

Mehmet A. Güler

CONTACT INFORMATION

Dept. of Mechanical Engineering
TOBB University of Economics and Technology
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Ankara, 06560 Turkey

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RESEARCH INTERESTS

Computational Mechanics, crashworthiness, contact mechanics, composite materials, peridynamics.

EDUCATION

Lehigh University, **Bethlehem, PA, US**

Ph.D. in Mechanical Engineering, January 2001

- Dissertation: "Contact Mechanics of FGM Coatings"
Advisor: Prof. Fazil Erdogan

Lehigh University, **Bethlehem, PA, US**

M.S., Mechanical Engineering, June 1996

- Thesis: "The Problem of a Rigid Punch with Friction on a Graded Elastic Medium"
Advisor: Prof. Fazil Erdogan

Sussex University, **Brighton, UK**

M.S., Computer Technology in Manufacturing, September 1991

- Thesis: "Self Organizing Control of Hardboard Manufacturing and Coupled Tank Systems"
Advisor: Prof. Andrew W. Self

Middle East Technical University, **Ankara, Turkey**

B.S., Mechanical Engineering, June 1990

- Senior Design Project: Computer Aided Selection of DC Servomotors
Advisor: Prof. I. Huseyin Filiz

ACADEMIC EXPERIENCE

TOBB University of Economics and Technology, **Ankara, Turkey**

Professor(Full time)

Associate Professor

Assistant Professor

Taught courses from sophomore level to graduate level, which covered the areas of statics, dynamics, machine design, finite element method for mechanical engineers and theory of elasticity.

Oct, 2015 - present

Sep, 2010 - Oct, 2015

Aug, 2007 - Mar, 2013

Near East University,

Professor(Part time)

Taught junior level machine design courses

Nicosia, N. Cyprus

Sep, 2014 - present

University of Arizona,

Visiting Research Scholar

Conducted research in modeling hyperelastic materials using peridynamic theory for the project funded by Department of Aerospace and Mechanical Engineering of University of Arizona

Tucson, AZ, US

Feb, 2014 - Jun, 2014

Fulbright Research Scholar

Conducted research in modeling composite materials using peridynamic theory for the project titled "Development of a method to predict strength and failure of layered composites using peridynamic theory" funded by Fulbright

Aug, 2013 - Feb, 2014

Virginia Commonwealth University,
Visiting Research Scholar

Richmond, VA, US
Jun, 2007 - Sep, 2007

Conducted research in springback prediction of Advanced High Strength Steels used in automobile components.

Lehigh University,
Research Assistant

Bethlehem, PA, US
Jan, 1994 - Sep, 2000

Research focused on stress analysis and fracture characterization of ceramic coatings on metal substrates, involving both mechanical and thermal stresses. Developed analytical models to study the contact mechanics of Functionally Gradient Materials (FGMs).

**HONORS AND
AWARDS**

Fulbright Visiting Research scholarship to University of Arizona, 2013

The most cited articles since 2012 for the paper entitled "The effect of geometrical parameters on the energy absorption characteristics of thin-walled structures under axial impact loading" in International Journal of Crashworthiness

The most cited articles published since 2010 for the paper entitled "Multi-objective crashworthiness optimization of tapered thin-walled tubes with axisymmetric indentations" in Thin-Walled Structures

The most cited articles published from 2004 to 2008 for the paper entitled "Contact mechanics of graded coatings" in International Journal of Solids and Structures.

Scholarship for graduate studies abroad, Turkish Higher Education Council, 1993-1999.

**GRANTED
RESEARCH
PROJECTS**

M.A. Guler and D. Coker (2017 – 2019), "Numerical and experimental investigation of fracture propagation in composites with impact damage", funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK). Budget \$ 100,000.

M.A. Guler (2015 – 2016), "Examination of impact energy absorbing capacity of empty and aluminum based foam-filled crash boxes", funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK). Budget \$ 10,000.

M.A. Guler (2013 – 2015), "Optimization of the structural parts and packaging of a dishwasher using Finite Element Method", funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK). Budget \$ 135,000.

M.A. Guler and B. Aksoylu, (2013 – 2015), "Development of a method to predict strength and failure of layered composites using peridynamic theory". Budget \$ 125,000.

M.A. Guler (2013), "Dynamic Analysis of a VSP Support Bracket as a senior design project", funded by OYAK RENAULT, Budget \$ 1,500.

