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Kişisel Bilgiler

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Eğitim Bilgileri

Doktora, Loughborough University, Mechanical And Manufacturing Engineering, İngiltere 2009 - 2012

Yüksek Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Türkiye 2003 - 2006

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Türkiye 1995 - 2000

Yabancı Diller

İngilizce, B2 Orta Üstü

Yaptığı Tezler

Doktora, Development of Parametric Finite Element Modelling Methods for Nonwoven Materials Including Rate Dependent Material Behaviour, Loughborough University, Mechanical And Manufacturing Engineering, 2012

Yüksek Lisans, Fatigue crack growth analysis models for functionally graded materials, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2006

Araştırma Alanları

Makina Mühendisliği, Mekanik, Katı Cisimler Mekaniği, Kırılma Mekaniği, Sonlu Elemanlar Yöntemi, Metalurji ve Malzeme Mühendisliği, Malzeme Bilimi ve Mühendisliği, Kompozitler, Mühendislik ve Teknoloji

Akademik Unvanlar / Görevler

Dr.Öğr.Üyesi, Hacettepe Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2018 - Devam Ediyor

Yrd.Doç.Dr., Hacettepe Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2017 - 2018

Yrd.Doç.Dr., Türk Hava Kurumu Üniversitesi, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2015 - 2017

Araştırma Görevlisi, Katholieke Universiteit Leuven, Mühendislik Fakültesi, Malzeme Bilimi, 2012 - 2014

Araştırma Görevlisi, Loughborough University, Engineering, Mechanical And Manufacturing Engineering, 2010 - 2011

Akademik İdari Deneyim

Türk Hava Kurumu Üniversitesi, Mühendislik Fakültesi, Mekatronik Mühendisliği Bölümü, 2015 - 2016

Verdiği Dersler

STATICS, Lisans, 2016 - 2017

ENGINEERING MECHANICS, Lisans, 2016 - 2017

DYNAMICS, Lisans, 2016 - 2017

Yönetilen Tezler

SABUNCUOĞLU B., Meso-scale finite element modeling of microvascular channels in composites, Yüksek Lisans, A.ALI(Öğrenci), 2017

Jüri Üyelikleri

Tez Savunma (Yüksek Lisans), DEVELOPMENT OF AN ARTIFICIAL NEURAL NETWORK BASED, Tez savunma jürisi, ODTÜ,2017, Eylül, 2017

Tez Savunma (Yüksek Lisans), Structural and Mechanical Characterization of Hybrid Composite Materials, Yüksek lisans tez jürisi, Türk Hava Kurumu Üniversitesi, 2017, Mayıs, 2017

Tez Savunma (Yüksek Lisans), OPTIMIZATION OF COMPLIANT PARTS OF A HYBRID TRAILING EDGE, Yüksek lisans tez jürisi, Ocak, 2017

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Stress analysis of vascularized glass fiber composites exposed to bending loading**
Tanabi H., Atasoy A. G. , DEMİRAL M., SABUNCUOĞLU B.
ADVANCED COMPOSITE MATERIALS, 2021 (SCI İndekslerine Giren Dergi)
- II. **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, cilt.259, 2021 (SCI İndekslerine Giren Dergi)
- III. **Development of an artificial neural network using parametric correlation technique for the determination of machined torsional spring stiffness**
SABUNCUOĞLU B., Demirtas O.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, cilt.36, sa.1, ss.105-118, 2021 (SCI İndekslerine Giren Dergi)
- IV. **A brief review on the mechanical behavior of nonwoven fabrics**
YILMAZ K. B. , SABUNCUOĞLU B., YILDIRIM B., Silberschmidt V. V.
JOURNAL OF ENGINEERED FIBERS AND FABRICS, cilt.15, 2020 (SCI İndekslerine Giren Dergi)
- V. **Experimental and numerical investigation of transverse shear behavior of glass-fibre composites with embedded vascular channel**
Demiral M., Tanabi H., SABUNCUOĞLU B.
COMPOSITE STRUCTURES, cilt.252, 2020 (SCI İndekslerine Giren Dergi)
- VI. **Fiber/matrix interface stress analysis of flax-fiber composites under transverse loading considering material nonlinearity**
SABUNCUOĞLU B., Cakmakci O., KADIOĞLU F. S.
JOURNAL OF REINFORCED PLASTICS AND COMPOSITES, cilt.39, ss.345-360, 2020 (SCI İndekslerine Giren Dergi)
- VII. **Stress redistribution around fiber breaks in unidirectional steel fiber composites considering the nonlinear material behavior**
SABUNCUOĞLU B., MUTLU Ç., KADIOĞLU F. S. , Swolfs Y.
COMPOSITE STRUCTURES, cilt.239, 2020 (SCI İndekslerine Giren Dergi)
- VIII. **Mesh stiffness of micro-spur gears by finite element formulations based on modified couple stress**

