

# Prof. ÖZGEN ÜMİT ÇOLAK ÇAKIR

## Personal Information

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## Education Information

Post Doctorate, University of Maryland Baltimore County, Makina, United States Of America 2001 - 2001

Doctorate, Rensselaer Polytechnic Institute, Mechanical, Aerospace And Nuclear Engineering, Makina Mühendisliği Bölümü, United States Of America 1996 - 2001

Postgraduate, Yildiz Technical University, Makina Fakültesi, Makina Mühendisliği, Turkey 1993 - 1994

Undergraduate, Yildiz Technical University, Makina Fakültesi, Makina Mühendisliği, Turkey 1988 - 1992

## Research Areas

Mechanical Engineering, Construction and Manufacturing, Machine Elements, Machine Design, Mechanical Properties, Polymeric Materials

## Academic Titles / Tasks

Professor, Yildiz Technical University, Makina, Makina Mühendisliği Bölümü, 2010 - Continues

Associate Professor, Yildiz Technical University, Makina, Makina Mühendisliği Bölümü, 2005 - 2010

Assistant Professor, Yildiz Technical University, Makina, Makina Mühendisliği Bölümü, 2003 - 2005

Medical Doctor, University of Maryland Baltimore County, Makina, Makina Mühendisliği Bölümü, 2001 - 2001

Research Assistant, Rensselaer Polytechnic Institute, Makina, Makina Mühendisliği Bölümü, 1997 - 2001

Research Assistant, Yildiz Technical University, Makina, Makina Mühendisliği Bölümü, 1993 - 1996

## Academic and Administrative Experience

Yıldız Teknik Üniversitesi, 2014 - 2018

Yıldız Teknik Üniversitesi, Makina Fakültesi, 2014 - 2018

Yıldız Teknik Üniversitesi, 2013 - 2018

Yıldız Teknik Üniversitesi, 2013 - 2018

Yıldız Teknik Üniversitesi, 2010 - 2013

Yıldız Teknik Üniversitesi, 2010 - 2013

Yıldız Teknik Üniversitesi, 2004 - 2006

Yıldız Teknik Üniversitesi, 2001 - 2005

## Supervised Theses

ÇOLAK ÇAKIR Ö. Ü., Rüzgar Türbini Pervane Göbek Tasarımı, Postgraduate, O.Yağmur(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Grafen-epoksi nanokompozitin Mekanik Özelliklerinin nanoindentasyon Yöntemi ile Tespit Edilmesi, Postgraduate, O.Bayrak(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Buzdolabı Kompresör Krank Yataklarının Optimizasyonu ve Rulmanlı Yatak Kullanımının İncelenmesi, Postgraduate, O.Bodur(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Spor Ayakkabısının Biyomekanik Esaslara Göre Sonlu Elemanlar Yöntemiyle İncelenmesi, Postgraduate, H.Balaban(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Tek ve İki Eksenli Yüklemlerde Gerinim Yığılmasının (Ratcheting) Modellenmesi, Doctorate, K.Asmaz(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Polimerik Malzemelerin Mekanik Davranışlarının Belirlenmesi Ve Modellenmesi, Doctorate, N.Düşünceli(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Haddemele Prosesinde Malzeme Karakteristiklerindeki Değişimlerin İncelenmesi Ve Modellenmesi, Postgraduate, K.Aydoğan(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Taşıt Lastiklerinin Tasarım ve Üretim Teknolojileri, Postgraduate, E.Pay(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Sonlu Elemanlar Yöntemi ile Yapısal Analiz ve Optimizasyon, Postgraduate, F.Ertuğ(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Polimer Matrisli Kompozitlerin Modellenmesi ve Sonlu Elemanlar Metodu Formulasyonu, Doctorate, A.Acar(Student), 2016  
ÇOLAK ÇAKIR Ö. Ü., Proton Değişim Membranlı Yakıt Hücrelerinde Polimerik Membranların Modellenmesi, Postgraduate, F.Doğan(Student), 2016