M.A. Guler (2013), "Design of a Shock Absorbing Component for a Front Bumper of an Automobile as a senior design project", funded by OYAK RENAULT, Budget \$ 1,500.

M.A. Guler (2012), "Frontal crash analysis for the design of an automobile cockpit carrier as a senior design project", funded by OYAK RENAULT, Budget \$ 1,500.

M.A. Guler, R.M. Görgülüarslan and Firat Özer, (2011), "Side crash simulation analysis for monolithic production of reinforced parts as a senior design project", funded by OYAK RENAULT, Budget \$ 3,000.

M.A. Guler and E. Acar, (2009 – 2011), "Accurate prediction and robust optimization of springback

in dual phase steels during sheet metal forming operations", funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK). Budget \$ 65,000.

M.A. Guler, (2008 – 2010), "Development of passive safety system for absorbing crash energy during frontal crashes involving intercity busses", funded by Ministry of Industry and Trade of Turkey under the scope of SAN-TEZ project. Budget \$ 225,000.

M.A. Guler and S. Dag, (2007 – 2009), "Computational and Analytical methods for contact mechanics analysis of functionally graded material", funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK). Budget \$ 70,000.

PROFESSIONAL
EXPERIENCE

The Scientific and Technological Council of Turkey (TÜBİTAK), **Ankara, Turkey**
Executive Committee Member for MAKİTEG Group **Apr, 2017 - present**

- Served as a committee member for evaluating research projects received from manufacturing industry submitted to Machinery, Manufacturing Technologies Group (MAKİTEG).

Executive Committee Member for USETEG Group **Apr, 2015 - Apr, 2016**

- Served as a committee member for evaluating research projects received from automotive industry submitted to for Transportation, Defense, Energy and Textile Technologies Group (USETEG).

Arçelik Dishwasher Inc., **Ankara, Turkey**
Project Consultant **Sep, 2013 - Sep, 2015**

- Principal investigator of the industrial project titled "Optimization of the structural parts and packaging of a dishwasher using Finite Element Method" funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK TEYDEB Project number 5150016).

Oyak Renault Inc., **Bursa, Turkey**
Project Consultant **Sep, 2011 - Jun, 2013**

- Helped Renault Engineers in doing FEA analysis of side crush analysis for the project titled "Renault Fluence mid-floor part monolithic design and production of the prototype by hot forming technology" funded by The Scientific and Technical Research Council of Turkey (TÜBİTAK TEYDEB Project number 3110357)
- performed dynamic Analysis of a VSP support bracket
- designed a shock absorbing component for a front bumper
- conducted frontal crash analysis for the design of an automobile cockpit carrier

GE Marmara Technology Center (GE MTC) Inc., **Gebze, Turkey**
Consultant **Jan, 2010 - Apr, 2010**

- Helped GE MTC Engineers in doing FEA analysis of Aircraft Engine components using ANSYS

TEMSA GLOBAL Inc., **Gebze, Turkey**
Project Consultant **Sep, 2008 - Sep, 2010**

- Principal Investigator of the industrial project titled "Development of passive safety system for absorbing crash energy during frontal crashes involving intercity busses" funded by Ministry of Industry and Trade of Turkey under the scope of SAN-TEZ project

TEMSA GLOBAL Inc., **Adana, Turkey**
Senior Structural Engineer **Mar, 2005 - Sep, 2006**

- Managed all phases of bus rollover simulation projects (ECE R66), including building the FEA models in ANSA, preparation of mass lists, verification of all necessary analysis data (e.g. center of gravity and mass moment of inertias of rigid components, engine, axles, fuel pump, AC etc), analysis setup in LS-DYNA, running, verification, and certification.

- Performed 3D stress analysis of automotive parts under structural and dynamic loads using ANSYS and determined the critical locations and suggested design changes to obtain maximum life of components.
- Carried out modal analysis of various type of busses and created animations to illustrate several modes of excitation.

