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### Research Areas

Mechanics of Solid Bodies, Civil Engineering, Mechanical, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Yildiz Technical University, Faculty Of Civil Engineering, Civil Engineering Department, 2014 - Continues

### Advising Theses

Mollamahmutoğlu Ç., Betonarme Kiriş Davranışının Doğrusal Olmayan Modellerle Parametrik İncelenmesi, Postgraduate, S.ŞEKER(Student), 2022

Mollamahmutoğlu Ç., Static and dynamic analysis of functionally graded microstructure elements with mixed finite element method, Doctorate, A.MERCAN(Student), 2021

Mollamahmutoğlu Ç., A mixed finite element formulation for static and eigenvalue analysis for functionally graded microbeams resting on two parameter elastic foundation, Postgraduate, A.LEVENT(Student), 2020

Mollamahmutoğlu Ç., Fonksiyonel derecelendirilmiş mikro kirişlerin sonlu farklaryöntemi ile analizi, Postgraduate, F.İŞİK(Student), 2020

Mollamahmutoğlu Ç., Dynamic stability analysis of functionally graded sandwich micro-beams, Doctorate, M.ALI(Student), 2018

Mollamahmutoğlu Ç., Çelik birleşimlerde çeşitli deformasyon mekanizmalarının analizi, Postgraduate, M.SOYKAN(Student), 2018

Mollamahmutoğlu Ç., Comperative structural analysis of suspension bridges with diagonal and vertical hangers, Postgraduate, M.MERT(Student), 2017

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

#### I. Effect of Buttress Form on Transverse Seismic Resistance of Masonry Buildings

Gürel M. A., İzol R., MOLLAMAHMUTOĞLU Ç., Pekkökgöz R. K., Yüksel F. Ş. K., Özeren M.

Iranian Journal of Science and Technology - Transactions of Civil Engineering, vol.48, no.1, pp.185-210, 2024 (SCI-Expanded)

- II. **Efficiency of Buttress Form on the Out-of-plane Resistance of Masonry Walls Subjected to Vault Thrust**  
Avcil F., Izol R., Gürel M. A., Arkan E., MOLLAMAHMUTOĞLU Ç.  
Tehnicky Vjesnik, vol.30, no.4, pp.1039-1046, 2023 (SCI-Expanded)
- III. **A comprehensive mechanical response and dynamic stability analysis of elastically restrained bi-directional functionally graded porous microbeams in the thermal environment via mixed finite elements**  
Mollamahmutoğlu Ç., Mercan A., Levent A.  
JOURNAL OF THE BRAZILIAN SOCIETY OF MECHANICAL SCIENCES AND ENGINEERING, vol.44, no.8, pp.1-19, 2022 (SCI-Expanded)
- IV. **A novel functional and mixed finite element analysis of functionally graded micro-beams based on modified couple stress theory**  
MOLLAMAHMUTOĞLU Ç., MERCAN A.  
Composite Structures, vol.223, 2019 (SCI-Expanded)
- V. **Buckling and free vibration analysis of functionally graded sandwich micro-beams resting on elastic foundation by using nonlocal strain gradient theory in conjunction with higher order shear theories under thermal effect**  
AL-SHUJAIRI M., MOLLAMAHMUTOĞLU Ç.  
COMPOSITES PART B-ENGINEERING, vol.154, pp.292-312, 2018 (SCI-Expanded)
- VI. **Dynamic stability of sandwich functionally graded micro-beam based on the nonlocal strain gradient theory with thermal effect**  
AL-SHUJAIRI M., MOLLAMAHMUTOĞLU Ç.  
COMPOSITE STRUCTURES, vol.201, pp.1018-1030, 2018 (SCI-Expanded)
- VII. **Residual winding stresses due to spatial web thickness variation**  
Good J., MOLLAMAHMUTOĞLU Ç., Markum R., Gale J.  
Journal of Manufacturing Science and Engineering, Transactions of the ASME, vol.139, no.3, 2017 (SCI-Expanded)
- VIII. **Pressures on webs in wound rolls due to winding and contact**  
MOLLAMAHMUTOĞLU Ç., GANAPATHI S., GOOD J. K.  
TAPPI JOURNAL, vol.13, no.2, pp.41-50, 2014 (SCI-Expanded)
- IX. **Analysis of Large Deformation Wound Roll Models**  
Mollamahmutoglu C., GOOD J. K.  
JOURNAL OF APPLIED MECHANICS-TRANSACTIONS OF THE ASME, vol.80, no.4, 2013 (SCI-Expanded)
- X. **Nonlinearly Viscoelastic Nanoindentation of PMMA Under a Spherical Tip**  
Kucuk Y., Mollamahmutoglu C., Wang Y., Lu H.  
EXPERIMENTAL MECHANICS, vol.53, no.5, pp.731-742, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **15 Temmuz Şehitler Köprüsü yeni ve eski askı kablosu düzenlemelerinin karşılaştırmalı yapısal analizi**  
MOLLAMAHMUTOĞLU Ç.  
Dicle Üniversitesi Mühendislik Fakültesi Mühendislik Dergisi, vol.9, pp.463-474, 2018 (Peer-Reviewed Journal)
- II. **Modeling the influence of web thickness and length imperfections resulting from manufacturing processes on wound roll stresses**  
MOLLAMAHMUTOĞLU Ç., Good J.  
CIRP Journal of Manufacturing Science and Technology, vol.8, pp.22-33, 2015 (ESCI)