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

- I. **Modeling wide range of viscoelastic–viscoplastic behavior of Araldite LY 564 epoxy using cooperative viscoplasticity theory based on overstress model**  
Bakbak O., Çolak Çakır Ö. Ü.  
Journal of Applied Polymer Science, vol.140, no.9, 2023 (SCI-Expanded)
- II. **Functionalized graphene–epoxy nanocomposites: experimental investigation of viscoelastic and viscoplastic behaviors**  
Colak Ö. Ü., Birkan B., BAKBAK O., ACAR A., Uzunsoy D.  
Mechanics of Time-Dependent Materials, vol.27, no.1, pp.185-205, 2023 (SCI-Expanded)
- III. **Simplified cooperative viscoplasticity theory based on overstress model for nanocomposites**  
Bakbak O., Çolak Çakır Ö. Ü.  
JOURNAL OF APPLIED POLYMER SCIENCE, vol.139, no.28, pp.1-18, 2022 (SCI-Expanded)
- IV. **Mechanical characterization of Araldite LY 564 epoxy\_ creep, relaxation, quasi-static compression and high strain rate behaviors**  
BAKBAK O., BİRKAN B. E., ACAR A., Colak Ö. Ü.  
Polymer Bulletin, vol.79, no.4, pp.2219-2235, 2022 (SCI-Expanded)
- V. **Experimental investigation of oligo cyclic compression behavior of pure epoxy and graphene-epoxy nanocomposites**  
ÇOLAK ÇAKIR Ö. Ü., UZUNSOY D., Bahlouli N., Francart C.  
POLYMER BULLETIN, vol.78, no.12, pp.6935-6952, 2021 (SCI-Expanded)
- VI. **Investigation of Tensile, Viscoelastic, and Viscoplastic Behavior of Polylactic Acid Manufactured by Fused Deposition Modeling**  
İstif İ., Feratoglu K., Colak Ö. Ü., Acar A.  
JOURNAL OF TESTING AND EVALUATION, vol.49, no.4, pp.2831-2839, 2021 (SCI-Expanded)
- VII. **High strain rate behavior of graphene-epoxy nanocomposites**  
Colak Ö. Ü., Bahlouli N., Uzunsoy D., Francart C.  
Polymer Testing, vol.81, 2020 (SCI-Expanded)
- VIII. **Material model parameter estimation with genetic algorithm optimization method and modeling of strain and temperature dependent behavior of epoxy resin with cooperative-VBO model**

