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Education Information

Doctorate, Universitaet Stuttgart, Germany 2002 - 2007

Post Graduate, Universitaet Stuttgart, Computational Mechanics Of Materials And Structures, Germany 2000 - 2002

Under Graduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1994 - 1999

Dissertations

Doctorate, Micro-Macro Approaches to Rubbery and Glassy Polymers: Predictive Micromechanically-Based Models and Simulations, Universitaet Stuttgart, 2007

Research Areas

Mechanics of Solid Bodies, Civil Engineering, Mechanical, Building materials, Materials in Civil Engineering, Material Mechanics, Biomechanics, Continuous Mechanics

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2015 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2010 - 2015

Expert, Stanford University, Mühendislik Fakültesi, Makina Mühendisliği, 2007 - 2010

Research Assistant, Universitaet Stuttgart, İnşaat Mühendisliği Fakültesi, Mekanik, 2002 - 2007

Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 1999 - 2000

Professional Experience

Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2010 - 2012

Advising Theses

GÖKTEPE S., Computationally efficient approaches to integrated cardiac electrophysiology, Post Graduate, Ö.PAŞAOĞLU(Student), 2017

GÖKTEPE S., Fracture analysis of spun-cast concrete poles using the phase-field method, Post Graduate, A.AZIM(Student), 2017

YAMAN İ. Ö. , GÖKTEPE S., Coupled thermomechanical analysis of concrete hardening, Post Graduate, H.İBRAHİM(Student), 2015
GÖKTEPE S., Computational modeling of cardiac dysfunctions, Post Graduate, E.BERBEROĞLU(Student), 2014
YAMAN İ. Ö. , GÖKTEPE S., Finite element analyses of differential shrinkage-induced cracking in centrifugally cast concrete poles, Post Graduate, T.TANFENER(Student), 2012

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

- **A modulus gradient model for inhomogeneous materials with isotropic linear elastic constituents**
Gülaşık H., Göktepe S., Gürses E.
European Journal of Mechanics, A/Solids, vol.78, 2019 (Journal Indexed in SCI)
- **A modulus gradient model for an axially loaded inhomogeneous elastic rod**
Gulasuk H., Göktepe S., Gürses E.
MECCANICA, vol.53, pp.2573-2584, 2018 (Journal Indexed in SCI)
- **Bifurcation Analysis of a Modified Tumor-immune System Interaction Model Involving Time Delay**
Kayan S., MERDAN H., Yafa R., GÖKTEPE S.
MATHEMATICAL MODELLING OF NATURAL PHENOMENA, vol.12, pp.120-145, 2017 (Journal Indexed in SCI)
- **The generalized Hill model: A kinematic approach towards active muscle contraction**
Göktepe S., Menzel A., Kuhl E.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.72, pp.20-39, 2014 (Journal Indexed in SCI)
- **Computational modeling of coupled cardiac electromechanics incorporating cardiac dysfunctions**
Berberoglu E., Solmaz H. O. , Göktepe S.
EUROPEAN JOURNAL OF MECHANICS A-SOLIDS, vol.48, pp.60-73, 2014 (Journal Indexed in SCI)
- **Modeling and simulation of viscous electro-active polymers**
Vogel F., GÖKTEPE S., Steinmann P., Kuhl E.
EUROPEAN JOURNAL OF MECHANICS A-SOLIDS, vol.48, pp.112-128, 2014 (Journal Indexed in SCI)
- **Frontiers in Finite-Deformation Electromechanics**
Menzel A., GÖKTEPE S., Kuhl E.
EUROPEAN JOURNAL OF MECHANICS A-SOLIDS, vol.48, pp.1-2, 2014 (Journal Indexed in SCI)
- **Computational modeling of chemo-electro-mechanical coupling: A novel implicit monolithic finite element approach**
Wong J., Göktepe S., Kuhl E.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN BIOMEDICAL ENGINEERING, vol.29, pp.1104-1133, 2013 (Journal Indexed in SCI)
- **A fully implicit finite element method for bidomain models of cardiac electromechanics**
Dal H., Goektepe S., Kaliske M., Kuhl E.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.253, pp.323-336, 2013 (Journal Indexed in SCI)
- **A fully implicit finite element method for bidomain models of cardiac electrophysiology**
Dal H., GÖKTEPE S., KALISKE M., Kuhl E.
COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING, vol.15, pp.645-656, 2012 (Journal Indexed in SCI)
- **Computational modeling of growth: systemic and pulmonary hypertension in the heart**
Rausch M. K. , Dam A., GÖKTEPE S., Abilez O. J. , Kuhl E.
BIOMECHANICS AND MODELING IN MECHANOBIOLOGY, vol.10, pp.799-811, 2011 (Journal Indexed in SCI)
- **Rigid, Complete Annuloplasty Rings Increase Anterior Mitral Leaflet Strains in the Normal Beating Ovine Heart**
Bothe W., Kuhl E., Kvitting J., Rausch M., GÖKTEPE S., Swanson J., Farahmandnia S., Ingels N., Miller C.
CIRCULATION, vol.124, 2011 (Journal Indexed in SCI)
- **Coupled thermoviscoplasticity of glassy polymers in the logarithmic strain space based on the free volume theory**
Miehe C., Mendez Diez J., GÖKTEPE S., Schaezel L. M.
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.48, pp.1799-1817, 2011 (Journal Indexed in

