

Contents

Editorial

F. Guilak

1583 The Journal of Biomechanics thanks Professor Rik Huiskes

Papers

M. Mirzaei, A. Zeinali, A. Razmjoo and M. Nazemi

1584 On prediction of the strength levels and failure patterns of human vertebrae using quantitative computed tomography (QCT)-based finite element method

E. Maeda, H. Asanuma, H. Noguchi, H. Tohyama, K. Yasuda and K. Hayashi

1592 Effects of stress shielding and subsequent restressing on mechanical properties of regenerated and residual tissues in rabbit patellar tendon after resection of its central one-third

M.T.G. Pain and S.E. Forrester

1598 Predicting maximum eccentric strength from surface EMG measurements

R. Yassi, L.K. Cheng, V. Rajagopal, M.P. Nash, J.A. Windsor and A.J. Pullan

1604 Modeling of the mechanical function of the human gastroesophageal junction using an anatomically realistic three-dimensional model

A. Rahmani, O. Rambaud, M. Bourdin and J.-P. Mariot

1610 A virtual model of the bench press exercise

R.E.D. Ferdinands, U. Kersting and R.N. Marshall

1616 Three-dimensional lumbar segment kinetics of fast bowling in cricket

B. Li, F. Li, K.M. Puskar and J.H.-C. Wang

1622 Spatial patterning of cell proliferation and differentiation depends on mechanical stress magnitude

N. Kosterina, H. Westerblad and A. Eriksson

1628 Mechanical work as predictor of force enhancement and force depression

H. Kumar, M.H. Tawhai, E.A. Hoffman and C.-L. Lin

1635 The effects of geometry on airflow in the acinar region of the human lung

P. Swider, G. Guérin, J. Baas, K. Søballe and J.E. Bechtold

1643 Characterization of bone-implant fixation using modal analysis: Application to a press-fit implant model

S.R.H. Barrett, M.P.F. Sutcliffe, S. Howarth, Z.-Y. Li and J.H. Gillard

1650 Experimental measurement of the mechanical properties of carotid atherothrombotic plaque fibrous cap

R.W. Kent, W.A. Woods, R.S. Salzar, A.M. Damon and C.R. Bass

1656 The transient relationship between pressure and volume in the pediatric pulmonary system

C.A.D. Leguy, E.M.H. Bosboom, A.P.G. Hoeks and F.N. van de Vosse

1664 Assessment of blood volume flow in slightly curved arteries from a single velocity profile

T.H. Cruz, M.D. Lewek and Y.Y. Dhafer

1673 Biomechanical impairments and gait adaptations post-stroke: Multifactorial associations

J.E. Bischoff, J.S. Hertzler and J.J. Mason

1678 Patellofemoral interactions in walking, stair ascent, and stair descent using a virtual patella model

A.L. Sheets and M. Hubbard

1685 Influence of optimization constraints in uneven parallel bar dismount swing simulations

F.H. Bieler, C.E. Ott, M.S. Thompson, R. Seidel, S. Ahrens, D.R. Epari, U. Wilkening, K.D. Schaser, S. Mundlos and G.N. Duda

1692 Biaxial cell stimulation: A mechanical validation

A. García-González, J. Bayod, J.C. Prados-Frutos, M. Losa-Iglesias, K.T. Jules, R.B. de Bengoa-Vallejo and M. Doblaré

1697 Finite-element simulation of flexor digitorum longus or flexor digitorum brevis tendon transfer for the treatment of claw toe deformity

