M., KAYRAN A.
JOURNAL OF FLUIDS AND STRUCTURES, vol.83, pp.259-292, 2018 (SCI-Expanded)

X. **Evaluation of the Effect of Spar Cap Fiber Angle of Bending-Torsion Coupled Blades on the Aero-Structural Performance of Wind Turbines**
Şener Ö., Farsadi T., Gozc M. O., Kayran A.
Journal of Solar Energy Engineering, Transactions of the ASME, vol.140, 2018 (SCI-Expanded)

XI. **Aircraft vulnerability assessment against fragmentation warhead**
Konokman H. E., KAYRAN A., KAYA M.
AEROSPACE SCIENCE AND TECHNOLOGY, vol.67, pp.215-227, 2017 (SCI-Expanded)

XII. **Experimental and numerical study of process-induced total spring-in of corner-shaped composite parts**
Cicek K. F., Erdal Erdoğmuş M., Kayran A.
JOURNAL OF COMPOSITE MATERIALS, vol.51, pp.2347-2361, 2017 (SCI-Expanded)

XIII. **Accurate equivalent models of sandwich laminates with honeycomb core and composite face sheets via optimization involving modal behavior**
Cinar O., ERDAL ERDOĞMUŞ M., KAYRAN A.
JOURNAL OF SANDWICH STRUCTURES & MATERIALS, vol.19, no.2, pp.139-166, 2017 (SCI-Expanded)

XIV. **Two-stage fatigue life evaluation of an aircraft fuselage panel with a bulging circumferential crack**

**and a broken stringer**
Sayar B., KAYRAN A.
FATIGUE & FRACTURE OF ENGINEERING MATERIALS & STRUCTURES, vol.37, no.5, pp.494-507, 2014 (SCI-Expanded)

XV. **Non-linear progressive failure analysis of open-hole composite laminates under combined loading**
Gunel M., KAYRAN A.
JOURNAL OF SANDWICH STRUCTURES & MATERIALS, vol.15, no.3, pp.309-339, 2013 (SCI-Expanded)

XVI. **Effect of Semi-Geodesic Winding on the Vibration Characteristics of Filament Wound Shells of Revolution**
KAYRAN A., Ibrahimoglu C. S.
JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME, vol.78, no.6, 2011 (SCI-Expanded)

XVII. **Computational and experimental study of high-speed impact of metallic Taylor cylinders**
Konokman H. E., Coruh M. M., KAYRAN A.
ACTA MECHANICA, vol.220, pp.61-85, 2011 (SCI-Expanded)

XVIII. **Free-Vibration Analysis of Ring-Stiffened Branched Composite Shells of Revolution**
KAYRAN A., Yavuzbalkan E.
AIAA JOURNAL, vol.48, no.4, pp.749-762, 2010 (SCI-Expanded)

XIX. **An Approach for the Evaluation of Effective Elastic Properties of Honeycomb Cores by Finite Element Analysis of Sandwich Panels**
Aydincak I., KAYRAN A.
JOURNAL OF SANDWICH STRUCTURES & MATERIALS, vol.11, no.5, pp.385-408, 2009 (SCI-Expanded)

XX. **Semi-analytical study of free vibration characteristics of shear deformable filament wound anisotropic shells of revolution**
KAYRAN A., Yavuzbalkan E.
JOURNAL OF SOUND AND VIBRATION, vol.319, pp.260-281, 2009 (SCI-Expanded)

XXI. **Flight flutter testing and aeroelastic stability of aircraft**
Kayran A.
AIRCRAFT ENGINEERING AND AEROSPACE TECHNOLOGY, vol.79, no.2, pp.150-162, 2007 (SCI-Expanded)

XXII. **Flight flutter testing and aeroelastic stability of aircraft**
Kayran A.
AIRCRAFT ENGINEERING AND AEROSPACE TECHNOLOGY, vol.79, no.5, pp.494-506, 2007 (SCI-Expanded)