CD-ADAPCO (Analysis Design and Application Company) Inc., Melville, NY, US
Senior Structural and Thermal Engineer **Sep, 2000 - Sep, 2004**

- Reviewed contracts with customer to determine analysis requirements and goals and best methods to achieve them.
- Identified possible causes of failure of a glass lining in a reactor.
- Conducted single cylinder thermal analysis of a six-cylinder diesel engine to understand the thermal behavior of the cylinder and the head.
- Performed 3D stress analysis of rotating parts in the gas turbines and compressors under thermal, structural and dynamic loads using ANSYS.
- Carried out modal analysis of a generator and created a movie to illustrate several modes of excitation.
- Performed thermal and structural analysis of EGR coolers used in truck engines, identified the regions susceptible to cracking and recommended design changes to obtain maximum life of the components.
- Models included thermal and structural loading, intermittent contact, friction and non-linear material properties.
- Created numerous programs and scripts to automate model generation, analysis set-up, and verification.

PUBLICATIONS

- JOURNAL PAPERS
- Y. Alinia and M.A. Güler. On the fully coupled partial slip contact problems of orthotropic materials loaded by flat and cylindrical indenters. *Mechanics of Materials*, 114:119 – 133, 2017
- M. Altin, M.A. Güler, and S.K. Mert. The effect of percent foam fill ratio on the energy absorption capacity of axially compressed thin-walled multi-cell square and circular tubes. *International Journal of Mechanical Sciences*, 131-132:368 – 379, 2017
- A.E. Orun and M.A. Güler. Effect of hole reinforcement on the buckling behaviour of thin-walled beams subjected to combined loading. *Thin-Walled Structures*, 118:12 – 22, 2017
- I. Comez and M.A. Güler. The contact problem of a rigid punch sliding over a functionally graded bilayer. *Acta Mechanica*, 228(6):2237–2249, 2017
- O. Mülkoğlu, M.A. Güler, E. Acar, and H. Demirbağ. Drop test simulation and surrogate-based optimization of a dishwasher mechanical structure and its packaging module. *Structural and Multi-disciplinary Optimization*, 55(4):1517–1534, 2017
- Y. Alinia, H. Zakerhaghighi, S. Adibnazari, and M.A. Güler. Rolling contact problem for an orthotropic medium. *Acta Mechanica*, 228(2):447–464, Feb 2017
- M.A. Güler, A. Kucuksucu, K.B. Yilmaz, and B. Yildirim. On the analytical and finite element solution of plane contact problem of a rigid cylindrical punch sliding over a functionally graded orthotropic medium. *International Journal of Mechanical Sciences*, 120:12 – 29, 2017

- H. Zakerhaghghi, S. Adibnazari, M.A. Güler, and S.A. Faghidian. Two-dimensional analysis of the fully coupled rolling contact problem between a rigid cylinder and an orthotropic medium. *ZAMM - Journal of Applied Mathematics and Mechanics / Zeitschrift für Angewandte Mathematik und Mechanik*, 97(10):1283–1304, 2017
- A. Taştan, E. Acar, M.A. Güler, and Ü. Kılınçkaya. Optimum crashworthiness design of tapered thin-walled tubes with lateral circular cutouts. *Thin-Walled Structures*, 107:543 – 553, 2016
- R. Elloumi, S. El-Borgi, M.A. Guler, and I. Kallel-Kamoun. The contact problem of a rigid stamp with friction on a functionally graded magneto-electro-elastic half-plane. *Acta Mechanica*, 227(4):1123, 2016
- Y. Alinia, A. Beheshti, M.A. Guler, S. El-Borgi, and A. Polycarpou. Sliding contact analysis of functionally graded coating/substrate system. *Mechanics of Materials*, 94:142–155, 2016
- A. Kucuksucu, M.A. Guler, and A. Avcı. Mechanics of sliding frictional contact for a graded orthotropic half-plane. *Acta Mechanica*, 226(10):3333, 2015
- S. El-Borgi, S. Usman, and M.A. Güler. A frictional receding contact plane problem between a functionally graded layer and a homogeneous substrate. *International Journal of Solids and Structures*, 51(25):4462–4476, 2014
- M.A. Guler. Closed-form solution of the two-dimensional sliding frictional contact problem for an orthotropic medium. *International Journal of Mechanical Sciences*, 87:72 – 88, 2014
- R. Elloumi, I. Kallel-Kamoun, S. El-Borgi, and M.A. Guler. On the frictional sliding contact problem between a rigid circular conducting punch and a magneto-electro-elastic half-plane. *International Journal of Mechanical Sciences*, 87:1 – 17, 2014
- Y. Alinia, M.A. Guler, and S. Adibnazari. The effect of material property grading on the rolling contact stress field. *Mechanics Research Communications*, 55:45 – 52, 2014
- Y. Alinia, M.A. Guler, and S. Adibnazari. On the contact mechanics of a rolling cylinder on a graded coating. part 1: Analytical formulation. *Mechanics of Materials*, 68:207 – 216, 2014
- M.A. Guler, Y. Alinia, and S. Adibnazari. On the contact mechanics of a rolling cylinder on a graded coating. part 2: Numerical results. *Mechanics of Materials*, 66:134 – 159, 2013
- R. Elloumi, M.A. Guler, I. Kallel-Kamoun, and S. El-Borgi. Closed-form solutions of the frictional sliding contact problem for a magneto-electro-elastic half-plane indented by a rigid conducting punch. *International Journal of Solids and Structures*, 50(24):3778 – 3792, 2013
- S. Dag, M.A. Guler, B. Yildirim, and A.C. Ozatag. Frictional hertzian contact between a laterally graded elastic medium and a rigid circular stamp. *Acta Mechanica*, 224(8):1773–1789, Aug 2013
- M.A. Guler, Y. Alinia, and S. Adibnazari. On the rolling contact problem of two elastic solids with graded coatings. *International Journal of Mechanical Sciences*, 64(1):62 – 81, 2012
- L. Sözen, M.A. Guler, D. Bekar, and E. Acar. Investigation and prediction of springback in rotary-draw tube bending process using finite element method. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, 226(12):2967–2981, 2012
- D. Bekar, E. Acar, F. Ozer, and M.A. Guler. Analyzing batch-to-batch and part-to-part springback variation of dp600 steels using a double-loop monte carlo simulation. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 226(8):1321–1333, 2012