V. Kanyanta, A. Ivankovic and A. Karac

1705 Validation of a fluid-structure interaction numerical model for predicting flow transients in arteries

L. Speelman, E.M.H. Bosboom, G.W.H. Schurink, J. Buth, M. Breeuwer, M.J. Jacobs and F.N. van de Vosse

1713 Initial stress and nonlinear material behavior in patient-specific AAA wall stress analysis

Continued on inside back cover



ELSEVIER

Available online at

 ScienceDirect

www.sciencedirect.com



0021-9290(20090807)42:11;1-C

Continued from outside back cover

- A. Nazarian, V. Entezari, V. Vartanians, R. Müller and B.D. Snyder 1720 **An improved method to assess torsional properties of rodent long bones**
- P. Varga, S. Baumbach, D. Pahr and P.K. Zysset 1726 **Validation of an anatomy specific finite element model of Colles' fracture**
- M.W. Gee, C. Reeps, H.H. Eckstein and W.A. Wall 1732 **Prestressing in finite deformation abdominal aortic aneurysm simulation**
- F. Steenbrink, J.H. de Groot, H.E.J. Veeger, F.C.T. van der Helm and P.M. Rozing 1740 **Glenohumeral stability in simulated rotator cuff tears**
- C. Curtze, A.L. Hof, H.G. van Keeken, J.P.K. Halbertsma, K. Postema and B. Otten 1746 **Comparative roll-over analysis of prosthetic feet**
- C. Guivier-Curien, V. Deplano, E. Bertrand, J. Dominique Singland and F. Koskas 1754 **Analysis of blood flow behaviour in custom stent grafts**
- Short Communications**
- J.(J). Yang, X. Feng, Y. Xiang, J.H. Kim and S. Rajulu 1762 **Determining the three-dimensional relation between the skeletal elements of the human shoulder complex**
- H. Hobara, T. Muraoka, K. Omuro, K. Gomi, M. Sakamoto, K. Inoue and K. Kanosue 1768 **Knee stiffness is a major determinant of leg stiffness during maximal hopping**
- L. Vigouroux, M. Domalain and E. Berton 1772 **Comparison of tendon tensions estimated from two biomechanical models of the thumb**
- Letters to the Editor**
- A.J. van den Bogert and S.G. McLean 1778 **Comment on "A stochastic biomechanical model for risk and risk factors of non-contact anterior cruciate ligament injuries"**
- B. Yu, M. Gross, C.-F. Lin, D. Padua, P. Weinhold and W. Garrett 1780 **Response to Letter to the Editor: Comment on "A stochastic biomechanical model for risk and risk factors of non-contact anterior cruciate ligament injuries"**
- A.D. Kuo and J. Maxwell Donelan 1783 **Comment on "Contributions of the individual ankle plantar flexors to support, forward progression and swing initiation during walking" (Neptune et al., 2001) and "Muscle mechanical work requirements during normal walking: The energetic cost of raising the body's center-of-mass is significant" (Neptune et al., 2004)**
- R.R. Neptune, F.E. Zajac and S.A. Kautz 1786 **Author's response to comment on "Contributions of the individual ankle plantar flexors to support, forward progression and swing initiation during walking" (Neptune et al., 2001) and "Muscle mechanical work requirements during normal walking: The energetic cost of raising the body's center-of-mass is significant" (Neptune et al., 2004)**
- Corrigendum**
- H.-C. Han 1790 **Erratum on "nonlinear buckling of blood vessels: A theoretical study" [J. Biomech. 41(2008):2708-2713]**
- Errata**
- S. Kudo, R. Vennell, B. Wilson, N. Waddell and Y. Sato 1791 **Erratum to "Influence of surface penetration on measured fluid force on a hand model" [Journal of Biomechanics 41 (2008) 3502-3505]**
- M.-G. Ascenzi, J. Gill and A. Lomovtsev 1792 **Erratum to "Orientation of collagen at the osteocyte lacunae in human secondary osteons" [Journal of Biomechanics 41/16 (2008) 3426-3435]**

Abstracted/indexed in: *Appl. Mech. Rev., Res. Alert, Biosis Data., Bioeng. Abstr., Cam. Sci. Abstr., Curr. Cont./Life Sci., EMBASE/Excerpta Medica; Elsevier BIOBASE Current Awareness in Biological Sciences, COMPENDEX, Engin. Indx Ann., Ei Engin. Mtg, Eng. Ind., Ergon. Abstr., Excerpt. Med., INSPEC Data., Curr. Cont. ISI/BIOBASE Database, MEDLINE, Mechanics, Oper. Res. Manage. Sci., PASCAL-CNRS Data., Curr. Cont. Sci. Cit. Ind., Curr. Cont. SCISEARCH Data., Ind. Med., Review. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.*