SCI)

- **In vivo dynamic strains of the ovine anterior mitral valve leaflet**
Rausch M., Bothe W., Kvitting J., GÖKTEPE S., Miller D. C. , Ellen K.
JOURNAL OF BIOMECHANICS, vol.44, pp.1149-1157, 2011 (Journal Indexed in SCI)
- **Computational modeling of electrochemical coupling: A novel finite element approach towards ionic models for cardiac electrophysiology**
Wong J., GÖKTEPE S., Kuhl E.
COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, vol.200, pp.3139-3158, 2011 (Journal Indexed in SCI)
- **Computational modeling of passive myocardium**
GÖKTEPE S., Acharya S., Wong J., Kuhl E.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN BIOMEDICAL ENGINEERING, vol.27, pp.1-12, 2011 (Journal Indexed in SCI)
- **Anterior Mitral Leaflet Curvature During the Cardiac Cycle in the Normal Ovine Heart**
Kvitting J., Bothe W., GÖKTEPE S., Rausch M., Swanson J., Kuhl E., Ingels N., Miller C.
CIRCULATION, vol.122, pp.1683-1689, 2010 (Journal Indexed in SCI)
- **A generic approach towards finite growth with examples of athlete's heart, cardiac dilation, and cardiac wall thickening**
GÖKTEPE S., Abilez O., Kuhl E.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.58, pp.1661-1680, 2010 (Journal Indexed in SCI)
- **How do annuloplasty rings affect mitral leaflet dynamic motion?**
Bothe W., Kvitting J., Swanson J., GÖKTEPE S., Vo K., Ingels N., Miller C.
EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY, vol.38, pp.340-349, 2010 (Journal Indexed in SCI)
- **A multiscale model for eccentric and concentric cardiac growth through sarcomerogenesis**
GÖKTEPE S., Abilez O., Parker K., Kuhl E.
JOURNAL OF THEORETICAL BIOLOGY, vol.265, pp.433-442, 2010 (Journal Indexed in SCI)
- **Anterior mitral leaflet curvature in the beating ovine heart: a case study using videofluoroscopic markers and subdivision surfaces**
GÖKTEPE S., Bothe W., Kvitting J., Swanson J., Ingels N., Miller C., Kuhl E.
BIOMECHANICS AND MODELING IN MECHANOBIOLOGY, vol.9, pp.281-293, 2010 (Journal Indexed in SCI)
- **Atrial and ventricular fibrillation: computational simulation of spiral waves in cardiac tissue**
GÖKTEPE S., Wong J., Kuhl E.
ARCHIVE OF APPLIED MECHANICS, vol.80, pp.569-580, 2010 (Journal Indexed in SCI)
- **Computational modeling of electrocardiograms: A finite element approach toward cardiac excitation**
Kotikanyadanam M., GÖKTEPE S., Kuhl E.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN BIOMEDICAL ENGINEERING, vol.26, pp.524-533, 2010 (Journal Indexed in SCI)
- **Electromechanics of the heart: a unified approach to the strongly coupled excitation-contraction problem**
GÖKTEPE S., Kuhl E.
COMPUTATIONAL MECHANICS, vol.45, pp.227-243, 2010 (Journal Indexed in SCI)
- **Computational modeling of cardiac electrophysiology: A novel finite element approach**
GÖKTEPE S., Ellen K.
INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN ENGINEERING, vol.79, pp.156-178, 2009 (Journal Indexed in SCI)
- **Finite viscoplasticity of amorphous glassy polymers in the logarithmic strain space**
Miehe C., GÖKTEPE S., Mendez Diez J.
INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, vol.46, pp.181-202, 2009 (Journal Indexed in SCI)
- **Elastica-based strain energy functions for soft biological tissue**
Krishna G., GÖKTEPE S., Christian M.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.56, pp.1693-1713, 2008 (Journal Indexed in SCI)