XXIII. **Kuessner's function in the sharp-edged gust problem - A correction**
Kayran A.
JOURNAL OF AIRCRAFT, vol.43, no.5, pp.1596-1599, 2006 (SCI-Expanded)

XXIV. **Kuessner's function in the sharp-edged gust problem - A correction**
Kayran A.
Journal Of Aircraft, vol.43, no.5, pp.1596-1599, 2006 (SCI-Expanded)

XXV. **Flutter qualification of transport aircraft with store suspension**
Kayran A.
AIRCRAFT ENGINEERING AND AEROSPACE TECHNOLOGY, vol.76, no.1, pp.19-28, 2004 (SCI-Expanded)

XXVI. **Effect of stacking sequence on free vibration frequencies of laminated composite circular cylindrical shells**
Kayran A., Anlas G.
JOURNAL OF VIBRATION AND CONTROL, vol.5, no.3, pp.355-372, 1999 (SCI-Expanded)

XXVII. **A method of strain and stress analysis for failure prediction in laminated composites**
Ardiç E., Bolcan C., Kayran A.
Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, vol.209, no.1, pp.43-51, 1995 (SCI-Expanded)

XXVIII. **A METHOD OF STRAIN AND STRESS-ANALYSIS OF COMPOSITES FOR NONLINEAR STRAIN DISTRIBUTION CASE**
ARDIC E., BOLCAN C., KAYRAN A.

INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.31, no.24, pp.3457-3473, 1994 (SCI-Expanded)

XXIX. **A METHOD FOR THE CALCULATION OF NATURAL FREQUENCIES OF ORTHOTROPIC AXISYMMETRICALLY LOADED SHELLS OF REVOLUTION**
KAYRAN A., VINSON J., ARDIC E.
JOURNAL OF VIBRATION AND ACOUSTICS-TRANSACTIONS OF THE ASME, vol.116, no.1, pp.16-25, 1994 (SCI-Expanded)

XXX. **THE EFFECT OF TRANSVERSE-SHEAR DEFORMATION ON THE NATURAL FREQUENCIES OF LAYERED COMPOSITE PARABOLOIDAL SHELLS**
KAYRAN A., VINSON J.
JOURNAL OF VIBRATION AND ACOUSTICS-TRANSACTIONS OF THE ASME, vol.112, no.4, pp.429-439, 1990 (SCI-Expanded)

XXXI. **TORSIONAL VIBRATIONS OF LAYERED COMPOSITE PARABOLOIDAL SHELLS**
KAYRAN A., VINSON J.
JOURNAL OF SOUND AND VIBRATION, vol.141, no.2, pp.231-244, 1990 (SCI-Expanded)

XXXII. **FREE-VIBRATION ANALYSIS OF LAMINATED COMPOSITE TRUNCATED CIRCULAR CONICAL SHELLS**
KAYRAN A., VINSON J.
AIAA JOURNAL, vol.28, no.7, pp.1259-1269, 1990 (SCI-Expanded)

## Articles Published in Other Journals

I. **Implementation of Dirlik's damage model for the vibration fatigue analysis**
Demirel G., Kayran A.
Procedia Structural Integrity, vol.21, pp.101-111, 2019 (Conference Book)

II. **Development of a regression model for the life assessment of open-hole specimens with double through cracks utilizing stress intensity factor calculations via XFEM**
Heıdarı S., Kayran A.
Procedia Structural Integrity, vol.21, pp.154-165, 2019 (Peer-Reviewed Journal)

III. **Load Reduction in Wind Turbines with Bend-Twist CoupledBlades without Power Loss at Underrated Wind Speeds**
Atalay O., Kayran A.
Journal of Physics: Conference Series, vol.1037, no.42015, pp.1-10, 2018 (Peer-Reviewed Journal)

IV. **Investigation of the effect of bending twisting coupling on the loads in wind turbines with superelement blade definition**
Gözcü M. O., Kayran A.
Journal of Physics: Conference Series, vol.524, no.12040, pp.1-10, 2014 (Peer-Reviewed Journal)

