

Office Phone: [+90 312 210 4257](tel:+903122104257)

Email: gurses@metu.edu.tr

Web: <http://users.metu.edu.tr/gurses/>

International Researcher IDs

ScholarID: M_zYIVoAAAAJ

ORCID: 0000-0001-6030-4063

Publons / Web Of Science ResearcherID: Q-6077-2019

ScopusID: 15070322000

Yoksis Researcher ID: 156434

Education Information

- I. Doctorate, Universitaet Stuttgart, İnşaat Mühendisliği Fakültesi, Germany 2002 - 2007
- II. Postgraduate, Universitaet Stuttgart, Germany 2000 - 2002
- III. Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1994 - 1999

Foreign Languages

- I. English, C1 Advanced

Dissertations

- I. Doctorate, Aspects of Energy Minimization in Solid Mechanics: Evolution of Inelastic Microstructures and Crack Propagation, Universitaet Stuttgart, İnşaat Mühendisliği Fakültesi, 2007
- II. Postgraduate, Two-Scale Relaxation Analysis of Finite-Strain Single Slip Plasticity based on a First-Order Rank-One Convexification, Universitaet Stuttgart, 2002

Research Areas

Mechanics of Solid Bodies, Solid Mechanics, Fracture Mechanics, Finite Element Methods, Continuous Mechanics, Composites, Polymeric Materials, Nanomaterials

Academic Titles / Tasks

- I. Professor, Middle East Technical University, Faculty Of Engineering, Department Of Aerospace Engineering, 2024 - Continues
- II. Associate Professor, Middle East Technical University, Faculty Of Engineering, Department Of Aerospace Engineering, 2024 - 2024
- III. Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2011 - 2017
- IV. Researcher, King Abdullah University of Science and Technology, Faculty of Engineering, Mechanical Engineering,

2009 - 2011

- V. Researcher, California Institute of Technology, Mühendislik Fakültesi, Havacılık Mühendisliği, 2007 - 2009
- VI. Research Assistant, Universitaet Stuttgart, Mühendislik Fakültesi, İnşaat Mühendisliği, 2002 - 2007

Academic and Administrative Experience

- I. Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Aerospace Engineering, 2019 - 2021

Courses

- I. APPLICATION OF FINITE ELEMENT ANALYSIS IN AEROSPACE STRUCTURES, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014
- II. AEROSPACE STRUCTURES, Undergraduate, 2022 - 2023, 2021 - 2022, 2015 - 2016, 2014 - 2015
- III. CONSTITUTIVE MODELING OF ENGINEERING MATERIALS, Postgraduate, 2022 - 2023, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012
- IV. APPLIED ELASTICITY, Undergraduate, 2022 - 2023, 2019 - 2020, 2016 - 2017
- V. MECHANICAL VIBRATIONS, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020
- VI. DYNAMICS, Undergraduate, 2018 - 2019, 2011 - 2012
- VII. MECHANICS OF MATERIALS, Undergraduate, 2017 - 2018, 2013 - 2014, 2012 - 2013
- VIII. STATICS, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012
- IX. NUMERICAL METHODS, Undergraduate, 2015 - 2016