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Pehlivanoglu Y., Aydogan M. O. , SABUNCUOĞLU B.

MICROSYSTEM TECHNOLOGIES-MICRO-AND NANOSYSTEMS-INFORMATION STORAGE AND PROCESSING SYSTEMS, 2020 (SCI İndekslerine Giren Dergi)

- IX. **Micro-scale numerical study of fiber/matrix debonding in steel fiber composites**
SABUNCUOĞLU B., Lomov S.
JOURNAL OF ENGINEERED FIBERS AND FABRICS, cilt.15, 2020 (SCI İndekslerine Giren Dergi)
- X. **Micro-CT analysis of deviations in fiber orientation and composite stiffness near the microvascular channels embedded in glass-fiber reinforced composites**
SABUNCUOĞLU B., Tanabi H., Soete J., Lomov S.
COMPOSITE STRUCTURES, cilt.237, 2020 (SCI İndekslerine Giren Dergi)
- XI. **Deformation and damage of random fibrous networks**
Sozumert E., Farukh F., SABUNCUOĞLU B., Demirci E., Acar M., Pourdeyhimi B., Silberschmidt V. V.
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, cilt.184, ss.233-247, 2020 (SCI İndekslerine Giren Dergi)
- XII. **Investigation of stress distributions in the resin rich region and failure behavior in glass fiber composites with microvascular channels under tensile loading**
Al-Shawk A., Tanabi H., Sabuncuoglu B.
COMPOSITE STRUCTURES, cilt.192, ss.101-114, 2018 (SCI İndekslerine Giren Dergi)
- XIII. **Analysis of stress concentrations in transversely loaded steel-fiber composites with nano-reinforced interphases**
Sabuncuoglu B., GORBATIKH L., Lomov S. V.
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, cilt.130, ss.248-257, 2018 (SCI İndekslerine Giren Dergi)
- XIV. **Evaluation of Fatigue Behavior of Lead-Free Solder Joints in Four-Point Bending Test by Finite-Element Modeling**
Sabuncuoglu B., VANHEE F., WILLEMS G., VANDEVELDE B., VANDEPITTE D.
IEEE TRANSACTIONS ON COMPONENTS PACKAGING AND MANUFACTURING TECHNOLOGY, cilt.7, sa.12, ss.1957-1964, 2017 (SCI İndekslerine Giren Dergi)
- XV. **Full-field strain measurements at the micro-scale in fiber-reinforced composites using digital image correlation**
Mehdikhani M., Aravand M., Sabuncuoglu B., Callens M. G. , Lomov S. V. , Gorbatikh L.
COMPOSITE STRUCTURES, cilt.140, ss.192-201, 2016 (SCI İndekslerine Giren Dergi)
- XVI. **Micro-scale finite element analysis of stress concentrations in steel fiber composites under transverse loading**
Sabuncuoglu B., Orlova S., Gorbatikh L., Lomov S. V. , Verpoest I.
JOURNAL OF COMPOSITE MATERIALS, cilt.49, sa.9, ss.1057-1069, 2015 (SCI İndekslerine Giren Dergi)
- XVII. **Mechanical analysis of bi-component-fibre nonwovens: Finite-element strategy**
Farukh F., Demirci E., Sabuncuoglu B., Acar M., Pourdeyhimi B., Silberschmidt V. V.
COMPOSITES PART B-ENGINEERING, cilt.68, ss.327-335, 2015 (SCI İndekslerine Giren Dergi)
- XVIII. **Mechanical behaviour of nonwovens: Analysis of effect of manufacturing parameters with parametric computational model**
Farukh F., Demirci E., Sabuncuoglu B., Acar M., Pourdeyhimi B., Silberschmidt V. V.
COMPUTATIONAL MATERIALS SCIENCE, cilt.94, ss.8-16, 2014 (SCI İndekslerine Giren Dergi)
- XIX. **On the high stress concentrations in steel fiber composites under transverse loading**
Sabuncuoglu B.
JOURNAL OF REINFORCED PLASTICS AND COMPOSITES, cilt.33, sa.21, ss.1941-1953, 2014 (SCI İndekslerine Giren Dergi)
- XX. **Numerical analysis of progressive damage in nonwoven fibrous networks under tension**
Farukh F., Demirci E., Sabuncuoglu B., Acar M., Pourdeyhimi B., Silberschmidt V. V.
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, cilt.51, sa.9, ss.1670-1685, 2014 (SCI İndekslerine Giren

