

Prof. HALUK DARENDELİLER

Personal Information

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Education Information

Doctorate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Turkey 1985 - 1991

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Turkey 1981 - 1983

Undergraduate, Middle East Technical University, Faculty of Engineering, Turkey 1977 - 1981

Dissertations

Doctorate, Computer-aided deformation analysis of deep-drawing process, Middle East Technical University, Graduate School of Natural and Applied Sciences, 1991

Research Areas

Mechanical Engineering, Mechanical, Solid Mechanics, Finite Element Methods, Continuous Mechanics

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty Of Engineering, Department of Mechanical Engineering, 2002 - Continues

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, 1997 - 2002

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, 1993 - 1997

Researcher, Ohio State University, Engineering Research Center for Net Shape Manufacturing, 1992 - 1993

Lecturer PhD, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, 1991 - 1993

Lecturer, Middle East Technical University, Faculty of Engineering, Department of Mechanical Engineering, 1987 - 1991

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department of Mechanical Engineering, 1982 - 1987

Academic and Administrative Experience

Genel Sekreter Vekili, Middle East Technical University, Presidency Office, 2000 - 2008

Advancing Ineses

- Darendeliler H., DEFORMATION AND FAILURE ANALYSIS OF LAMINATED COMPOSITES BY ISOGEOMETRIC ELEMENTS FORMULATION, Postgraduate, C.BADE(Student), 2020
- Darendeliler H., Analysis of effects of temperature variation on deep drawing process using different constitutive laws, Postgraduate, R.HAKAN(Student), 2019
- Darendeliler H., Investigation of tensile plastic instability and necking for AL2024T3 aluminum and S235JR steel alloys, Postgraduate, V.İLİ(Student), 2019
- Darendeliler H., Analysis of deep drawing process by using hypo- and hyperelastic based plasticity models, Postgraduate, İ.BARIŞ(Student), 2019
- Darendeliler H., THE EFFECT OF STRAIN RATE AND TEMPERATURE ON DEEP DRAWING FOR DIFFERENT CONSTITUTIVE RELATIONS, Postgraduate, S.GÖKŞEN(Student), 2019
- Darendeliler H., Analysis of wrinkling in deep drawing processes, Postgraduate, S.RABİA(Student), 2019
- DARENDELİLER H., Analysis of metal forming by using isogeometric elements, Postgraduate, Y.ÖZDOĞAN(Student), 2018
- DARENDELİLER H., Analysis of ratcheting by using different yield criteria and kinematic hardening models for uniaxial and biaxial loading, Postgraduate, M.İŞLER(Student), 2018
- DARENDELİLER H., An Investigation of ductile fracture criteria for sheet metal forming /, Doctorate, S.Abbasnejad(Student), 2014
- DARENDELİLER H., An investigation of ductile fracture criteria for sheet metal forming, Doctorate, S.ABBASNEJAD(Student), 2014
- DARENDELİLER H., Flexible multibody analysis using absolute nodal coordinate formulation, Postgraduate, M.ALİ(Student), 2014
- DARENDELİLER H., Dynamic analysis and modelling of a rocket launcher system, Postgraduate, B.CAN(Student), 2014
- DARENDELİLER H., Implementation and comparison of different constitutive models in deep drawing process, Postgraduate, F.ÇOĞUN(Student), 2013
- DARENDELİLER H., Experimental and finite element analysis of rotary draw tube bending process, Postgraduate, F.DERE(Student), 2013
- DARENDELİLER H., Springback analysis in bending through finite element method based artificial neural networks, Postgraduate, Ö.ŞENOL(Student), 2013
- DARENDELİLER H., GÖKLER M. İ. , DEVELOPMENT OF INTERNAL HEATING SYSTEM FOR HOT FORGING DIES, Doctorate, L.ERTONG(Student), 2013
- DARENDELİLER H., Buckling, postbuckling and progressive failure analyses of composite laminated plates under compressive loading, Postgraduate, Ö.NAMDAR(Student), 2012
- DARENDELİLER H., Large deformation analysis of flexible multibody systems, Doctorate, A.TÜZÜN(Student), 2012
- DARENDELİLER H., Buckling, postbuckling and progressive failure analyses of composite laminated plates under compressive loading, Postgraduate, Ö.Namdar(Student), 2012
- DARENDELİLER H., Progressive failure analysis of composite shells, Postgraduate, Y.OLCAY(Student), 2012
- DARENDELİLER H., GÖKLER M. İ. , Analysis of Roller Hemming Process for a Vehicle Tailgate, Postgraduate, S.GÜRGEN(Student), 2011
- DARENDELİLER H., Effect of constitutive modeling in sheet metal forming, Postgraduate, M.UÇAN(Student), 2011
- DARENDELİLER H., GÖKLER M. İ. , DESIGN AND ANALYSIS OF COLD FORGING PROCESS ON MULTI-STATION HORIZONTAL FORGING MACHINES, Postgraduate, C.YUMUŞ(Student), 2010
- DARENDELİLER H., Finite Element and Experimental Analysis of Cold Drawing for Spline Profile, Postgraduate, S.SAMET(Student), 2010
- DARENDELİLER H., GÖKLER M. İ. , Analysis of hot forming of an Advanced High Strength Steel sheet metal component of A-Pillar in a vehicle, Postgraduate, S.DEMİRKAYA(Student), 2010
- DARENDELİLER H., GÖKLER M. İ. , Experimental and numerical analysis of compression on a forging press, Postgraduate, G.BİÇER(Student), 2010
- DARENDELİLER H., Large deformation analysis of shells under impulsive loading, Postgraduate, M.EVCİM(Student), 2010
- DARENDELİLER H., Inner ring fatigue analysis of rolling element bearings, Postgraduate, B.EROĞLU(Student), 2009
- DARENDELİLER H., GÖKLER M. İ. , Effect of strain history on simulation of crashworthiness of a vehicle, Postgraduate, U.ÇAĞRI(Student), 2009