Advising Theses

- I. Şahin M., Gürses E., Evolutionary topology optimization of a folding missile wing for stiffness and frequency, Postgraduate, A.ÜRÜN(Student), 2023
- II. Gürses E., Numerical calculation of homogenized properties of piezoelectric composites, Postgraduate, M.KURT(Student), 2022
- III. Şahin M., Gürses E., Mechanical characterization of additively manufactured Ti-6Al-4V aircraft structural components produced by electron beam melting, Doctorate, F.YILMAZ(Student), 2022
- IV. Gürses E., Determination of elastic properties of polymer nanocomposites using embedded element method, Postgraduate, A.ELİF(Student), 2022
- V. GÜRSES E., A two-level homogenization method for polymer nanocomposites with coated inclusions, Postgraduate, D.GÜZEL(Student), 2021
- VI. GÜRSES E., Artificial neural network based tool for buckling loads of integrally stiffened aircraft structural panels, Postgraduate, S.GÜZEL(Student), 2021
- VII. Göktepe S., Gürses E., Micromechanical modeling of semicrystalline polymers with spherulite morphology, Doctorate, H.Emre(Student), 2020
- VIII. Gürses E., Modeling oxidation and plasticity induced damage in thermal barrier coatings (TBCS), Doctorate, F.SAİT(Student), 2020
- IX. Gürses E., Development of a structural design methodology for filament winding composite rocket motor case, Postgraduate, Y.ERTURAN(Student), 2019
- X. Gürses E., Finite element modelling of tbc failure mechanisms by using extended finite element method and cohesive zone method, Postgraduate, S.MESUT(Student), 2019
- XI. Gürses E., Experimental and numerical investigation of ballistic impact behaviour of high strength aluminium plates,

- Postgraduate, G.BAŞARAN(Student), 2019
- XII. Gürses E., Development of an equivalent model of aluminum honeycomb sandwich structures subjected to transverse loads, Postgraduate, O.YARDIMCI(Student), 2019
- XIII. Gürses E., Development of structural optimization and neural network design tool for buckling behaviour of skin stringer structures under combined compression and shear loading, Postgraduate, A.OKUL(Student), 2019
- XIV. GÜRSES E., A study on energy trapping parameters of a multistable elastic beam, Postgraduate, A.ZEMBİLÖREN(Student), 2018
- XV. GÜRSES E., Micromechanical modeling of carbon nanotube – polymer composites, Postgraduate, V.TAÇ(Student), 2018
- XVI. GÜRSES E., TOFFOLI H., Density functional theory and molecular dynamics simulations of carbon nanotubes, polyetheretherketone and their interfaces, Postgraduate, G.TORAMAN(Student), 2018
- XVII. GÜRSES E., A modulus gradient elasticity model for nano-reinforced composites, Doctorate, H.GÜLAŞIK(Student), 2018
- XVIII. GÜRSES E., Optimization of compliant parts of a hybrid trailing edge control surface of a morphing unmanned aerial vehicle, Postgraduate, P.ARSLAN(Student), 2017
- XIX. GÜRSES E., Development of an artificial neural network based analysis method for skin-stringer structures, Postgraduate, A.CANKUR(Student), 2017
- XX. GÜRSES E., Numerical simulation of non-energetic reactive armors, Postgraduate, M.CAN(Student), 2017
- XXI. GÜRSES E., ÇÖKER D., Experimental and numerical investigation of damage process in composite laminates under low -velocity impact, Postgraduate, Ö.TANAY(Student), 2016
- XXII. GÜRSES E., Finite element analysis and experimental study of dovetail attachments, Postgraduate, A.ARDA(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Adaptive-Quadratic-Neural-Network-Based Multifidelity Modeling Approach for Buckling of Stiffened Panels**
Yasar H. A., GÜRSES E.
AIAA JOURNAL, vol.62, no.11, pp.4207-4220, 2024 (SCI-Expanded)
- II. **A non-iterative boundary element formulation for nonlinear viscoelasticity**
Akay A. A., Gürses E., Göktepe S.
Engineering Analysis with Boundary Elements, vol.163, pp.223-236, 2024 (SCI-Expanded)
- III. **High-fidelity simulations of low-velocity impact induced matrix cracking and dynamic delamination progression in CFRP beams**
Batmaz O. A., Bozkurt M. O., GÜRSES E., ÇÖKER D.
Composites Part A: Applied Science and Manufacturing, vol.177, 2024 (SCI-Expanded)
- IV. **Determination of the elastoplastic properties of Ti-6Al-4V alloy manufactured by electron beam melting**
Yılmaz F., Gürses E., Şahin M.
Rapid Prototyping Journal, vol.29, no.10, pp.2149-2163, 2023 (SCI-Expanded)
- V. **A new time-domain boundary element formulation for generalized models of viscoelasticity**
Akay A. A., Gürses E., Göktepe S.
ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS, vol.150, pp.30-43, 2023 (SCI-Expanded)
- VI. **The Effect of Apical Vertebra Position on Growing Rod Treatment: A Clinical and Finite Element Study**
DURSUN G., Cetik R. M., GÜZEL D., DEMİRKIRAN H. G., Ramazanov R., Dede O., GÜRSES E., Yazici M.
Journal of Pediatric Orthopaedics, vol.42, 2022 (SCI-Expanded)
- VII. **Polymer interfaces with carbon nanostructures: First principles density functional theory and molecular dynamics study of polyetheretherketone adsorption on graphene and nanotubes**