Dergi)

- XXI. **Finite element modelling of fibrous networks: Analysis of strain distribution in fibres under tensile load**
Sabuncuoglu B., Acar M., Silberschmidt V. V.
COMPUTATIONAL MATERIALS SCIENCE, cilt.79, ss.143-158, 2013 (SCI İndekslerine Giren Dergi)
- XXII. **Parametric code for generation of finite-element model of nonwovens accounting for orientation distribution of fibres**
Sabuncuoglu B., Acar M., Silberschmidt V. V.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, cilt.94, sa.5, ss.441-453, 2013 (SCI İndekslerine Giren Dergi)
- XXIII. **Characterisation and numerical modelling of complex deformation behaviour in thermally bonded nonwovens**
Farukh F., Demirci E., Sabuncuoglu B., Acar M., Pourdeyhimi B., Silberschmidt V. V.
COMPUTATIONAL MATERIALS SCIENCE, cilt.71, ss.165-171, 2013 (SCI İndekslerine Giren Dergi)
- XXIV. **Analysis of rate-dependent tensile properties of polypropylene fibres used in thermally bonded nonwovens**
Sabuncuoglu B., Demirci E., Acar M., Silberschmidt V. V.
JOURNAL OF THE TEXTILE INSTITUTE, cilt.107, sa.9, ss.965-971, 2013 (SCI İndekslerine Giren Dergi)
- XXV. **Finite element modelling of thermally bonded nonwovens: Effect of manufacturing parameters on tensile stiffness**
Sabuncuoglu B., Acar M., Silberschmidt V. V.
COMPUTATIONAL MATERIALS SCIENCE, cilt.64, ss.192-197, 2012 (SCI İndekslerine Giren Dergi)
- XXVI. **Numerical modelling of damage initiation in low-density thermally bonded nonwovens**
Farukh F., Demirci E., Sabuncuoglu B., Acar M., Pourdeyhimi B., Silberschmidt V. V.
COMPUTATIONAL MATERIALS SCIENCE, cilt.64, ss.112-115, 2012 (SCI İndekslerine Giren Dergi)
- XXVII. **Three dimensional computational analysis of fatigue crack propagation in functionally graded materials**
Sabuncuoglu B., DAĞ S., YILDIRIM B.
COMPUTATIONAL MATERIALS SCIENCE, cilt.52, sa.1, ss.246-252, 2012 (SCI İndekslerine Giren Dergi)
- XXVIII. **A parametric finite element analysis method for low-density thermally bonded nonwovens**
Sabuncuoglu B., Acar M., Silberschmidt V. V.
COMPUTATIONAL MATERIALS SCIENCE, cilt.52, sa.1, ss.164-170, 2012 (SCI İndekslerine Giren Dergi)
- XXIX. **Analysis of Creep Behavior of Polypropylene Fibers**
SABUNCUOĞLU B., Svetlana O.
Applied Mechanics and Materials, cilt.70, ss.410-415, 2011 (SCI İndekslerine Giren Dergi)