DARENDELİLER H., GÖKLER M. İ. , ANALYSIS OF HIGH-G CAMERA SUPPORT STRUCTURE FOR CRASH TEST SYSTEM, Postgraduate, M.GÖKHAN(Student), 2009

DARENDELİLER H., GÖKLER M. İ. , Finite element analysis and manufacturing of fin connector rod by hot forging process, Postgraduate, B.ŞERBETÇİ(Student), 2009

DARENDELİLER H., GÖKLER M. İ. , Elastic-plastic finite element analysis of semi-hot forging dies, Postgraduate, M.HALİSÇELİK(Student), 2009

DARENDELİLER H., Development of a shell finite element for large deformation analysis of laminated composites, Postgraduate, T.YILDIZ(Student), 2008

DARENDELİLER H., GÖKLER M. İ. , Analysis and design for aluminum forging process, Postgraduate, H.ÖZTÜRK(Student), 2008

DARENDELİLER H., GÖKLER M. İ. , Thermo-mechanically coupled numerical and experimental study on 7075 aluminum forging process and dies, Postgraduate, M.CİHAT(Student), 2008

DARENDELİLER H., Analysis of heat treatment effect on springback in v-bending, Postgraduate, O.Turgay(Student), 2008

DARENDELİLER H., ORAL S., Finite element analysis of bending operation of aluminum profiles, Postgraduate, U.PENEKLİ(Student), 2008

DARENDELİLER H., Analysis of heat treatment effect on springback in v-bending, Postgraduate, O.TURGAY(Student), 2008

DARENDELİLER H., GÖKLER M. İ. , Design and implementation of hot precision forging die for a spur gear, Postgraduate, M.MAŞAT(Student), 2007

DARENDELİLER H., GÖKLER M. İ. , Effects of induction heating parameters on forging billet temperature, Postgraduate, İ.DURUKAN(Student), 2007

DARENDELİLER H., GÖKLER M. İ. , Design and thermo-mechanical analysis of warm forging process and dies, Postgraduate, S.SARAÇ(Student), 2007

DARENDELİLER H., An elastic-plastic beam finite element, Postgraduate, A.MÜCAHİT(Student), 2006

DARENDELİLER H., Analysis of warm forging process, Postgraduate, G.AKTAKKA(Student), 2006

DARENDELİLER H., An Elastic-Plastic Beam Element, Postgraduate, A.M(Student), 2006

DARENDELİLER H., GÖKLER M. İ. , Analysis of roll-forging process, Postgraduate, H.KARACAOVALI(Student), 2005