D. Bekar, E. Acar, F. Ozer, and M.A. Guler. Robust springback optimization of a dual phase steel seven-flange die assembly. *Structural and Multidisciplinary Optimization*, 46(3):425–444, Sep 2012

M.A. Guler, Y.F. Gülver, and E. Nart. Contact analysis of thin films bonded to graded coatings. *International Journal of Mechanical Sciences*, 55(1):50 – 64, 2012

M.A. Guler, S. Adibnazari, and Y. Alinia. Tractive rolling contact mechanics of graded coatings. *International Journal of Solids and Structures*, 49(6):929 – 945, 2012

S. Dag, T. Apatay, M.A. Guler, and M. Gulgeç. A surface crack in a graded coating subjected to sliding frictional contact. *Engineering Fracture Mechanics*, 80:72 – 91, 2012. Special Issue on Fracture and Contact Mechanics for Interface Problems

M.A. Guler, A.O. Atahan, and B. Bayram. Crashworthiness evaluation of an intercity coach against rollover accidents. *International Journal of Heavy Vehicle Systems*, 18(1):64–82, 2011

E. Acar, M.A. Guler, B. Gerçeker, M.E. Cerit, and B. Bayram. Multi-objective crashworthiness optimization of tapered thin-walled tubes with axisymmetric indentations. *Thin-Walled Structures*, 49(1):94 – 105, 2011

T. Apatay ve S. Dağ ve M.A. Güler ve M. Gülgeç. Subsurface contact stresses in a functionally graded coating loaded by a frictional flat stamp. *Gazi Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi*, 25(3):611 – 623, 2010

M.A. Guler, F. Ozer, M. Yenice, and M. Kaya. Springback prediction of dp600 steels for various material models. 81:801–804, 2010

M.A. Guler, M.E. Cerit, B. Bayram, B. Gerçeker, and E. Karakaya. The effect of geometrical parameters on the energy absorption characteristics of thin-walled structures under axial impact loading. *International Journal of Crashworthiness*, 15(4):377–390, 2010

S. Dag, M.A. Guler, B. Yildirim, and A.C. Ozatag. Sliding frictional contact between a rigid punch and a laterally graded elastic medium. *International Journal of Solids and Structures*, 46(22):4038 – 4053, 2009

M.A. Guler. Mechanical modeling of thin films and cover plates bonded to graded substrates. *ASME Journal of Applied Mechanics*, 75(5):051105–051105–8, 2008

M.A. Guler, K. Elitok, B. Bayram, and U. Stelzmann. The influence of seat structure and passenger weight on the rollover crashworthiness of an intercity coach. *International Journal of Crashworthiness*, 12(6):567–580, 2007