- Colak Ö. Ü., Cakir Y.  
MECHANICS OF MATERIALS, vol.135, pp.57-66, 2019 (SCI-Expanded)
- IX. **Cooperative-VBO model for polymer/graphene nanocomposites**  
ACAR A., Colak O., Correia J., Ahzi S.  
Mechanics of Materials, vol.125, pp.1-13, 2018 (SCI-Expanded)
- X. **Development of High Purity, Few-Layer Graphene Synthesis by Electric Arc Discharge Technique**  
Cotul U., Parmak E. D. S., Kaykilarli C., Saray O., Colak Ö. Ü., Uzunsoy D.  
ACTA PHYSICA POLONICA A, vol.134, no.1, pp.289-291, 2018 (SCI-Expanded)
- XI. **Investigation of Mechanical Properties of Graphene and Reduced Graphene Oxide Reinforced Epoxy Matrix Composites**  
Topal E., Parmak E., Uzunsoy D., ÇOLAK ÇAKIR Ö. Ü.  
JOURNAL OF TESTING AND EVALUATION, vol.45, no.4, pp.1182-1191, 2017 (SCI-Expanded)
- XII. **Modelling of biaxial ratcheting behaviour of ultrahigh-molecular-weight polyethylene with viscoplasticity theory based on overstress for polymers**  
Colak O. U., ASMAZ K.  
POLYMER INTERNATIONAL, vol.64, no.11, pp.1522-1526, 2015 (SCI-Expanded)
- XIII. **Synthesis and characterization of graphene-epoxy nanocomposites**  
Acar A., Colak O. U., Uzunsoy D.  
MATERIALS TESTING, vol.57, pp.1001-1005, 2015 (SCI-Expanded)
- XIV. **Biaxial Ratcheting of Ultra High Molecular Weight Polyethylene: Experiments and Constitutive Modeling**  
ASMAZ K., Colak O. U., Hassan T.  
JOURNAL OF TESTING AND EVALUATION, vol.42, no.6, pp.1486-1492, 2014 (SCI-Expanded)
- XV. **Investigation of Hygro-Thermal Cycle Effects on the Membranes of Proton Exchange Membrane Fuel Cells**  
Colak O., ACAR A., Ergenekon E.  
JOURNAL OF TESTING AND EVALUATION, vol.42, no.2, pp.285-290, 2014 (SCI-Expanded)
- XVI. **Cooperative viscoplasticity theory based on the overstress approach for modeling large deformation behavior of amorphous polymers**  
Colak Ö. Ü., Ahzi S., Remond Y.  
POLYMER INTERNATIONAL, vol.62, no.11, pp.1560-1565, 2013 (SCI-Expanded)
- XVII. **Modeling of hydro-thermo-mechanical behavior of Nafion NRE212 for Polymer Electrolyte Membrane Fuel Cells using the Finite Viscoelasticity Theory Based on Overstress for Polymers (FVBOP)**  
Colak O. U., ACAR A.  
MECHANICS OF TIME-DEPENDENT MATERIALS, vol.17, no.3, pp.331-347, 2013 (SCI-Expanded)
- XVIII. **Uniaxial Strain and Stress-Controlled Cyclic Responses of Ultrahigh Molecular Weight Polyethylene: Experiments and Model Simulations**  
Hassan T., Colak Ö. Ü., Clayton P. M.  
JOURNAL OF ENGINEERING MATERIALS AND TECHNOLOGY-TRANSACTIONS OF THE ASME, vol.133, no.2, 2011 (SCI-Expanded)
- XIX. **Determination of material parameters of a viscoplastic model by genetic algorithm**  
Dusunceli N., Colak Ö. Ü., Filiz C.  
MATERIALS & DESIGN, vol.31, no.3, pp.1250-1255, 2010 (SCI-Expanded)
- XX. **Modelling Effects of Degree of Crystallinity on Mechanical Behavior of Semicrystalline Polymers**  
Düşünceli N., ÇOLAK ÇAKIR Ö. Ü.  
International Journal of Plasticity, vol.24, pp.1224-1242, 2008 (SCI-Expanded)
- XXI. **The effects of manufacturing techniques on viscoelastic and viscoplastic behavior of high density polyethylene (HDPE)**  
Dusunceli N., Colak Ö. Ü.  
MATERIALS & DESIGN, vol.29, no.6, pp.1117-1124, 2008 (SCI-Expanded)