Toraman G., Sert E., Gulasik H., Toffoli D., TOFFOLI H., GÜRSES E.
COMPUTATIONAL MATERIALS SCIENCE, vol.191, 2021 (SCI-Expanded)

- VIII. **Development of a procedure to model the mechanical behavior of composites with embedded element method by considering the matrix non-linearity**
ŞIK A., GÜRSES E., SABUNCUOĞLU B.
COMPOSITE STRUCTURES, vol.259, 2021 (SCI-Expanded)
- IX. **Modeling and simulation of coupled phase transformation and stress evolution in thermal barrier coatings**
Sait F., Gürses E., Aslan O.
INTERNATIONAL JOURNAL OF PLASTICITY, vol.134, 2020 (SCI-Expanded)
- X. **Micromechanical modelling of carbon nanotube reinforced composite materials with a functionally graded interphase**
Taç V., Gürses E.
Journal of Composite Materials, vol.53, pp.4337-4348, 2019 (SCI-Expanded)
- XI. **A modulus gradient model for inhomogeneous materials with isotropic linear elastic constituents**
Gülaşık H., Göktepe S., Gürses E.
European Journal of Mechanics, A/Solids, vol.78, 2019 (SCI-Expanded)
- XII. **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)
- XIII. **A modulus gradient model for an axially loaded inhomogeneous elastic rod**
Gulasuk H., Göktepe S., Gürses E.
MECCANICA, vol.53, pp.2573-2584, 2018 (SCI-Expanded)
- XIV. **Structural and aerodynamic analyses of a hybrid trailing edge control surface of a fully morphing wing**
Gürses E., Tunçöz I. O., Yang Y., Arslan P., Kalkan U., Tıraş H., Şahin M., Özgen S., Yaman Y.
JOURNAL OF INTELLIGENT MATERIAL SYSTEMS AND STRUCTURES, vol.28, pp.979-991, 2017 (SCI-Expanded)
- XV. **Experimental and computational study of the damage process in CFRP composite beams under low-velocity impact**
Topac O. T., Gözlüklü B., Gürses E., Çöker D.
COMPOSITES PART A-APPLIED SCIENCE AND MANUFACTURING, vol.92, pp.167-182, 2017 (SCI-Expanded)
- XVI. **Modeling of spherulite microstructures in semicrystalline polymers**
Oktay H. E., Gürses E.
MECHANICS OF MATERIALS, vol.90, pp.83-101, 2015 (SCI-Expanded)
- XVII. **Constitutive modeling of stress-driven grain growth in nanocrystalline metals**
GÜRSES E., Wafai H., El Sayed T.
MODELLING AND SIMULATION IN MATERIALS SCIENCE AND ENGINEERING, vol.21, no.2, 2013 (SCI-Expanded)
- XVIII. **A phenomenological two-phase constitutive model for porous shape memory alloys**
EL SAYED T., GÜRSES E., SIDDIQ A.
COMPUTATIONAL MATERIALS SCIENCE, vol.60, pp.44-52, 2012 (SCI-Expanded)
- XIX. **A constitutive model of nanocrystalline metals based on competing grain boundary and grain interior deformation mechanisms**
Gürses E., El Sayed T.
MATERIALS LETTERS, vol.65, pp.3391-3395, 2011 (SCI-Expanded)
- XX. **On evolving deformation microstructures in non-convex partially damaged solids**
GÜRSES E., MIEHE C.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.59, no.6, pp.1268-1290, 2011 (SCI-Expanded)
- XXI. **Constitutive modeling of strain rate effects in nanocrystalline and ultrafine grained polycrystals**
Gürses E., Tamer E. S.
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.48, no.10, pp.1610-1616, 2011 (SCI-Expanded)
- XXII. **A variational multiscale constitutive model for nanocrystalline materials**