## Books & Book Chapters

### I. Mukavemet

Arpacı A., ATAÖĞLU Ş., YÜCEL A., BULUT O., MOLLAMAHMUTOĞLU Ç., Tosun M.  
Palme Yayınevi, Ankara, 2019

## Refereed Congress / Symposium Publications in Proceedings

- I. **Web Length Creep in Wound Rolls**  
MOLLAMAHMUTOĞLU Ç., Gajalla A. R., markum r., Aurelie A., Good J. K.  
15th International Conference on Web Handling, 10 - 13 June 2019
- II. **Investigation of damage on derbendikhan dam during earthquake excitation**  
MOLLAMAHMUTOĞLU Ç., Bedirhanoglu I.  
10th International Structural Engineering and Construction Conference, ISEC 2019, Illinois, United States Of America, 20 - 25 May 2019
- III. **EVALUATION OF 12 NOVEMBER 2017 Mw 7.3 – 30 KM SOUTH OF HALABJA IRAQ-IRAN BORDER EARTHQUAKE AND ITS EFFECTS ON DARBANDIKHAN DAM FROM A GEOLOGICAL PERSPECTIVE**  
İMAMOĞLU M., BEDİRHANOĞLU İ., MOLLAMAHMUTOĞLU Ç.  
5th INTERNATIONAL SYMPOSIUM on DAM SAFETY ANDEXHIBITION, 27 - 31 October 2018
- IV. **DAMAGE OF THE DERBENDIKHAN DAM DURING THE LAST Mw 7.3 HALABJA EARTHQUAKE**  
BEDİRHANOĞLU İ., MOLLAMAHMUTOĞLU Ç., İMAMOĞLU M.  
5th INTERNATIONAL SYMPOSIUM on DAM SAFETY ANDEXHIBITION, 27 - 31 October 2018
- V. **Tarihi Zerzevan Kalesi Güney Kulesinin Mevcut Durumunun Değerlendirilmesi**  
BEDİRHANOĞLU İ., MOLLAMAHMUTOĞLU Ç.  
6th International GAP Engineering Conference – GAP2018, 8 - 10 November 2018
- VI. **Darbandikhan Barajında Oluşan Hasarın İki Boyutlu Sonlu Elemanlar Yöntemi ile Değerlendirilmesi**  
BEDİRHANOĞLU İ., MOLLAMAHMUTOĞLU Ç.  
6th International GAP Engineering Conference – GAP2018, 8 - 10 November 2018
- VII. **Parametric Investigation of Moment Transferring Steel Connections**  
Taşpınar M. S., MOLLAMAHMUTOĞLU Ç.  
THE 3rd INTERNATIONAL CONFERENCE ON CIVIL AND ENVIRONMENTAL ENGINEERING, 24 - 27 April 2018
- VIII. **TERMAL GERİLME PROBLEMİ İLE YÜZEY KUVVETLERİNİN OLUŞTURDUĞU ELASTİK PROBLEMİN ANALOJİSİNE AİT DENEYSEL ÇALIŞMA**  
BULUT O., BAYTAK T., Tosun M., İpek C., MOLLAMAHMUTOĞLU Ç., Abdulaliyev Z.  
XX. Ulusal Mekanik Kongresi, Turkey, 5 - 09 September 2017
- IX. **NIP IMPINGED CENTER-WINDING INCLUDING A NONLINEAR BEAM MODEL**  
MOLLAMAHMUTOĞLU Ç., Good J. K., markum r., Gale J.  
14th International Conference on Web Handling, 5 - 07 June 2017
- X. **İNCE KOMPOZİT LEVHALARDA ANİZOTROP TERMAL GERİLME ANALİZİ**  
BAYTAK T., BULUT O., MOLLAMAHMUTOĞLU Ç., dönmez a., ATAÖĞLU Ş.  
XX. Ulusal Mekanik Kongresi, Turkey, 5 - 09 September 2017
- XI. **INVESTIGATION of THERMAL EFFECTS ON RETROFITTED BOSPHORUS BRIDGE: COMPARISON BETWEEN DIAGONAL AND VERTICAL HANGER CONFIGURATIONS**  
MOLLAMAHMUTOĞLU Ç., eyüpgiller m. m.  
Computational Civil Engineering 2017, 26 May 2017
- XII. **INTRICATE FINITE ELEMENT MODELING of THE RETROFITTED 15th JULY MARTYRS BRIDGE**  
MOLLAMAHMUTOĞLU Ç., Eyüpgiller M. M.  
ICOCEE 2017, 8 - 10 May 2017
- XIII. **The Impact of Thickness Measurement on Residual Stresses Due to Winding**  
MOLLAMAHMUTOĞLU Ç.  
Thirteenth International Conference on Web Handling, 8 - 10 June 2015