- XXII. **Kinematic hardening rules for modeling uniaxial and multiaxial ratcheting**  
Colak Ö. Ü.  
MATERIALS & DESIGN, vol.29, no.8, pp.1575-1581, 2008 (SCI-Expanded)
- XXIII. **High density polyethylene (HDPE): Experiments and modeling**  
Dusunceli N., Colak Ö. Ü.  
MECHANICS OF TIME-DEPENDENT MATERIALS, vol.10, no.4, pp.331-345, 2006 (SCI-Expanded)
- XXIV. **Modeling viscoelastic and viscoplastic behavior of high density polyethylene (HDPE)**  
Colak Ö. Ü., Dusunceli N.  
JOURNAL OF ENGINEERING MATERIALS AND TECHNOLOGY-TRANSACTIONS OF THE ASME, vol.128, no.4, pp.572-578, 2006 (SCI-Expanded)
- XXV. **High Density Polyethylene (HDPE): Experiments and Modeling**  
Düşünceli N., ÇOLAK ÇAKIR Ö. Ü.  
MECHANICS OF TIME-DEPENDENT MATERIALS, vol.10, pp.331-335, 2006 (SCI-Expanded)
- XXVI. **Modeling deformation behavior of polymers with viscoplasticity theory based on overstress**  
Colak Ö. Ü.  
INTERNATIONAL JOURNAL OF PLASTICITY, vol.21, no.1, pp.145-160, 2005 (SCI-Expanded)
- XXVII. **Modeling of the monotonic and cyclic Swift effects using an isotropic, finite viscoplasticity theory based on overstress (FVBO)**  
Colak Ö. Ü., Krempl E.  
INTERNATIONAL JOURNAL OF PLASTICITY, vol.21, no.3, pp.573-588, 2005 (SCI-Expanded)
- XXVIII. **Modeling of monotonic and cyclic Swift effect using anisotropic finite viscoplasticity theory based on overstress (AFVBO): Part II - Numerical experiments**  
Colak Ö. Ü.  
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.41, pp.5313-5325, 2004 (SCI-Expanded)
- XXIX. **Modeling of the monotonic and cyclic swift effects using anisotropic finite viscoplasticity theory based on overstress (AFVBO): Part I - Constitutive model**  
Colak Ö. Ü.  
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.41, pp.5301-5311, 2004 (SCI-Expanded)
- XXX. **Viscoplasticity Theory Applied To Proportional And Non-Proportional Cyclic Loading at Small Strains**  
ÇOLAK ÇAKIR Ö. Ü.  
INTERNATIONAL JOURNAL OF PLASTICITY, vol.20, no.8, pp.1387-1401, 2004 (SCI-Expanded)
- XXXI. **Modeling of large simple shear using a viscoplastic overstress model and classical plasticity model with different objective stress rates**  
Colak Ö. Ü.  
ACTA MECHANICA, vol.167, pp.171-187, 2004 (SCI-Expanded)
- XXXII. **Modeling of Monotonic and Cyclic Swift Effect Using Anisotropic Finite Viscoplasticity Theory Based on Overstress (AFVBO): Part I - Constitutive Model**  
ÇOLAK ÇAKIR Ö. Ü.  
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.41, pp.5301-5311, 2004 (SCI-Expanded)
- XXXIII. **A viscoplasticity theory applied to proportional and non-proportional cyclic loading at small strains**  
Colak Ö. Ü.  
INTERNATIONAL JOURNAL OF PLASTICITY, vol.20, pp.1387-1401, 2004 (SCI-Expanded)
- XXXIV. **Modeling of Uniaxial and Biaxial Ratcheting Behavior of CS 1026 Carbon Steel Using the Simplified Viscoplasticity Theory Based on Overstress (VBO)**  
ÇOLAK ÇAKIR Ö. Ü., Krempl E.  
ACTA MECHANICA, vol.160, pp.27-44, 2003 (SCI-Expanded)
- XXXV. **Compressive failure strengths and modes of woven S2-glass reinforced polyester due to quasi-static and dynamic loading**  
Khan A., Colak Ö. Ü., Centala P.  
INTERNATIONAL JOURNAL OF PLASTICITY, vol.18, no.10, pp.1337-1357, 2002 (SCI-Expanded)

## Articles Published in Other Journals

- I. **GENETIC ALGORITHM OPTIMIZATION METHOD FOR PARAMETER ESTIMATION IN THE MODELING OF STORAGE MODULUS OF THERMOPLASTICS**  
ÇOLAK ÇAKIR Ö. Ü., Çakır Y.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.37, no.3, pp.981-988, 2019 (ESCI)
- II. **THEORETICAL AND EXPERIMENTAL DEFORMATION ANALYSIS OF CRANE BEAMS SUBJECTED TO MOVING LOAD**  
AZELOĞLU C. O., Hasan A. G., ÖZEN S., ÇOLAK ÇAKIR Ö. Ü., SAĞIRLI A.  
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.33, no.4, pp.653-663, 2015 (ESCI)

## Books

- I. **Makina Elemanlarının Projelendirilmesi**  
Bozacı A., ÇOLAK ÇAKIR Ö. Ü., Koçaş İ.  
Çağlayan Kitabevi, İstanbul, 2001