DARENDELİLER H., AKKÖK M., Friction analysis in cold forging, Postgraduate, Ö.NECATİ(Student), 2004

DARENDELİLER H., GÖKLER M. İ. , Analysis of forging for three different alloy steels, Postgraduate, B.CİVELEKOĞLU(Student), 2003

DARENDELİLER H., GÖKLER M. İ. , Analysis and preform design for long press forgings with non-planar parting surfaces, Postgraduate, A.BARIŞ(Student), 2003

DARENDELİLER H., GÖKLER M. İ. , Finite element analysis of springback in bending process., Postgraduate, V.ESAT(Student), 2002

DARENDELİLER H., Finite element analysis of trimming process., Postgraduate, S.Ş.(Student), 2002

DARENDELİLER H., GÖKLER M. İ. , Finite element analysis of hot upset forging dies., Postgraduate, M.CERAN(Student), 2002

GÖKLER M. İ. , DARENDELİLER H., Finite element analysis of effects of tapered preforms on final product in cold upsetting, Postgraduate, Ö.Doğan(Student), 2000

SOYLU R., DARENDELİLER H., Optimal shape design of two dimensional rigid bodies with constraints on their kinematic and inertial parameters, Postgraduate, S.GÜREL(Student), 2000

DARENDELİLER H., Optimal shape design of two dimensional rigid bodies with constraints on their kinematic and inertial parameters, Postgraduate, S.Gürel(Student), 2000

DARENDELİLER H., Finite element analysis of effects of tapered preforms on final product in cold upsetting, Postgraduate, Ö.DOĞAN(Student), 2000

GÖKLER M. İ. , DARENDELİLER H., Finite element analysis of piercing operation on forging machines, Postgraduate, T.Moğulkoç(Student), 1999

DARENDELİLER H., Finite element analysis of tapered preforms in cold upsetting, Postgraduate, N.ELMASKAYA(Student), 1997

DARENDELİLER H., Finite element analysis of tapered preforms in cold upsetting, Postgraduate, N.Elmaskaya(Student), 1997

DARENDELİLER H., Computer aided optimal design of spur and helical gears., Postgraduate, E.ULUGÜL(Student), 1997

DARENDELİLER H., Analysis of the effect of friction in sheet metal drawing, Postgraduate, C.ALI(Student), 1997
DARENDELİLER H., An Elastic-plastic shell finite element, Postgraduate, A.TURGUT(Student), 1997
DARENDELİLER H., Finite element modelling of non-axisymmetric deep drawing, Postgraduate, C.TENDÜRÜS(Student), 1997
DARENDELİLER H., Functional analysis, optimization and development of the brake system in Turk-Fiat tractors, Postgraduate, A.DİNÇER(Student), 1997
DARENDELİLER H., AKKÖK M., Analysis of the effect of friction in sheet metal drawing, Postgraduate, C.Ali(Student), 1997
DARENDELİLER H., Experimental and numerical analysis of deep drawing, Postgraduate, O.YILDIRIM(Student), 1997
DARENDELİLER H., One dimensional stress waves in longitudinal members, Postgraduate, M.ERSAN(Student), 1995