- GÜRSES E., EL SAYED T.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.59, no.3, pp.732-749, 2011 (SCI-Expanded)
- XXIII. **On tension-compression asymmetry in ultrafine-grained and nanocrystalline metals**
GÜRSES E., Tamer E. S.
COMPUTATIONAL MATERIALS SCIENCE, vol.50, no.2, pp.639-644, 2010 (SCI-Expanded)
- XXIV. **Shock-induced subgrain microstructures as possible homogenous sources of hot spots and initiation sites in energetic polycrystals**
RIMOLI J., GÜRSES E., ORTIZ M.
PHYSICAL REVIEW B, vol.81, no.1, 2010 (SCI-Expanded)
- XXV. **A computational framework of three-dimensional configurational-force-driven brittle crack propagation**
GÜRSES E., MIEHE C.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.198, pp.1413-1428, 2009 (SCI-Expanded)
- XXVI. **A robust algorithm for configurational-force-driven brittle crack propagation with R-adaptive mesh alignment**
MIEHE C., GÜRSES E.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, vol.72, no.2, pp.127-155, 2007 (SCI-Expanded)
- XXVII. **A computational framework of configurational-force-driven brittle fracture based on incremental energy minimization**
Miehe C., Gürses E., Birkle M.
INTERNATIONAL JOURNAL OF FRACTURE, vol.145, no.4, pp.245-259, 2007 (SCI-Expanded)
- XXVIII. **Analysis of material instabilities in inelastic solids by incremental energy minimization and relaxation methods: evolving deformation microstructures in finite plasticity**
MIEHE C., LAMBRECHT M., GÜRSES E.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.52, no.12, pp.2725-2769, 2004 (SCI-Expanded)

Articles Published in Other Journals

- I. **Growth-induced instabilities for transversely isotropic hyperelastic materials**
Altun C., Gürses E., Dal H.
Mechanics of Soft Materials, vol.5, no.7, pp.1-22, 2023 (Peer-Reviewed Journal)
- II. **A Two-Level Homogenization Approach for Polymer Nanocomposites with Coated Inclusions**
GÜZEL D., GÜRSES E.
Procedia Structural Integrity, vol.35, pp.34-41, 2022 (Peer-Reviewed Journal)
- III. **Weight reduction of an unmanned aerial vehicle pylon fitting by topology optimization and additive manufacturing with electron beam melting**
Gürses E.
Journal of Additive Manufacturing Technologies, vol.1, no.2, pp.1-5, 2021 (Peer-Reviewed Journal)
- IV. **Decamber Morphing Concepts by Using a Hybrid Trailing Edge Control Surface**
Yaman Y., Tuncoz I. O., Yang Y., Arslan P., Kalkan U., Tiras H., Gürses E., Şahin M., Özgen S.
AEROSPACE, vol.2, pp.482-504, 2015 (ESCI)

Books & Book Chapters

- I. **Modeling of a Three-Dimensional Spherulite Microstructure in Semicrystalline Polymers**
Oktay H. E., Gürses E.
in: Numerical Mathematics and Advanced Applications, M. Manguoğlu, M. Tezer-Sezgin, S. Göktepe, Ö. Uğur, Editor,

Springer, London/Berlin , Berlin, pp.567-574, 2016

II. Experimental and Computational Investigation of Out-of-Plane Low Velocity Impact Behavior of CFRP Composite Plates

Topac T., Tasdemir B., Gozluklu B., GÜRSES E., ÇÖKER D.