V. **Preliminary study on the applicability of semi-geodesic winding in the design and manufacturing of composite towers**
Kayran A., İbrahimoğlu C. S.
Journal of Physics: Conference Series, vol.555, no.12059, pp.1-12, 2014 (Peer-Reviewed Journal)

VI. **Comparison of transient and quasi-steady aeroelastic analysis of wind turbine blade in steady wind conditions**
Sargın H., Kayran A.
Journal of Physics: Conference Series, vol.524, no.12051, pp.1-11, 2014 (Peer-Reviewed Journal)

VII. **Investigation of the effect of bending twisting coupling on the load in wind turbines with superelement blade definition**
GÖZCÜ M. O., KAYRAN A.
Journal of Physics Conference Series, vol.524, no.12040, 2014 (Peer-Reviewed Journal)

VIII. **Design, analysis and optimization of thin walled semi-monocoque wing structures using different structural idealization in the preliminary design phase**
Dababneh O., KAYRAN A.

International Journal of Structural Integrity, vol.5, no.3, pp.214-226, 2014 (ESCI)

IX. **Assessment of effective elastic properties of honeycomb cores by finite element analysis of sandwich panels**
KAYRAN A., Aydincak I.
ICCM International Conferences on Composite Materials, 2009 (Scopus)

X. **Effect of anisotropy on the vibration characteristics of composite shells of revolution**
KAYRAN A., Yavuzbalkan E.
ICCM International Conferences on Composite Materials, 2007 (Scopus)

## Refereed Congress / Symposium Publications in Proceedings

I. **Improving the Load Carrying Capacity of Highly Tapered Laminates**
Ergin F., Kayran A.
ASME International Mechanical Engineering Congress & Exposition 2023, Louisiana, United States Of America, 29 October - 02 November 2023

II. **Implementation of Through the Thickness Compressive Stress on the Retardation of Delamination Initiation in Ply-Drop Off Regions**
Ergin F., Kayran A.
International Workshop on Plasticity, Damage and Fracture of Engineering Materials, İstanbul, Turkey, 4 - 06 October 2023

III. **Numerical Investigation of Delamination in Highly Tapered Laminates**
Ergin F., Kayran A.
Eccomass COMPOSITES 2023, Palermo, Italy, 12 - 14 September 2023

IV. **Investigation of the Effects of Varying Stagger Distances on Load Carrying Capacity of Tapered Laminates**
Ergin F., Kayran A.
Wind Energy Science Conference, Glasgow, England, 23 - 26 May 2023

V. **Boşta Hareket Davranışı İçeren Kontrol Yüzeylerine Sahip Bir Uçağın Doğrusal Olmayan Aeroservoelastik Modellenmesi ve Analizi**
Yurtsever U., Kayran A., Şahin M.
Otomatik Kontrol Ulusal Kongresi (TOK), Elazığ, Turkey, 15 - 18 September 2022, pp.1-7

VI. **INVESTIGATION OF LOAD CARRYING CAPACITIES OF HIGHLY TAPERED LAMINATES**
Ergin F., Kayran A.
Ulusal Havacılık ve Uzay Konferansı, İzmir, Turkey, 14 - 16 September 2022, pp.1-9

VII. **Aeroelastic Model Corrections of a Very Light Aircraft; Implications on Static Trim, Flutter and Gust Response**
Demirer G., Kayran A.
AIAA AVIATION 2022 Forum, Illinois, United States Of America, 27 June - 01 July 2022

VIII. **INVESTIGATION OF THE EFFECT OF LAMINATE STIFFNESS ON BEARING/BYPASS LOADS FOR BOLTED COMPOSITE JOINTS**
Candan K., KAYRAN A.
11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 08 September 2021, pp.1-19

IX. **DESIGN OPTIMIZATION OF VARIABLE STIFFNESS COMPOSITE LAMINATES USING SURROGATE MODELS FOR MINIMUM COMPLIANCE OF CURVED WING PANELS**
İNCİ H., KAYRAN A.
11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 08 September 2021, pp.1-20