M.A. Guler and F. Erdogan. The frictional sliding contact problems of rigid parabolic and cylindrical stamps on graded coatings. *International Journal of Mechanical Sciences*, 49(2):161 – 182, 2007

M.A. Guler and F. Erdogan. Contact mechanics of two deformable elastic solids with graded coatings. *Mechanics of Materials*, 38(7):633–647, 2006

M.A. Guler and F. Erdogan. Contact mechanics of graded coatings. *International Journal of Solids and Structures*, 41(14):3865–3889, 2004

A. Kucuksucu, M.A. Guler, and A. Avci. Closed-form solution of the frictional sliding contact problem for an orthotropic elastic half-plane indented by a wedge-shaped punch. In *Key Engineering Materials*, volume 618, pages 203–225. Trans Tech Publ, 2014

A. Tastan, U. Yolum, M.A. Güler, M. Zaccariotto, U. Galvanetto, (2016), “A 2D Peridynamic Model for Failure Analysis of Orthotropic Thin Plates Due to Bending”, *Procedia Structural Integrity*, Vol. 2, pp. 3713 – 3720.

U. Yolum, A. Tastan, M.A. Güler, (2016), “A Peridynamic Model for Ductile Fracture of Moderately Thick Plates”, *Procedia Structural Integrity*, Vol. 2, pp. 3713 – 3720.

V. Rezazadeh, A. Tastan, U. Yolum, M.A. Guler, (2015), “Peridynamic Analyses of Structures by using Finite Element Method”, 8th Ankara International Aerospace Conference 2015, Ankara, Turkey.

U. Yolum, A. Tastan, M.A. Guler, (2015), “Peridynamic Modelling of Fracture in Ductile Materials”, Tbilisi International Conference on Computer Sciences and Applied Mathematics, Tbilisi, Georgia.

U. Yolum, A. Tastan, T. Kahraman, M.A. Guler, E. Oterkus, E. Madenci, (2015), “Modeling of Mode I Delamination Growth in Composites by using Peridynamics Implemented in Abaqus”, International Conference on Advances in Composite Materials and Structures, Istanbul, Turkey.

O. Mulkoglu, M.A. Guler, H. Demirbag, (2015), “Drop Test Simulation and Verification of a Dishwasher Mechanical Structure”, 10th European LSDYNA Conference 2015, Würzburg, Germany.

T. Kahraman, U. Yolum, M.A. Guler, (2015), “Implementation of Peridynamic Theory to LS-DYNA for Prediction of Crack Propagation in a Composite Lamina”, 10th European LSDYNA Conference 2015, Würzburg, Germany.

O.M. Bircan, M.A. Guler, Y. Karpat, (2013), "An Analytical Approach to Design Accurate Profile of the Form-Turning Inserts", 7th International Advanced Technologies Symposium, Istanbul, Turkey.

A.O. Ozcan, D. Bulgurlu, I. Vuruskan, N. Sezer-Uzol and M.A. Guler , (2011), "Design and analysis of a vertical axis wind turbine: Part I: Aerodynamic design and CFD analysis", 6th Ankara International Aerospace Conference, Ankara, Turkey.

I. Vuruskan, D. Bulgurlu, A.O. Ozcan, M.A. Guler and N. Sezer-Uzol, (2011), "Design and analysis of a vertical axis wind turbine: Part II: Structural design and analysis", 6th Ankara International Aerospace Conference, Ankara, Turkey.

D. Bekar, E. Acar, F. Ozer and M.A. Guler, (2011), “Robust springback optimisation of DP600 steels for U-channel forming”, World Congress on Engineering 2011, WCE 2011, London, U.K.

M.A. Guler, Y.F. Gulver and S. Dag, (2010), “Mechanical modeling of thin films bonded to functionally graded materials”, Proceedings of the 10th International Symposium on Multiscale, Multifunctional and Functionally Graded Materials, Sendai, Japan, 2008, Materials Science Forum, 631-632, pp. 333-338.

M.A. Guler, L. Sözen, R. M. Görgülüarslan, E. M. Kaplan, (2010), “Prediction of Springback in CNC Tube Bending Process Based on Forming Parameters, 11th International LS-DYNA Users Conference, Detroit, Michigan.