- XIV. **The coupling of winding models and roll quality instruments**  
MOLLAMAHMUTOĞLU Ç., BULUT O.  
The Thirteenth International Conference on Web Handling, 8 - 10 June 2015
- XV. **AN AXISYMMETRIC NONLINEAR TRANSIENT THERMO-ELASTIC WINDINGMODEL**  
MOLLAMAHMUTOĞLU Ç.  
Thirteenth International Conference on Web Handling, 8 - 10 June 2015
- XVI. **Surface Compression of Wound Rolls**  
MOLLAMAHMUTOĞLU Ç., ganapathi s., Good J. K.  
12th International Conference on Web Handling, 9 - 12 June 2013
- XVII. **Possible Implications of Grain Scale Material Heterogeneity on Radiation Hardening and Embrittlement**  
bardenhagen s., MOLLAMAHMUTOĞLU Ç., lu h.  
Materials Modeling and Simulation for Nuclear Fuels, 26 - 28 September 2011
- XVIII. **EVALUATION OF HIGHER ORDER SHAPE FUNCTIONS IN 2D GIMP SIMULATIONS and STRUCTURED MESH REFINEMENT**  
MOLLAMAHMUTOĞLU Ç., LU H.  
11th us national congress on computational mechanics, 25 - 28 July 2011
- XIX. **LARGE DEFORMATION WINDING MODELS**  
MOLLAMAHMUTOĞLU Ç., Good J. K.  
10th International Conference on Web Handling, 8 - 10 June 2009
- XX. **AXISYMMETRIC WOUND ROLL MODELS**  
MOLLAMAHMUTOĞLU Ç., Good J. K.  
10th International Conference on Web Hanling, 8 - 10 June 2009

## Supported Projects

MOLLAMAHMUTOĞLU Ç., Project Supported by Higher Education Institutions, Yapı Elemanlarının Birleşim Bölgelerindeki Çatlak Civarında Gerilme Dağılımının Fotoelastik Yöntemlerle Araştırılması, 2014 - 2019

MOLLAMAHMUTOĞLU Ç., TUBITAK Project, Rulo halinde sarılarak saklanan malzemelerin termo-viskoelastik analizi, 2014 - 2016

Mollamahmutoğlu Ç., Good J. K., Other International Funding Programs, Rulo malzemelerin simulasyonlarını güvenilir ve verimli hale getirme projesi, 2011 - 2013

Mollamahmutoğlu Ç., Good J. K., Universities of Other Countries Supported Project, Rulo halindeki malzemelerin kalite kontrolü için bir model ve bilgisayar ile analizi, 2011 - 2013

Mollamahmutoğlu Ç., Good J. K., Other International Funding Programs, Doğrusal olmayan viskoelastik sargı malzemeleri için eksenel simetrik sarım modeli geliştirilmesi, 2008 - 2010

Mollamahmutoğlu Ç., Good J. K., Universities of Other Countries Supported Project, Baskı rulosu etkisini hesaba katan eksenel simetrik bir sarım modeli geliştirilmesi, 2008 - 2009

Mollamahmutoğlu Ç., Good J. K., Universities of Other Countries Supported Project, Rulo malzemelerin temas mekaniğinin analizi için etkili bir algoritma geliştirilmesi, 2007 - 2008

Mollamahmutoğlu Ç., Good J. K., Universities of Other Countries Supported Project, Geometrik ve malzeme bakımından nonlineer rulolar için etkili bir sarım modeli geliştirilmesi, 2005 - 2008

## Metrics

Publication: 34  
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