in: Fracture Fatigue Failure and Damage Evolution Volume 8, Allison M. Beese, Alan T. Zehnder, Shuman Xia, Editor, Springer, pp.9-16, 2016

III. Analytical and Numerical Methods for Finite Strain Elastoplasticity

GÜRSES E., MAINIK A., MIEHE C., MIELKE A.

in: Multifield problems in Fluid and Solid Mechanics, Helmig, R., Mielke, A., Wohlmuth, B., Editor, Springer, pp.491-529, 2006

Refereed Congress / Symposium Publications in Proceedings

I. Formulation of a Bilinear Traction-Separation Interface Law in Boundary Elements with Homogenization

AKAY A. A., GÖKTEPE S., GÜRSES E.

3rd International Workshop on Plasticity, Damage and Fracture of Engineering Materials, IWPDF 2023, İstanbul, Turkey, 4 - 06 October 2023, vol.61, pp.138-147

II. Modeling of coupled behavior and microcracking of multifunctional composite structures for energy storage

Uyar İ., GÜRSES E.

3rd International Workshop on Plasticity, Damage and Fracture of Engineering Materials, IWPDF 2023, İstanbul, Turkey, 4 - 06 October 2023, vol.61, pp.195-205

III. Numerical simulations of low-velocity impact experiments on cross-ply CFRP beams using a heuristic boundary conditions approach with spring elements

BATMAZ O. A., Bozkurt M. O., GÜRSES E., ÇÖKER D.

3rd International Workshop on Plasticity, Damage and Fracture of Engineering Materials, IWPDF 2023, İstanbul, Turkey, 4 - 06 October 2023, vol.61, pp.305-314

IV. Homogenization of Nanocomposites with Agglomerating Nano-Inclusions using Embedded Element Method

Demirtaş A., Gürses E.

12th Ankara International Aerospace Conference, Ankara, Turkey, 13 - 15 September 2023, pp.1-9

V. Determination of Elastic Constants of Hybrid Composites by a Two-Step Computational Homogenization Approach

Batır M., Gürses E.

12th Ankara International Aerospace Conference, 13 - 15 September 2023, pp.1-9

VI. Defect Sensitivity Study on 3-D Printed Auxetic Tubular Structures

Karaca I. S., Gürses E.

12th Ankara International Aerospace Conference, 13 - 15 September 2023, pp.1-14

VII. KATLANABİLİR FÜZE KANADININ DİRENGENLİK KİSTASINA GÖRE YAPISAL ENİYİLEMESİ

Ürün A., Şahin M., Gürses E.

9. ULUSAL HAVACILIK VE UZAY KONFERANSI (UHUK), İzmir, Turkey, 14 - 16 September 2022, pp.1-13

VIII. PİEZOELEKTRİK FİBERLİ KOMPOZİTLERİN ETKİN ÖZELLİKLERİNİN DEĞERLENDİRİLMESİ

Kurt M., Gürses E.

9. ULUSAL HAVACILIK VE UZAY KONFERANSI (UHUK), İzmir, Turkey, 14 - 16 September 2022, pp.1-14

IX. TOPOLOJİ OPTİMİZASYONU VE EKLEMELİ İMALAT İLE HAFİFLETİLEN BİR İNSANSIZ HAVA ARACI PİLON BAĞLANTI PARÇASININ KALİFİKASYONU

Yılmaz F., Gürses E., Şahin M.