X. **TENSILE TESTING OF REPAIRED COMPOSITE SPECIMENS WITH DIC MEASUREMENT AND FEM CORRELATION**
Ekren M., KAYRAN A.
11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 08 September 2021, pp.1-10

XI. **NURBS BASED OPTIMIZATION OF VARIABLE STIFNESS COMPOSITE STRUCTURES**
ÇİMEN K., KAYRAN A.
11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 08 September 2021, pp.1-16

XII. **Static and Dynamic Aeroelastic Analysis of a Very Light Aircraft**
Demirer H. G., Kayran A.
Ankara International Aerospace Conference, Ankara, Turkey, 8 - 10 September 2021, no.2021057, pp.1-14

XIII. **Homogenization of Unidirectional Composites with Brittle Fracture Modeled by the Phase-Field Approach**
Atasoy M., Kayran A., Göktepe S.
6th International Virtual Conference of Engineering Against Failure, Patras, Greece, 23 - 25 June 2021, no.115, pp.100

XIV. **AEROELASTIC MODELING AND ANALYSIS OF HIGH ASPECT RATIO WINGS WITH DIFFERENT FIDELITY STRUCTURAL MODELS**
Çiçek G., KAYRAN A.
ASME 2019 International Mechanical Engineering Congress and Exposition, 11 - 14 November 2019

XV. **COMPARATIVE STRUCTURAL OPTIMIZATION STUDY OF COMPOSITE AND ALUMINUM HORIZONTAL TAIL PLANE OF A HELICOPTER**
Arpacıoğlu B., KAYRAN A.
ASME 2019International Mechanical Engineering Congress and Exposition, 11 - 14 November 2019

XVI. **Multibody Simulation of Helicopter Rotor with Structural Flexibility**
Turan B. İ., KAYRAN A.
8th Asian/Australian Rotorcraf t Forum, 30 October - 02 November 2019

XVII. **AN INVESTIGATION ON DEVELOPMENT OF A PREDICTION MODEL FOR FATIGUE LIFE OF OPEN HOLE SPECIMENS WITH DOUBLE THROUGH THE THICKNESS CRACKS USING RESPONSE SURFACE METHODOLOGY**
Shabestari S. H., Kayran A.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 18 - 20 September 2019, no.2019046, pp.1-15

XVIII. **A COMPARISON STUDY ON STRENGTH ANALYSIS OF COMPOSITE REPAIR ADHESIVE ZONE BY ANALYTICAL METHODS AND ABAQUS COHESIVE ZONE MODELLING TECHNIQUES**
Ekren M., Kayran A.
10th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 18 - 20 September 2019, pp.1-10

XIX. **Experimental Assessment of Bend-Twist Coupling Potentials of Composite Materials via Digital Image Correlation Method**
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## Tasks In Event Organizations

Söken H. E., Tuncer I. H., Gürses E., Kayran A., Kahveci H. S., 11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Scientific Congress, Ankara, Turkey, Eylül 2021
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

## Metrics

Publication: 142
Citation (WoS): 179
Citation (Scopus): 378
H-Index (WoS): 7
H-Index (Scopus): 11

## Awards

Özturan B. İ., Kayran A., Rotorcraft design session best paper award, Asian/Australian Rotorcraft Forum, November 2019
Kayran A., Yavrucuk İ., Gürses E., Konukseven E. İ., Tekinalp O., Çoker D., Kurtuluş D. F., Aksel H., Schmidt Ş. E., Yaman Y.,

et al., ODTÜ-Tusaş Çok Hafif Uçak (Very Light Aircraft (VLA)) Tasarım ve Geliştirme, Yüksek Öğretim Kurumu, September 2019

## Non Academic Experience

Aselsan
Boğaziçi Üniversitesi/Makina Mühendisliği Bölümü
Tofaş
TAI- Tusaş Havacılık ve Uzay Sanayii, Ankara, Türkiye
TAI- Tusaş Havacılık ve Uzay Sanayii, Ankara, Türkiye