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

- I. **Prediction of forming limit curve at fracture for sheet metal using new ductile fracture criterion**
Dizaji S. A. , DARENDELİLER H., KAFTANOĞLU B.
EUROPEAN JOURNAL OF MECHANICS A-SOLIDS, vol.69, pp.255-265, 2018 (Journal Indexed in SCI)
- II. **Buckling, postbuckling and progressive failure analyses of composite laminated plates under compressive loading**
Namdar O., DARENDELİLER H.
COMPOSITES PART B-ENGINEERING, vol.120, pp.143-151, 2017 (Journal Indexed in SCI)
- III. **Comparison of different yield criteria in various deep drawn cups**
Cogun F., DARENDELİLER H.
INTERNATIONAL JOURNAL OF MATERIAL FORMING, vol.10, no.1, pp.85-98, 2017 (Journal Indexed in SCI)
- IV. **Effect of hardening models on different ductile fracture criteria in sheet metal forming**
Dizaji S. A. , DARENDELİLER H., KAFTANOĞLU B.
INTERNATIONAL JOURNAL OF MATERIAL FORMING, vol.9, no.3, pp.261-267, 2016 (Journal Indexed in SCI)
- V. **Modelling of variable friction in cold forging**
Cora O. N. , AKKÖK M., DARENDELİLER H.
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART J-JOURNAL OF ENGINEERING TRIBOLOGY, vol.222, pp.899-908, 2008 (Journal Indexed in SCI)
- VI. **Finite element analysis of springback in bending of aluminium sheets**
Esat V., Darendeliler H., Gokler M.
MATERIALS & DESIGN, vol.23, no.2, pp.223-229, 2002 (Journal Indexed in SCI)
- VII. **Effect of variable friction coefficient on sheet metal drawing**
Darendeliler H., Akkok M., Yucesoy C.
TRIBOLOGY INTERNATIONAL, vol.35, no.2, pp.97-104, 2002 (Journal Indexed in SCI)
- VIII. **A pseudo-layered, elastic-plastic, flat-shell finite element**
Darendeliler H., Oral S., Turgut A.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.174, pp.211-218, 1999 (Journal Indexed in SCI)
- IX. **Analysis of tapered preforms in cold upsetting**
Gokler M., Darendeliler H., Elmaskaya N.
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, vol.39, no.1, pp.1-16, 1999 (Journal Indexed in SCI)
- X. **The optimum die profile for the cylindrical bending of plates**
Oral S., Darendeliler H.
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, vol.70, pp.151-155, 1997 (Journal Indexed in SCI)
- XI. **The drum spring (DS) retractor: A constant and continuous force for canine retraction**
Darendeliler M., Darendeliler H., Uner O.
EUROPEAN JOURNAL OF ORTHODONTICS, vol.19, no.2, pp.115-130, 1997 (Journal Indexed in SCI)

- XII. **Analysis of axisymmetric cup drawing in relation to friction**
Darendeliler H., Altan T.
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, vol.58, pp.293-301, 1996 (Journal Indexed in SCI)
- XIII. **ANALYSIS OF A CENTRAL MAXILLARY INCISOR BY USING A 3-DIMENSIONAL FINITE-ELEMENT METHOD**
DARENDELİLER S., DARENDELİLER H., KINOGLU T.
JOURNAL OF ORAL REHABILITATION, vol.19, no.4, pp.371-383, 1992 (Journal Indexed in SCI)
- XIV. **Deformation Analysis of Deep-Drawing by a Finite Element Method**
DARENDELİLER H., Kaftanoğlu B.
CIRP Annals - Manufacturing Technology, vol.40, no.1, pp.281-284, 1991 (Journal Indexed in SCI Expanded)

Articles Published in Other Journals

- I. **A study on the constitutive equation effects in the fracture initiation of AA5450 sheets**
DİZEÇİ Ş., DARENDELİLER H., KAFTANOĞLU B.
Proceedings of the 7th International Conference on Fracture Fatigue and Wear, 2018 (Refereed Journals of Other Institutions)
- II. **An investigation on sample size distribution in electric discharge machining (EDM)**
Darendeliler H., Cogun C.
1991 (Refereed Journals of Other Institutions)
- III. **An Investigation on Sample Size Determination in Electric Discharge Machining EDM**
DARENDELİLER H., ÇOĞUN C.
Transactions of the Institution of Engineers, Australia, Mechanical Engineering, vol.16, no.4, pp.237-244, 1991 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **The effect of strain rate and temperature on forming limit diagram for DKP-6112 and AZ31 materials**
Goksen S., DARENDELİLER H.
23rd International Conference on Material Forming, ESAFORM 2020, Cottbus, Germany, 4 May - 08 April 2020, vol.47, pp.1241-1244
- II. **Baskı Plakası Kuvvetinin Derin Çekme İşlemi Üzerindeki Etkilerinin Farklı Pekleşme Kuralları ve Akma Kriterleri ile İncelenmesi**
Dal S. R. , DARENDELİLER H.
21. Ulusal Mekanik Kongresi, Niğde, Turkey, 2 - 06 September 2019, pp.441-444
- III. **A study on the constitutive equation effects in the fracture initiation of AA5450 sheets**
Dizaji S. A. , DARENDELİLER H., Kaftanoğlu B.
7th International Conference on Fracture Fatigue and Wear, FFW 2018, Ghent, Belgium, 9 - 10 July 2018, pp.78-83
- IV. **Effects of forming history on crash simulation of a vehicle**
GÖKLER M. İ. , Dogan U. C. , DARENDELİLER H.
10th International Conference and Workshop on Numerical Simulation of 3D Sheet Metal Forming Processes, Bristol, United Kingdom, 4 - 09 September 2016, vol.734
- V. **On the fracture prediction of 304L stainless steel sheets utilizing different hardening models**
Dizaji S. A. , DARENDELİLER H., KAFTANOĞLU B.
10th International Conference and Workshop on Numerical Simulation of 3D Sheet Metal Forming Processes, Bristol, United Kingdom, 4 - 09 September 2016, vol.734
- VI. **Springback analysis in air bending process through experiment based artificial neural networks**
Senol O., Esat V., DARENDELİLER H.