M. E. Cerit, M.A. Guler, B. Bayram, U. Yolum, (2010), “Improvement of the Energy Absorption Capacity of an Intercity Coach for Frontal Crash Accidents, 11th International LS-DYNA Users Conference, Detroit, Michigan.

M.A. Guler, A.O. Atahan and B. Bayram, (2009), "Effectiveness of using seat belt on the rollover crashworthiness of an intercity coach", 21th International Technical Conference on the Enhanced Safety of Vehicles, ESV, Stuttgart, Germany.

M.A. Guler, Y.F. Gülever and S. Dag, (2008), "Mechanical modeling of thin films bonded to functionally graded materials", in Proceedings of the 5th International Powder Metallurgy Conference, Ankara, Turkey, pp. 369-378 (in Turkish).

M.A. Guler, F. Erdogan and S. Dag, (2008), "Contact problems with friction in graded materials", in Proceedings of the Multiscale and Functionally Graded Materials Conference 2006, Honolulu, Hawaii, USA. Editors G. H. Paulino, M.-J. Pindera, R. H. Dodds, Jr., F. A. Rochinha, E. V. Dave, and L. Chen, American Institute of Physics, Vol. 978, pp. 784 - 789.

M.A. Guler, F. Erdogan and S. Dag, (2008), "Modeling of thin films and cover plates bonded to graded substrates", in Proceedings of the Multiscale and Functionally Graded Materials Conference 2006, Honolulu, Hawaii, USA. Editors G. H. Paulino, M.-J. Pindera, R. H. Dodds, Jr., F. A. Rochinha, E. V. Dave, and L. Chen, American Institute of Physics, Vol. 978, pp. 790 - 795.

K. Elitok, M.A. Güler, B. Bayram, B. and U. Stelzmann, (2006), "An Investigation on the Rollover Crashworthiness of an Intercity Coach, Influence of Seat Structure and Passenger Weight", in 9th International LS-Dyna Users Conference, Detroit, USA, pp. 11-17 – 11-34.

M.A. Guler and F. Erdogan, (1998), "Contact Mechanics of FGM coatings", in the 8th Japan-US Conference on Composite Materials, Baltimore, Maryland, USA, September, 1998. The 8th Japan-US Conference on Composite Materials, Baltimore, Maryland, USA.

NATIONAL
CONFERENCE
PAPERS

A.T. Camcı, M.A. Guler, (2014), "Hafif Elektrikli Araçlarda Sürekli Değişken Oranlı Şanziman Kullanılarak Menzil Ve Performansın Artırılması", 7th Automotive Technologies Congress, Bursa, Turkey.
O. Üşenmez, M. Tekir, Y.Z. Akman, N. Sezer-Uzol, M.A. Güler, (2012), "Sessiz Helikopter Tasarım Ve Analizi İçin İzlenen Adımlar Ve Yöntemler, SAVTEK 2012, 6. Savunma Teknolojileri Kongresi, Ankara, Turkey.

M.A. Guler, L. Sözen, R.M. Görgülüarslan, E.M. Kaplan, (2010), "Investigation On Deformation Characteristics Of Rotary Draw Tube Bending And Roll Bending Operations", 5th Automotive Technologies Congress, Bursa, Turkey.

M.A. Guler, N. Babacan, U. Yolum, Y. Demiryürek, (2010), "CONWEP Yöntemi ile Mayın Patlama Benzetimi, 5. Savunma Teknolojileri Kongresi", Ankara, Turkey.

M. E. Cerit, M.A. Guler, B. Bayram, B. Gerçeker, E. Karakaya, (2009), "Farklı Kesitli Ezilme Kutularının Enerji Yutma Kapasitelerinin Karşılaştırılması", 16. Ulusal Mekanik Kongresi, Kayseri, Turkey.

M.A. Guler, M. Koç, U. Stelzmann, (2008), "Springback Evaluation for Flange Design in Stamping of Advanced High Strength Steels", 4th Automotive Technologies Congress, Bursa, Turkey.

K. Elitok, M.A. Guler, F.H. Avcı and U. Stelzmann, (2005), "Regulatory Bus Roll-Over Crash Analysis Using LS-DYNA", Conference for Computer-Aided Engineering and System Modeling, İstanbul, Turkey.

