

HIGHLIGHTS

Muybridge Lecture

John P. Paul (UK) : Strength Requirements for Internal and External Prostheses S1

President Lecture

Peter R. Cavanagh (USA) : The Foot-Ground Interface: Modeling and Experimentation S2

Wartenweiler Memorial Lecture

V. Reggie Edgerton (USA) : Transmission of Forces within Mammalian Skeletal Muscles S3

KEYNOTE LECTURES

Richard B. Stein (CAN) : Biomechanical Models for Functional Electrical Stimulation of Paralysed Muscles S4

Jésus Dapena (USA) : The Influence of Muscle Physiology and Mechanics on Sports Techniques S5

Pietro E. di Prampero (ITA) : Cycling on Earth, in Space, on the Moon S6

Peter A. Huijing (NED) : Muscle as Collagen Fiber Reinforced Composite Material: Force Transmission
in Muscle and Whole Limbs S7

Richard L. Lieber (USA) : Intraoperative Measurements of Human Wrist Muscle Sarcomere Lengths S8

Rik Huiskes (NED) : Biomechanics and Osteoporosis S9

ROBOT SESSION

Hirofumi Miura (JPN) : Intelligent Motion of Robot S10

Kyoichi Tatsuno (JPN) : A Robot that Plays Beach Volleyball with a Human S11

Kuniaki Iizuka (JPN) : Ski Robot: Movement of Alpine Skier S12

ISB Promising Young Scientist Award

Amy C. Courtney (USA) : Sample Sizes, Statistical Power and the Significance of Importance S13

<i>Page</i>	<i>Title</i>	<i>Authors</i>	<i>Category</i>
25th August, Hall A			
1	Real-Time Motion Analysis by means of Passive Markers	G. Baroni, G. Ferrigno	1
2	Influence of Number of Markers Per Body Segment on Knee and Ankle Kinematics - an In-Vivo Study	W. Barth, K. J. Deluzio, P. A. Costigan, U. P. Wyss	1
3	A General Kinematic Representation For Human Multi-Joint Systems	D. O. Anderson, A. M. Hollister, K. Hollerbach	1
4	Errors in Applying the Screw Deviation Method to Single Degree of Freedom Mechanisms	K. Hollerbach, A. M. Hollister, R. L. Van Vorhis	1
5	An Inexpensive Method of Measuring One, Two or Three Dimensional Displacement of the Human Body during a Range of Human Movement Studies	P. J. Rowe	1
6	On Expression of Human Body Motion	T. Nishimura, T. Sakata, Y. Wada, M. Ito	1
7	Influences of Inertial Properties on Joint Resultants	A. Arampatzis, J. Gao, G. P. Bruggemann	1
8	The "Axial Rotational Rhythm" of Upper Extremity	W. N. Chang, F. C. Su, H. W. Wu, Y. W. Chang, Y. C. Lu, C. Y. Wong	1
9	Feedforward and Feedback Control of Center of Gravity during Lateral Arm Raising in Man	S. Vernazza, M. Cincera, A. Pedotti, J. Massion	1
10	Measurement of Human Wrist Functional Axes Motions: Preliminary Validation of Method	R. L. Van Vorhis, A. M. Hollister, P. Tittiranonda, K. Hollerbach, S. R. Burastero	1
11	An Experimental Investigation of the Upper Arm Axial Motion Range	X. Wang, F. Mazet, N. D. C. Maia, K. Voinot, J. P. Verriest, M. Fayet	1
12	Morphological Data Acquisition Using MRI/CT: Geometric Transformation of a Human Shoulder Model	* B. L. Kaptein, F. C. T. van der Helm	1
13	Shoulder Injuries on Swinging Motion of Arm	S. Yanagi, T. Nishimura, N. Watanabe, Y. Wada, M. Itoh, H. Yamashita, K. Tsurumi	1
25th August, Hall B			
14	Biomechanical Criteria for Determination of Sitting Posture	A. Hirao, N. Yamazaki	7
15	Closed-Loop Balance Control in Standing Posture	P. Bourassa, F. Prince	7
16	Manipulation Primitives for 3D Posture Simulation with a Graphical Manikin	J. P. Verriest	7
17	An Interactive Computer Graphical System for the Study of Upper Extremity Kinematics Using up to 3 Degrees of Freedom at Each Joint	J. M. Pickard, W. L. Buford Jr, K. W. Elder, R. M. Patterson	7
18	Center of Pressure (COP) Enhancement in Piezoelectric Force Plates	R. Sommer, D. Kohler, C. Calame	7
19	The Determination of Total Power during On-Water Rowing	V. V. Kleshnev	1
20	The 3D Articular Efforts in Rowing	P. Pudlo, F. Barbier, J. C. Angue	1
21	Lower Limb Muscle Activity Patterns in Females during Maximal Ergometer Rowing: Differences due to Level of Competition	R. Smith, P. Milburn	1
22	Power Production during Swim Starting	D. G. E. Robertson, V. L. Stewart	1
23	The Effects of Tethered Swimming on Freestyle Stroke Techniques	T. Takahashi, B. D. Wilson	1
24	Swimming Technique and Race Performance in 100m International Freestyle and Backstroke Events	B. D. Wilson	1