## Refereed Congress / Symposium Publications in Proceedings

- I. **Creep and Relaxation Behavior of Araldite LY564 Epoxy**  
Birkan B. E., Bakkak O., Çolak Çakır Ö. Ü., Acar A.  
"Virtual Congress on Materials Science & Engineering". Materials Info 2020, 9 - 10 November 2020, pp.19
- II. **High Strain Rate and Quasi Static Behavior of Araldite LY564 Epoxy**  
Bakkak O., Birkan B. E., Acar A., Çolak Çakır Ö. Ü., Taşdemirci A.  
"Virtual Congress on Materials Science & Engineering". Materials Info 2020, Delaware, United States Of America, 9 - 10 November 2020, pp.20
- III. **MACROSCOPIC TESTING AND NANOINDENTATION OF GRAPHENE-EPOXY NANOCOMPOSITES**  
ÇOLAK ÇAKIR Ö. Ü., Uzunsoy D.  
1st International Conference on Advances in Mechanical and Mechatronics Engineering, Ankara, Turkey, 08 November 2018, pp.1-6
- IV. **MECHANICAL PROPERTIES OF FLOWFORMED AISI 1.4330 GUN BARREL**  
Koltan U., ÇOLAK ÇAKIR Ö. Ü.  
1st International Conference on Advances in Mechanical and Mechatronics Engineering, Ankara, Turkey, 08 November 2018, pp.1-6
- V. **MATERIAL MODEL DEVELOPMENT FOR NANOCOMPOSITES AND FINITE ELEMENTS IMPLEMENTATION**  
ACAR A., ÇOLAK ÇAKIR Ö. Ü.  
1st International Conference on Advances in Mechanical and Mechatronics Engineering, Ankara, Turkey, 08 November 2018, pp.1-6
- VI. **Investigation The Usability Of Spectroscopic Methods For Determining The Existance Of Graphene In Soil And Leaf Of Plants**  
Çakır Y., ÇOLAK ÇAKIR Ö. Ü.  
7th International Conference on Agro-Geoinformatics, Fairfax, United States Of America, 06 August 2017, pp.1-6
- VII. **Phytotoxicity of Graphene in Tomatoes and Bean**  
Çakır Y., ÇOLAK ÇAKIR Ö. Ü.  
6th International Conference on Agro-Geoinformatics, Tianjin, China, 18 July 2016, pp.1-8
- VIII. **Processing and Characterisation of few layer graphene sheets by electric Arc Discharge**

Uzunsoy D., Çotul U., Saray O., Parmak E., ÇOLAK ÇAKIR Ö. Ü.

13th International Conference on Nansciences and Nanotechnologies (NN16), Thessalonik, Greece, 05 July 2016, pp.279