Diğer Dergilerde Yayınlanan Makaleler

- I. **Sonlu elemanlar yöntemi ile yorulma çatlağı ilerlemesi simülasyonu**
SABUNCUOĞLU B., DAĞ S., YILDIRIM B.
Makina Tasarım ve İmalat, cilt.7, ss.87-95, 2005 (Diğer Kurumların Hakemli Dergileri)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Stress Concentrations in Composites with Microvascular Channels**
AL SHAWK A., TANABİ H., SABUNCUOĞLU B.
Procedia Structural Integrity, 25 - 26 Eylül 2017
- II. **Notches in fibrous materials: micro-mechanisms of deformation and damage**
Sozumert E., Farukh F., Sabuncuoglu B., Demirci E., Acar M., Pourdeyhimi B., Silberschmidt V. V.

27th International Conference on Mathematical and Computer Simulations in Mechanics of Solids and Structures - Fundamentals of Static and Dynamic Fracture (MCM), Saint Peter, Guernsey Ve Alderney, 25 - 27 Eylül 2017, cilt.6, ss.168-173

- III. **Digital image correlation and finite element analysis applied to fiber reinforced composites at the micro scale**
Mehdikhani M., Aravand M. A. , SABUNCUOĞLU B., Callens M. G. , Lomov S., Gorbatikh L.
20th International Conference on Composite Materials, Kopenhag, Danimarka, 19 - 24 Temmuz 2015
- IV. **The Effect of Nano-reinforced fiber matrix interface on stress in steel fiber composites**
SABUNCUOĞLU B., SÖKMEN Ö.
ECCM16 - 16TH EUROPEAN CONFERENCE ON COMPOSITE MATERIALS, Sevilla, İspanya, 22 - 26 Haziran 2014
- V. **Analysis of Stress Distributions in Steel Fibre Reinforced Composites in Micro Scale Including Large Deformations**
SABUNCUOĞLU B., Sökmen Ö.
IV ECCOMAS Thematic Conference on the Mechanical Response of Composites, Azorlar, Portekiz, 25 - 27 Eylül 2013
- VI. **Micro mechanical Analysis of Stresses in Steel Fibre Reinforced Composites**
SABUNCUOĞLU B., Sökmen Ö.
TEXCOMP-11 CONFERENCE, Leuven, Belçika, 16 Eylül 2013 - 20 Haziran 2014
- VII. **Micro scale computational analysis of the effect of matrix properties on the stress distribution of steel fiber composites**
SABUNCUOĞLU B., Sökmen Ö.
24th Annual International SICOMP Conference on Manufacturing and Design of Composites, 30 - 31 Mayıs 2013
- VIII. **Characterisation and Numerical Modelling of Deformation and Damage In Thermally Bonded Nonwovens**
SABUNCUOĞLU B., Acar M., Silberschmidt V.
22nd International Workshop on Computational Mechanics of Materials, Baltimore, Amerika Birleşik Devletleri, 24 - 26 Eylül 2012
- IX. **Finite element modeling of solder joint fatigue in four-point bending test**
Sabuncuoglu B., Vanhee F., Willems G., Vandeveldel B., Vandepitte D., De Wolf I.
2012 13th International Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems, EuroSimE 2012, Cascais, Portekiz, 16 - 18 Nisan 2012
- X. **Analysis of Creep Behavior of Polypropylene Fibers Edinburg**
SABUNCUOĞLU B., Acar M., Silberschmidt V.
International Conference on Advances in Experimental Mechanics: Integrating Simulation and Experimentation (ISEV2011), Edinburgh, İngiltere, 7 - 09 Eylül 2011
- XI. **Finite Element Modelling of Thermally Bonded Nonwoven Materials A Parametric Model with Orientation Based Distribution of Fibres**
SABUNCUOĞLU B., Acar M., Silberschmidt V.
21st International Workshop on Computational Mechanics of Materials, Limerick, İrlanda, 21 - 24 Ağustos 2011
- XII. **Analysis of Creep Behavior of Polypropylene Fibers**
Sabuncuoglu B., Acar M., Silberschmidt V. V.
8th International Conference on Advances in Experimental Mechanics: Integrating Simulation and Experimentation for Validation, Edinburgh, Saint Helena, 7 - 09 Eylül 2011, cilt.70, ss.410-415
- XIII. **Finite Element Analysis of Thermally Bonded Nonwovens Under Large Deformation A Discontinuous Model with a Large Number of Fibres**
SABUNCUOĞLU B., Acar M., Silberschmidt V.
20th International Workshop on Computational Mechanics of Materials, Loughborough, İngiltere, 8 - 10 Eylül 2010
- XIV. **Three Dimensional Fatigue Crack Growth Analysis of Functionally Graded Materials**
SABUNCUOĞLU B., Sökmen Ö.
20th International Workshop on Computational Mechanics of Materials, Loughborough, İngiltere, 8 - 10 Eylül 2010
- XV. **Fatigue crack growth analysis models for functionally graded materials**