- **A micro-macro approach to rubber-like materials. Part III: The micro-sphere model of anisotropic Mullins-type damage**
GÖKTEPE S., Miehe C.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.53, pp.2259-2283, 2005 (Journal Indexed in SCI)
- **A micro macro approach to rubber like materials Part II The micro sphere model of finite rubber viscoelasticity**
Christian M., GÖKTEPE S.
Journal Of The Mechanics And Physics Of Solids, vol.53, pp.2231-2258, 2005 (Journal Indexed in SCI Expanded)
- **A micro-macro approach to rubber-like materials - Part I: the non-affine micro-sphere model of rubber elasticity**
Miehe C., GÖKTEPE S., Lulei F.
JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS, vol.52, pp.2617-2660, 2004 (Journal Indexed in SCI)

Refereed Congress / Symposium Publications in Proceedings

- **Computational Modeling of Durability Phenomena in Concrete**
GÖKTEPE S., Ghasabeh M.
55th Annual Technical Meeting of the Society of Engineering Science (SES2018), Madrid, Spain, 10 - 12 October 2018
- **Micromechanically Motivated Modeling of Semicrystalline Polymers**
Oktay H. E. , Gürses E., Göktepe S.
XIV International Conference on Computational Plasticity COMPLAS, Barcelona, Spain, 5 - 07 September 2017
- **Computational Approaches to Integrated Modeling of Electrophysiology of the Heart**
PAŞAOĞLU Ö., GÖKTEPE S.
XIV International Conference on Computational Plasticity. Fundamentals and Applications, Barcelona, Spain, 5 - 07 September 2017
- **AN EXPERIMENTAL AND NUMERICAL STUDY OF BALLISTIC PERFORMANCE OF SFRC STRUCTURES**
ALEESSA ALAM B., Ghasabeh M., Toksoy K., Dara G., GÖKTEPE S., YAMAN İ. Ö.
29th International Symposium on Ballistics, Edinburgh, Saint Helena, 9 - 13 May 2016, pp.2088-2097
- **Multi Physics Approaches to Computational Cardiology**
GÖKTEPE S.
Euro- pean Conference on Numerical Mathematics and Advanced Applications, 14 - 18 September 2015, pp.53
- **In Silico Modeling of Electrical and Mechanical Disorders in Cardiac Tissue**
Berberoğlu E., GÖKTEPE S.
9th European Solid Mechanics Conference, 6 - 10 July 2015
- **Computational Modeling of Myocardial Infarction**
Berberoglu E., GÖKTEPE S.
IUTAM/EUROMECH Symposium Dynamics of Capsules, Vesicles and Cells in Flow (DYNACAPS), Compiègne, France, 15 - 19 July 2014, pp.52-61
- **A three field bi domain based approach to the strongly coupled electromechanics of the heart**
DAL H., GÖKTEPE S., Kaliske M., Kuhl E.
GAMM Annual Scientific Conference, 18 - 21 April 2011, vol.11, pp.931-934

Episodes in the Encyclopedia

- **Encyclopedia of Applied and Computational Mathematics**
GÖKTEPE S.
Springer, pp., 2015

Scientific Refereeing

International Journal Of Solids And Structures, SCI Journal, December 2018

Journal Of The Mechanics And Physics Of Solids, SCI Journal, November 2018

Project Supported by Higher Education Institutions, BAP Research Project, Middle East Technical University, Turkey, November 2018

Computer Methods In Biomechanics And Biomedical Engineering, SCI Journal, October 2018

Journal Of The Mechanics And Physics Of Solids, SCI Journal, September 2018

European Journal Of Mechanics A-Solids, SCI Journal, July 2018

Journal Of The Mechanics And Physics Of Solids, SCI Journal, April 2018

MOLECULAR & CELLULAR BIOMECHANICS, SCI Journal, March 2018

Biomechanics And Modeling In Mechanobiology, SCI Journal, March 2018

Project Supported by Higher Education Institutions, BAP Research Project, Middle East Technical University, Turkey, March 2018

INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES, SCI Journal, February 2018

INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN BIOMEDICAL ENGINEERING, SCI Journal, January 2018

Citations

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