- IX. **Grid Independence Analysis of Computational Fluid Dynamics of a Hydrodynamic Journal Bearing with Microfilm Lubrication**  
Özen S., ÇOLAK ÇAKIR Ö. Ü.  
International Conference On Advances In Mechanical Engineering ICAME 2016, İstanbul, Turkey, 11 May 2016, pp.1-6
- X. **Optimization Of The Crankshaft Journal Bearings In Compressor MTZ 90 MT**  
Bodur O., ÇOLAK ÇAKIR Ö. Ü.  
International Conference On Advances In Mechanical Engineering ICAME 2016, İstanbul, Turkey, 11 May 2016, pp.1-6
- XI. **Investigation of graphene phytotoxicity in the germination stage of wheat and barley**  
Çakır Y., ÇOLAK ÇAKIR Ö. Ü.  
5th International Conference on Agro-Geoinformatics, İstanbul, Turkey, 20 July 2015, pp.1-6
- XII. **Fabrication and Mechanical Characterization of Graphene-Epoxy Nano Composites**  
Acar A., ÇOLAK ÇAKIR Ö. Ü., Uzunsoy D.  
6th International Conference on Polymeric Behavior, Viena, Austria, 22 September 2014, pp.1-2
- XIII. **Biaxial Ratcheting Behavior of Ultra High Molecular Weight Polyethylene (UHMWPE)**  
ASMAZ K., ÇOLAK ÇAKIR Ö. Ü.  
6th International Conference on Polymer Behaviour (ICPB6), Vienna, Austria, 22 September 2014, pp.44
- XIV. **Cooperative Viscoplasticity Theory Based on Overstress Model for Modeling Amorphous Polymers over a Wide Range of Temperature and Strain Rate**  
ÇOLAK ÇAKIR Ö. Ü.  
5th International Conference on Polymer Behavior, 01 September 2012
- XV. **Biaxial Ratcheting Behavior of Ultra High Molecular Weight Polyethylene (UHMWPE): Experiments and Modeling**  
ÇOLAK ÇAKIR Ö. Ü.  
14. Uluslar arası Malzeme Sempozyumu (IMPS), 01 September 2012
- XVI. **Determination of Temperature Dependent Elasticity Modulus of PFSA Membranes Using Dynamic Mechanical Analysis (DMA) Technique**  
ÇOLAK ÇAKIR Ö. Ü.  
14. Uluslar arası Malzeme Sempozyumu (IMPS), 01 September 2012
- XVII. **Nanoindentation and Finite Element Analysis of Graphene Platelet-Epoxy Nanocomposite**  
ÇOLAK ÇAKIR Ö. Ü.  
14. Uluslar arası Malzeme Sempozyumu (IMPS), 01 September 2012
- XVIII. **Mechanical Characterization and Modeling of Cyclic Behavior of Ultra High Molecular Weight Polyethylene (UHMWPE)**  
Colak O. U., ASMAZ K., Hassan T.  
14th International Conference on Advances in Materials and Processing Technologies (AMPT), İstanbul, Turkey, 13 - 16 July 2011, vol.445, pp.877-879
- XIX. **Fabrication of Graphene-Epoxy Nanocomposites and Characterization with Nanoindentation**  
ÇOLAK ÇAKIR Ö. Ü.  
14th International Conference On Advances In Materials & Processing Technologies (AMPT), 01 July 2011
- XX. **Chracterization of Creep Behavior of Epoxy and Graphene-Epoxy Nancomposite using Nanoindentation**  
ÇOLAK ÇAKIR Ö. Ü.  
Multiphase Polymer and Polymer Composites, 01 June 2011
- XXI. **Modeling of Humidity and Temperature Effects on Uniaxial Tension Behavior of Perfluorosulfonic Acid (PFSA) Membran nafion 112**  
ÇOLAK ÇAKIR Ö. Ü.

- 4th International Conference on Polymer Behavior, 01 July 2010
- XXII. **Nanoindentation of Graphene-Epoxy nanocomposite**  
ÇOLAK ÇAKIR Ö. Ü.  
4th International Conference on Polymer Behavior, 01 July 2010
- XXIII. **Proton Değişim Membran Yakıt Hücrelerinde Kullanılan Polimerik Membranın Deneysel Olarak İncelenmesi**  
ÇOLAK ÇAKIR Ö. Ü.  
5. Uluslararası İleri Teknolojiler Sempozyumu (İATS 09), 01 May 2009
- XXIV. **An Overstress Model For Inelastic Behavior**  
ÇOLAK ÇAKIR Ö. Ü.  
12th International Materials Symposium (IMSP 2008), 01 November 2008
- XXV. **Cyclic Behavior Of Ultra High Molecular Weight Polyethylene (UHMWPE) and Modeling**  
ÇOLAK ÇAKIR Ö. Ü.  
36th International Solid Mechanics, 01 October 2008
- XXVI. **İmalat Yöntemlerinin Yüksek Yoğunluklu Polietilen'in (HDPE) Tek Eksenli Çekme Davranışı Üzerindeki Etkisi**  
ÇOLAK ÇAKIR Ö. Ü.  
8. Uluslararası Kırılma Konferansı, 01 October 2007
- XXVII. **Experimental Characterization and Modelling of High Density Polyethylene (HDPE)**  
ÇOLAK ÇAKIR Ö. Ü.  
ASME Applied Mechanics and Materials Conference, 01 June 2007
- XXVIII. **Mühendislik Tasarımına Yönelik Polimerik Malzeme Modelleri**  
ÇOLAK ÇAKIR Ö. Ü.  
12. Uluslar arası Makine Tasarımı ve İmalat Kongres, 01 October 2006
- XXIX. **Modeling cyclic behavior of high density polyethylene (HDPE)**  
ÇOLAK ÇAKIR Ö. Ü.  
ASME International Mechanical Engineering Congress and Exposition, 01 November 2005
- XXX. **Modeling Creep And Relaxation Behaviors Of Polyphenylene Oxide (PPO) Using A Viscoplasticity Theory**  
ÇOLAK ÇAKIR Ö. Ü.  
ASME International Mechanical Engineering Congress and Exposition, 01 November 2005
- XXXI. **Modeling of The Swift Effect Using State Variable Theories**  
ÇOLAK ÇAKIR Ö. Ü.  
Proceeding of the 10th International Symposium on Plasticity, 01 June 2003
- XXXII. **Modeling the Deformation Behavior Of PPO Using The Viscoplasticity Theory Based On Overstress**  
ÇOLAK ÇAKIR Ö. Ü.  
Proceeding of the 10th International Symposium on Plasticity, 01 June 2003
- XXXIII. **Modeling of Uniaxial and Biaxial Ratcheting**  
ÇOLAK ÇAKIR Ö. Ü.  
Proceedings of the 9th International Symposium on Plasticity, 01 January 2002
- XXXIV. **Deformation Induced Anisotropy and the Modeling of The Swift Effect**  
ÇOLAK ÇAKIR Ö. Ü.  
Proceedings of the 9th International Symposium on Plasticity, 01 January 2002
- XXXV. **Viscoplasticity Theory Based on Overstress Applied to Cyclic Proportional and Non-proportional Loading**  
ÇOLAK ÇAKIR Ö. Ü.  
Proceedings of the 8th International Symposium on Plasticity, 01 June 2000
- XXXVI. **Cyclic Viscoplasticity and Deformation Induced Anisotropy**  
ÇOLAK ÇAKIR Ö. Ü.  
Proceedings of the 36th Annual Meeting Society of Engineering Science, 01 June 1999