10. Savunma Teknolojileri Kongresi (SAVTEK), Ankara, Turkey, 13 - 15 September 2022, pp.1067-1080

- X. **A Two-Level Homogenization Method for Coated Inclusion Problem in Elasticity**
Güzel D., Gürses E.
11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Ankara, Turkey, 08 September 2021
- XI. **Determination of the 1st buckling and collapse loads for integrally stiffened panels by artificial neural network and design of experiment methodology**
Güzel Ş. G., Gürses E.
10th EASN International Conference on Innovation in Aviation and Space to the Satisfaction of the European Citizens, EASN 2020, Virtual, Online, 2 - 04 September 2020, vol.1024
- XII. **Arafazlı, Heterojen Mikroyapının Çok Seviyeli Homojenleştirme Yaklaşımı ile Modellenmesi**
Güzel D., Gürses E.
VIII. Ulusal Havacılık ve Uzay Konferansı (UHUK), Ankara, Turkey, 9 - 11 September 2020, pp.1-12
- XIII. **Nanokompozit Malzemelerin Elastik Özelliklerinin Gömülü Eleman Yöntemi ile Hesaplanması**
Altay A. E., Gürses E.
VIII. Ulusal Havacılık ve Uzay Konferansı (UHUK), Ankara, Turkey, 9 - 11 September 2020, pp.1-7
- XIV. **Development of a modeling strategy to improve the embedded element method in composites modeling in case of matrix nonlinearity**
ŞIK A., GÜRSES E., SABUNCUOĞLU B.
Fibremod Conference, Leuven, Belgium, 9 - 12 December 2019
- XV. **Structural Analysis and Design on Composite Rocket Motor Case**
Erturan Y., Gürses E.
10th Ankara International Aerospace Conference, Ankara, Turkey, 18 - 20 September 2019
- XVI. **A micromechanically based multi-scale model for semi-crystalline polymers**
Oktay H. E., Gürses E., Göktepe S.
Beyond 2019, Ankara, Turkey, 9 - 11 September 2019, pp.51
- XVII. **ÇOK FAZLI MALZEMELERİN DÜZLEMSEL ARAYÜZLERLE HOMOJENLEŞTİRİLMESİ: KİNEMATİK UYUMLU YAKLAŞIM**
Oktay H. E., GÜRSES E., GÖKTEPE S.
21. Ulusal Mekanik Kongresi, Turkey, 2 - 06 September 2019
- XVIII. **High Velocity Impact Response of High Strength Aluminum Using LS DYNA**
BAŞARAN G., ÖZBAYRMOĞLU E., BÜTÜN O., ÖNEY E., GÜRSES E.
12th European LS DYNA Conference, Austria, 14 - 16 May 2019
- XIX. **Finite Element Modelling of TBC Failure Mechanisms by Using XFEM and CZM**
Bostancı S. M., GÜRSES E., ÇÖKER D.
1st International Workshop on Plasticity, Damage and Fracture of Engineering Materials (IWPDF), Ankara, Turkey, 22 - 23 August 2019, vol.21, pp.91-100
- XX. **Development of Structural Neural Network Design Tool for Buckling Behaviour of Skin-Stringer Structures Under Combined Compression and Shear Loading**
Okul A., Gürses E.
ASME 2018 International Mechanical Engineering Congress Exposition, Pennsylvania, United States Of America, 9 - 15 November 2018
- XXI. **Micromechanical Characterization of Nanotube Reinforced Polymers**
Taç V., Gürses E.
1st International Conference on Advances in Mechanical and Mechatronics Engineering ICAMMEN 2018, Ankara, Turkey, 8 - 09 November 2018
- XXII. **A functionally graded multi-phase micromechanical model for carbon nanotube-polymer composites**
Taç V., Gürses E.
9th Multiscale Materials Modeling (MMM) Conference, Osaka, Japan, 28 October - 02 November 2018
- XXIII. **Micromechanical Modelling of Carbon Nanotube Reinforced Composite Materials with a Functionally Graded Interphase**
Gülaşık H., Göktepe S., Gürses E.
SES 2018, Madrid, Spain, 10 - 12 October 2018, pp.1