DAĞ S., Sabuncuoğlu B., YILDIRIM B.

9th International Conference on Multiscale and Functionally Graded Materials, Hawaii, Amerika Birleşik Devletleri, 15 - 18 Ekim 2006, cilt.973, ss.423-424

XVI. Elliptical cracks in functionally graded materials under repeated loading

SABUNCUOĞLU B., Sökmen Ö.

The Third International Conference on Advances in Mechanical Engineering and Mechanics, Hammamet, Tunus, 17 - 19 Aralık 2006

XVII. A computational procedure for fatigue crack growth simulation in functionally graded composites

SABUNCUOĞLU B., Sökmen Ö.

12th International Conference on Machine Design and Production, Kuşadası, Türkiye, 5 - 08 Eylül 2006

XVIII. Patlayıcı depolama koşulları yapısal analizleri ve isil çevrim altında ömrünün belirlenmesi

SABUNCUOĞLU B., Sökmen Ö.

MSC Kullanıcı Kongresi 2006, İstanbul, Türkiye, 21 - 23 Haziran 2006

XIX. Fatigue Crack Growth Simulation Using ANSYS

SABUNCUOĞLU B., Sökmen Ö.

Bilgisayar Destekli Mühendislik ve Sistem Modellemesi, İstanbul, Türkiye, 25 Kasım 2005

XX. Fonksiyonel derecelendirilmiş malzemelede için yorulma çatlak ilerlemesi

SABUNCUOĞLU B., Sökmen Ö.

14. Ulusal Mekanik Kongresi, Antakya, Türkiye, 21 - 23 Eylül 2005

Desteklenen Projeler

SABUNCUOĞLU B., TÜBİTAK Projesi, Tek yönlü çelik fiberli kompozit malzemelerde transvers hasar davranışının sonlu eleman yöntemi ile mikro seviyede incelenmesi, 2015 - Devam Ediyor

SABUNCUOĞLU B., Yükseköğretim Kurumları Destekli Proje, Doğal elyafli kompozitlerde enine yüklemeye gerilme yığılmalarının incelenmesi, 2018 - 2019

Atıflar

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