11th International Conference on Technology of Plasticity (ICTP), Nagoya, Japan, 19 - 24 October 2014, vol.81, pp.999-1004

- VII. **Springback Analysis In Air Bending Process Through Experiment Based Artificial Neural Networks ICTP 2014**
Şenol Ö., ESAT V., DARENDELİLER H.
11th International Conference on Technology of Plasticity, Nagoya, Japan, 19 - 24 October 2014, vol.81, pp.999-1004
- VIII. **Springback Analysis in Wipe Bending Process through Neural Networks**
ŞENOL Ö., ESAT V., DARENDELİLER H.
7th International Conference and Exhibition on Design and Production of Machines and Dies/Molds, 20 June 2013 - 23 June 2014
- IX. **Analysis of Roller Hemming Process for a Vehicle Tailgate Closure**
Gurgen S., GÖKLER M. İ. , DARENDELİLER H., Celikkaya C. C. , Erden K.
11th International Conference on Numerical Methods in Industrial Forming Processes (NUMIFORM), Shenyang, China, 6 - 10 July 2013, vol.1532, pp.367-374
- X. **Analysis of Hot Forming of a Sheet Metal Component Made of Advanced High Strength Steel**
Demirkaya S., DARENDELİLER H., GÖKLER M. İ. , Ayhaner M.
11th International Conference on Numerical Methods in Industrial Forming Processes (NUMIFORM), Shenyang, China, 6 - 10 July 2013, vol.1532, pp.421-426
- XI. **Comparison of Different Constitutive Models in Sheet Metal Forming**
Ucan M., Darendeliler H.
16th ESAFORM Conference on Material Forming (ESAFORM 2013), Aveiro, Portugal, 22 - 24 April 2013, pp.1203-1216
- XII. **Large deformation analysis of laminated composite plates**
YILDIZ T., Olcay Y., DARENDELİLER H.
11th International Conference on Computational Structures Technology, CST 2012, Dubrovnik, Croatia, 4 - 07 September 2012, vol.99
- XIII. **Finite element analysis of shearing processes**
Isbir S., DARENDELİLER H., GÖKLER M. İ.
5th International Conference on Engineering Computational Technology, ECT 2006, Las Palmas de Gran Canaria, Spain, 12 - 15 September 2006
- XIV. **Finite element analysis of header dies for taper upsetting**
Ceran M., GÖKLER M. İ. , DARENDELİLER H.
8th International Conference on Computational Structures Technology, CST 2006, Las Palmas de Gran Canaria, Spain, 12 - 15 September 2006, vol.83
- XV. **Finite element analysis of the effects of tapered preforms on the final product in cold upsetting**
Dogan O., GÖKLER M. İ. , DARENDELİLER H.
Proceedings of the Third International Conference on Engineering Computational Technology, Prague, Czech Republic, 4 - 06 September 2002, pp.105-106
- XVI. **Elastic-plastic large strain large displacement analysis of sheet metal forming processes**
Darendeliler H.
1st International Conference on Engineering Computational Technology/4th International Conference on Computational Structures Technology, Edinburgh, Saint Helena, 18 - 21 August 1998, pp.343-348

Patent

Darendeliler H., Forging Dies with Internal Heating System, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, The Invention Registration Number: US 10 , 124 , 395 B2 , Initial Registration, 2018

Activities in Scientific Journals

Makina Tasarım ve İmalat Dergisi, Editor, 1993 - 1999

Citations

Total Citations (WOS):214

h-index (WOS):7