## Supported Projects

- Çolak Çakır Ö. Ü., ACAR A., TUBITAK Project, Yüksek şekil değiştirme hızlarında Nano kompozit malzeme karakterizasyonu ve modellenmesi, 2018 - 2022
- ÇOLAK ÇAKIR Ö. Ü., TUBITAK Project, Yüksek Safılıkta Birkaç Tabakalı Grafenin Elektrik Ark Yöntemiyle Sentezlenmesi ve Karakterizasyonu, 2015 - 2017
- ÇOLAK ÇAKIR Ö. Ü., AZELOĞLU C. O., Project Supported by Higher Education Institutions, Hareketli Yüke Maruz Kirişlerin Dinamik Davranışlarının İncelenmesi, 2012 - 2016
- ÇOLAK ÇAKIR Ö. Ü., BOĞOÇLU M. E., Industrial Thesis Project, Ticari Araç Direksiyon Sistemleri için Değişken Deplasmanlı Paletli Pompa Geliştirme, 2013 - 2015
- Çolak Çakır Ö. Ü., TÜBİTAK International Bilateral Joint Cooperation Program Project, Graphene-PMMA nanocomposite; Processing, Experimental Characterization and Modeling, 2013 - 2015
- ÇOLAK ÇAKIR Ö. Ü., Project Supported by Higher Education Institutions, Elektrik Ark Oluşturma Yöntemi ile Grafen Sentezi, Grafen Takviyeli Epoksi Nano Kompozit Üretimi ve Karakterizasyonları, 2012 - 2015
- Işık Z., Çolak Çakır Ö. Ü., Hüdaverdi M., Yılmaz T., TUBITAK Project, YTÜ Teknoloji Transfer Ofisi Projesi, 2013 - 2014
- CELLEK M. S., ÇOLAK ÇAKIR Ö. Ü., ÖZEN S., BOĞOÇLU M. E., Industrial Thesis Project, Hermetik Kompresörlerde Krank Yataklarının Optimizasyonu ve Rulman Kullanımının İncelenmesi, 2012 - 2014
- GÜZEL E., EKERİM A., ŞEN Ö., ÇOLAK ÇAKIR Ö. Ü., Industrial Thesis Project, Rüzgar Türbini Pervane Göbeği Tasarımı, Üretimi ve Yapısal Özelliklerinin Belirlenmesi, 2009 - 2012
- ÇOLAK ÇAKIR Ö. Ü., GÖRGÜN H., ACAR A., ASMAZ K., TUBITAK Project, Hidro-Termal Çevrime Maruz Kalan Proton Değişim Membranlı Yakıt Hücrelerinde Membranın Modellenmesi, 2011 - 2011
- ÇOLAK ÇAKIR Ö. Ü., TUBITAK Project, Polimerik Malzemelerin Mekanik Davranışlarının Belirlenmesi ve Viskoelastik - Viskoplastik Teorilerin Geliştirilmesi, 2005 - 2009

