

CONTENTS

VIII All-russian congress on theoretical and applied mechanics 12-16

13th Conference of the european society of biomechanics 17-17

M.A. Osipenko, Y.I. Nyashin, R.N. Rudakov, A.V. Ostanin, E.N. Kuleshova, T.N. Zhuravleva (Perm, Russia). Mathematical modelling of the foot prosthesis elastic element under bending 18-29

M. Ohta, S. Tsutsumi, S.-H. Hyon, Y.-B. Kang, H. Tanabe, Y. Miyoshi (Kyoto, Japan). Residual stress measurements of ultra-high molecular weight polyethylene for artificial joints. 30-38

Y.V. Akulich, A.S. Denisov, Y.I. Nyashin, R.M. Podgaets, V.L. Scryabin, A.V. Sotin, A.Y. Akulich (Perm, Russia). Studies on the biomechanics of proximal femur..... 39-48

E.Y. Simanovskaya, M.Ph. Bolotova, M.Y. Nyashin (Perm, Russia). Mastication as stimulus of growth, development and formation of the dentofacial system 49-53

A.S. Vitenson, Y.M. Mironov, K.A. Petrushanskaya (Moscow, Russia). Biomechanical and electromyographic aspects of the restorative treatment in patients with spinal cord injuries by means of phase electrical stimulation of muscles during walking 54-65

A.V. Novikov, N.V. Loskutova, G.V. Smirnov, M.N. Lavrov (Nizhniy Novgorod, Russia). Load distribution to various hand parts in pathological hand 66-74

A.P. Vatorinov, D.A. Kuznetsov, T.I. Subbotina, A.A. Yashin (Tula, Russia). The research *in vivo* of pepsin proteolytic activity change under the influence of vortical magnetic fields with D- and L-form of chirality 75-82

R.N. Rudakov, Yu.I. Nyashin, A.R. Podgayets, A.F. Lisovski, S.A. Miheeva (Perm, Tchaikovsky, Russia). The influence of aerodynamic forces on the movement of sportsmen and sport balls..... 83-94

M.B. Hidirova (Tashkent, Uzbekistan). Biomechanics of cardiac activation: the simplest equations and modelling results 95-103