INTERNATIONAL
CONFERENCE
PRESENTATIONS

U. Yolum, M.A. Guler, (2017), "A Peridynamic Plate Formulation to Couple Delamination and in-plane Failures for Composite Laminates", AFM 2017 International Conference on Advances in functional Materials, Los Angeles, USA.

D.J. Bang, M.A. Guler, E. Madenci, (2014), "Ordinary state-based peridynamic modeling of hy-

perelastic materials”, ASME 2014 International Mechanical Engineering Congress and Exposition, Montreal, Canada.

S. Adibnazari, M.A. Guler, Y. Alinia, (2011), “Rolling Contact Mechanics of FGM Coatings”, ASME 2011 International Mechanical Engineering Congress and Exposition, Denver, Colorado, USA.

Y.F. Gülever, M.A. Guler, E. Nart, (2011), “Mechanics of Thin Films Bonded To Graded Coatings”, ASME 2011 International Mechanical Engineering Congress and Exposition, Denver, Colorado, USA.

M.A. Guler, F. Ozer, M. Yenice and M. Kaya, (2010), “Springback Prediction of DP600 Steels for Various Material Models, The 13th International Conference on Metal Forming, Toyahashi, Japan.

T. Apatay, S. Dag, M.A. Guler and M. Gulgeç, (2010), “Subsurface stresses in an FGM coating loaded by a sliding flat punch”, Fourth European Conference on Computational Mechanics, Minisymposium on Fracture and Contact Mechanics for Interface Problems, Paris, France.

M.A. Guler, (2008), "Mechanical Failure of Thin Films Bonded to Graded Substrates", The Mechanics Conference to Celebrate the 100th Anniversary of the Department of Engineering Science and Mechanics, Professor Liviu Librescu Memorial Sessions, Virginia Tech, Blacksburg, Virginia, USA.

S. Dag, M.A. Guler and B. Yildirim, (2007), "Contact mechanics of laterally graded materials", 9th US National Congress on Computational Mechanics, San Fransisco, California, USA.

M.A. Guler, (2003), "The Effect of Material Grading on the Contact Mechanics of FGM Coatings", ASME International Mechanical Engineering Congress and RD and D Expo, Washington DC, USA.

F. Erdogan, S. Dag and M.A. Guler, (2000), "Contact and crack problems in functionally graded materials", 20th International Congress of Theoretical and Applied Mechanics, August 2000, Chicago, Illinois, USA.

POST DOC.
RESEARCHER

A. Kucuksucu, “Contact mechanics of orthotropically graded materials”, 2012-2014.

VISITING RESEARCH
SCHOLAR

Y. Alinia, “Rolling contact mechanics of graded materials”, 2011-2012.

SUPERVISED
PH.D. STUDENTS

E. Ince, PhD Candidate, ongoing.

S.K. Mert, PhD Candidate, ongoing.

U. Yolum, PhD Candidate, ongoing.

M. Altın, (2017), “Investigation of the energy absorption capacities of metallic foam filled crash-boxes used in automobiles, co-supervised with Dr. H.S. Yücesu

SUPERVISED
M.SC. STUDENTS

B. Yılmaz (ongoing)

E. Özaslan (ongoing)

A.E. Örün (2017), “Effect of hole reinforcement on buckling behavior under combined loads for a beam structure”

K.B. Yılmaz (2016), “Finite element analysis of contact mechanics of rigid punches sliding over a graded orthotropic medium” co-supervised with Dr. B. Yıldırım

N. Tüten (2016), “Weight optimization and reliability prediction of an automobile torque arm subjected to cyclic loading” co-supervised with Dr. E. Acar

A Tastan (2016), “Development of a method to predict strength and failure of isotropic and composite structures under tension and bending loadings using bond-based peridynamic theory”

O Mülkoğlu (2016), “Optimization of the mechanical structure of a dishwasher and its packaging module using Finite Element Method”

T Kiper (2015), “Analysis of bird strike effects on the wing of a training aircraft” co-supervised with Dr. İ. Uslan

O.M. Bircan (2014), “An analytical approach to design form-turning insert profiles: Investigation of rake face design on tool life” with Dr. Y. Karpat

A.T. Camcı (2013), “Improvements on the range and the performance of a light electric vehicle by making use of a continuously variable transmission”

F. Özer, (2011), “Springback prediction in Advanced High Strength Steels after forming operations” with Dr. I.B. Ozsoy

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