- XXIV. **Yüksek Hızda Mermi Çarpışma Durumunda Zırh Kombinasyonlarının Sayısal Olarak İncelenmesi**
Başaran G., Gürses E.
VII. Ulusal Havacılık ve Uzay Konferansı (UHUK), Samsun, Turkey, 12 - 14 September 2018
- XXV. **Finite element modelling of TBC failure mechanisms by using XFEM**
Bostancı S. M., Gürses E., Çöker D.
ASME 2018 International Mechanical Engineering Congress and Exposition, IMECE 2018, Pennsylvania, United States Of America, 9 - 15 November 2018, vol.1
- XXVI. **DEVELOPMENT OF ARTIFICIAL NEURAL NETWORK BASED DESIGN TOOL FOR AIRCRAFT ENGINE BOLTED FLANGE CONNECTION SUBJECT TO COMBINED AXIAL AND MOMENT LOAD**
Sanli T. V., Gürses E., Çöker D., Kayran A.
ASME International Mechanical Engineering Congress and Exposition, Tama, Japan, 3 - 09 November 2017
- XXVII. **EXPERIMENTAL STUDY AND FINITE ELEMENT ANALYSIS OF DOVETAIL ATTACHMENTS**
Akay A. A., Çöker D., Kayran A., Gürses E.
ASME International Mechanical Engineering Congress and Exposition, Tama, Japan, 3 - 09 November 2017
- XXVIII. **A comparative study of the polymer-nanotube interface through a reactive force field and density functional theory**
Toffoli H., Gürses E., Gülaşık H., Konuk M., Sert E., Toraman G.
International Symposium on Chemistry via Computation, Ankara, Turkey, 30 October 2017
- XXIX. **Development of an Artificial Neural Network Based Analysis Method for Skin-Stringer Structures**
Cankur A., Gürses E.
7th EASN International Conference on Innovation in European Aeronautics Research, Warszawa, Poland, 26 - 29 September 2017
- XXX. **Laminated Shell Modeling of Sandwich Beams with Ramp Region Under Four Point Bending Loading via Structural Optimization**
Yardımcı O., Gürses E.
7th EASN International Conference on Innovation in European Aeronautics Research, Warszawa, Poland, 26 - 29 September 2017
- XXXI. **Alternative Finite Element Based Modeling Approaches for Carbon Nanotubes**
KOCA O., GÜLAŞIK H., GÜRSES E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXII. **A Study on Energy Trapping Parameters of a Multistable Elastic Beam**
Zembilören A., Gürses E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXIII. **Optimization of Compliant Parts of a Trailing Edge Control Surface of a Morphing Wing**
Arslan P., Gürses E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXIV. **Equivalent Model of a Sandwich Beam With Ramp Region Under Four Point Bending via Genetic Algorithm**
YARDIMCI O., GÜRSES E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXV. **Molecular Dynamics Simulations of Carbon Nanotube Reinforced Polymer Composites**
Toraman G., Konuk M., Sert E., Toffoli H., Gülaşık H., Gürses E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXVI. **An Artificial Neural Network Based Analysis Method for Skin- Stringer Structures**
CANKUR A., GÜRSES E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXVII. **Implementation of the Submodelling Technique on the Dovetail Attachments”**
Akay A. A., Çöker D., Kayran A., Gürses E.
9th Ankara International Aerospace Conference, Ankara, Turkey, 20 - 22 September 2017
- XXXVIII. **Kirişle Güçlendirilmiş Kabuk Yapılar İçin Yapay Sinir Ağ Bazlı Analiz Yöntemi Geliştirilmesi**
CANKUR A., GÜRSES E.