## Patent

- ÇOLAK ÇAKIR Ö. Ü., ARK DEŞARJ YÖNTEMİ İLE ÇALIŞAN NANO PARTİKÜL SENTEZ REAKTÖRÜ, Patent, CHAPTER F Mechanical engineering; Lighting; Heating; Weaponry; Destroyed Materials, Standard Registration, 2017

## Memberships / Tasks in Scientific Organizations

- TÜBİTAK- TEYDEB, Executive Board Member, 2020 - Continues, Turkey
- Sigma Xi, Member, 2001 - Continues, United States Of America
- TÜBİTAK, ARDEB (MAG), Member of Advisory Board, 2009 - 2012, Turkey

## Scientific Refereeing

- International Journal of Mechanical Sciences, SCI Journal, February 2017
- Advances in Polymer Technology, SCI Journal, February 2016
- International Journal of Plasticity, SCI Journal, January 2011
- Mechanical Research Communications, SCI Journal, May 2007
- International Journal of Solids and Structures, SCI Journal, May 2006
- Materials and Design, SCI Journal, January 2005

## Mobility Activity

- Sabbatical Leave, Post Doc, Université Louis-Pasteur: Strasbourg I, France, 2018 - 2019
- Post Doc, Post Doc, Rensselaer Polytechnic Institute, United States Of America, 2010 - 2010



Post Doc, Post Doc, Rensselaer Polytechnic Institute, United States Of America, 2002 - 2002

## Metrics

Publication: 85

Citation (WoS): 483

Citation (Scopus): 549

H-Index (WoS): 12

H-Index (Scopus): 13

## Congress and Symposium Activities

5th International Conference on Polymer Behavior, Invited Speaker, Aveiro, Portugal, 2012

International Conference on Advances in Materials and Processing Technologies (AMPT) 2011, Session Moderator, Agualva-Cacem, Turkey, 2011

## Scholarships

Malzeme modelleme, TUBITAK, 2002 - 2002

YÖK Doktora Bursu, YOK, 1996 - 2001

## Awards

ÇOLAK ÇAKIR Ö. Ü., En iyi makale ödülü, 4th International Conference on Advances in Civil, Structural and Mechanical Engineering, May 2016

ÇOLAK ÇAKIR Ö. Ü., Doçent kadrosunda 2006-2007 yılında en çok yayın yapan akademisyen (Üçüncülük ödülü), Yıldız Teknik Üniversitesi Rektörlüğü, December 2007

ÇOLAK ÇAKIR Ö. Ü., Doçent kadrosunda 2005-2006 yılında en çok yayın yapan akademisyen (İkincilik ödülü), Yıldız Teknik Üniversitesi Rektörlüğü, November 2006

ÇOLAK ÇAKIR Ö. Ü., Doçent kadrosunda 2004-2005 yılında yayınlarına en çok atf alan akademisyen (Üçüncülük ödülü), Yıldız Teknik Üniversitesi Rektörlüğü, September 2005

ÇOLAK ÇAKIR Ö. Ü., Yardımcı Doçent kadrosunda 2004 yılında en çok yayın yapan akademisyen (İkincilik ödülü), Yıldız Teknik Üniversitesi, October 2004

ÇOLAK ÇAKIR Ö. Ü., YTÜ, Makina Müh. 1992 Yılı mezunları arasında Bölüm üçüncülüğü, Yıldız Teknik Üniversitesi, July 1992

## Non Academic Experience

Strasbourg University, Visiting professor