- XX. Ulusal Mekanik Kongresi, Bursa, Turkey, 5 - 09 September 2017
- XXXIX. **Micromechanically Motivated Modeling of Semicrystalline Polymers**
Oktay H. E., Gürses E., Göktepe S.
XIV International Conference on Computational Plasticity COMPLAS, Barcelona, Spain, 5 - 07 September 2017
- XL. **Damage Progression and Delamination Speeds in CFRP Under Impact Loading**
BOZKURT M. O., TOPAÇ Ö. T., GÜRSES E., ÇÖKER D.
20th International Conference on Composite Structures ICCS 20, Paris, France, 4 - 07 September 2017
- XLI. **Multi-Scale Modelling of Carbon Nanotube Reinforced Polymer Composites**
Toraman G., Konuk M., Gülaşık H., Sert E., Toffoli H., Gürses E.
Materials Resistant to Extreme Conditions for Future Energy Systems, Kyiv, Ukraine, 12 - 14 June 2017
- XLII. **Numerical Study of High Velocity Impact Response of Vehicle Armor Combination Using LS DYNA**
Başaran G., GÜRSES E.
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- LIII. **Experimental and numerical investigation of damage interaction mechanism in composites under dynamic transverse loading**
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- LIV. **Failure Initiation and Progression in 0 90 CFRP Composite Beams Subject to Out of Plane Low velocity Impact**
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- LV. **Büyük Oranda Şekil Değiştirebilen Bir Hibrid Firar Kenarı Kontrol Yüzeyinin Tasarımı ve Analizleri**
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- LVIII. **PARAMETRIC STUDY FOR THE STUDY OF THE EFFECT OF CONTACT PARAMETERS FOR PLASTIC ANALYSIS OF BOLTED FLANGE CONNECTIONS**
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- LX. **3D Numerical Simulation of Nonenergetic Reactive Armor**
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- LXI. **Design and Analysis of an Unmanned Aerial Vehicle Hybrid Trailing Edge Control Surface Having Camber and Decamber Capabilities**
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- LXVIII. **Hibrit Bir Kontrol Yüzeyinin Hesaplamalı Akışkanlar Dinamiği Destekli Yapısal Analizi**
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- LXXVII. **Katmanlı Kompozitlerde Düşük Hızlı Darbe Davranış Analizi**
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- II. Gürses E., Sabuncuoğlu B., TUBITAK Project, Gömülü Eleman Yöntemi ile Doğrusal Olmayan Malzeme Davranışı Gösteren Kompozit Malzemelerin Mekanik Davranışının Modellenmesi, 2018 - 2020
- III. GÜRSES E., GÖKTEPE S., TUBITAK Project, Karbon Nanotüp İle Güçlendirilmiş Polimer Kompozitlerin Çok Ölçekli Modellenmesi, 2015 - 2018
- IV. GÜRSES E., Industrial Thesis Project, Flanş İleri Analiz Arayüzü ve Tasarım Programı Oluşturulması, 2014 - 2017
- V. Gürses E., Yaman Y., Şahin M., Özgen S., FP7 Project, CHANGE Combined morphing Assessment software using flight Envelope data and mission based morphing prototype wing development, 2012 - 2016
- VI. Gürses E., Aydıner C. C., TUBITAK Project, Sıkı Dizimli Hegzagonal Yapısal Metallerde Temel Deformasyon Fiziğinin Çok Ölçekli Tam Saha Gerinim Ölçümleriyle Yük Altında İncelenmesi, 2013 - 2015
- VII. Gürses E., Company, ŞİŞEN ZIRH ARA KATMAN MALZEMESİNİN ZIRH PERFORMANSI ÜZERİNE ETKİSİ VE ZIRH OPTİMİZASYONUNA YÖNELİK MALZEME İSTERLERİNİN OLUŞTURULMASI PROJESİ, 2013 - 2014
- VIII. GÜRSES E., TUBITAK Project, Ultra Yüksek Moleküler Ağırlıklı Polietilenin Çok Ölçekli Modellenmesi, 2012 - 2014

Tasks In Event Organizations

- I. Söken H. E., Tuncer I. H., Gürses E., Kayran A., Kahveci H. S., 11th ANKARA INTERNATIONAL AEROSPACE CONFERENCE, Scientific Congress, Ankara, Turkey, Eylül 2021
- II. Yalçınkaya T., Gürses E., 2nd International Workshop on Plasticity, Damage and Fracture of Engineering Materials,

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- III. 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
- IV. Yalçinkaya T., Dal H., Gürses E., 1st International Workshop on Plasticity, Damage and Fracture of Engineering Materials, Scientific Congress, Ankara, Turkey, Ağustos 2019

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Coaching Duties

Refereeing Duties

Non Academic Experience

- I. King Abdullah University of Science and Technology
- II. California Institute of Technology
- III. University of Stuttgart