25th August, Hall C

- | | | | |
|----|--|--|---|
| 25 | Analysis of Certain Inverse Problems in Biomechanics Using Nonlinear Optimization and Boundary Element Method | H. R. Katoozian | 2 |
| 26 | Motion Analysis in Space: the EUROMIR '95 Experience | G. Ferrigno, G. Baroni, G. Andreoni, A. Pedotti | 2 |
| 27 | A Biomechanical Method for the Construction of a "Standard Motion" and the Identification of Essential Motions by Motion Variability | M. Ae, N. Fujii, J. Takamatsu | 2 |
| 28 | A Flexible Computational Environment to Track Markers and Reconstruct Trajectories in Biomechanics | R. Barros, R. Brenzikofer, W. Baumann, E. C. Lima, S. Cunha, P. Figueroa | 2 |
| 29 | Application of 3D Real-Time Motion Analysis Technique to Functional Electrical Stimulation: a Tool for the Development of Closed-Loop Control Strategies | M. Ferrarin, G. Baroni, G. Ferrigno, E. D'Acquisto, A. Pedotti | 2 |
| 30 | 3-D Back Surfaces as an Ergonomic Tool | G. Andreoni, M. Rabuffetti, A. Tarzia, A. Pedotti | 2 |
| 31 | Biomechanical Modelling of the Human Spine - Optimization of the Thrust Line in the Human Spine Modelled as an Arch | D. C. Xiao, B. S. Acar, K. Case, J. M. Porter | 2 |
| 32 | Spine Curvature Analysis of 97 Subjects | C. Duque, R. Brenzikofer, R. Barros | 2 |
| 33 | Biomechanical Evaluation of a Spinal Instrumentation Using a New Test Apparatus - Experimental and Finite-Element Investigations | H. H. Chen, C. K. Cheng, H. Y. Shao, C. L. Liu | 2 |
| 34 | Experimental Procedure for Studying Scoliosis during Surgery | B. Watier, C. Lecire, I. Ghanem, J. Dubousset, W. Skalli, F. Lavaste | 2 |
| 35 | Elimination of Torque Artifact in Dynamometers | K. S. Olree, J. R. Engsborg, S. A. Ross | 2 |

25th August, Hall D

- | | | | |
|----|--|---|---|
| 36 | The Effect of Muscle Length Reduction on Gastrocnemius Motoneuron Excitability | A. G. Cresswell, W. N. Loscher, A. Thorstensson | 3 |
| 37 | Long-Lasting or Transient Force Depressions in Skeletal Muscles Following Shortening? | W. Herzog, T. R. Leonard | 3 |
| 38 | Modelling of Post-Shortening Force Deficit and Post-Lengthening Force Enhancement with a Hill Type Muscle Model | * K. Meijer, H. J. Grootenboer, H. F. J. M. Koopman, B. J. J. van der Linden, P. A. Huijing | 3 |
| 39 | Mechanical Explanation of Muscle Fiber Slack-Length | * B. J. J. van der Linden, H. F. J. M. Koopman, P. A. Huijing, H. J. Grootenboer | 3 |
| 40 | Changes in Muscle-Tendon Unit during Passive Stretching in Humans | * Y. Kawakami, Y. Ichinose, T. Fukunaga | 3 |
| 41 | Forces of Individual Cat Ankle Extensor Muscles during Locomotion Predicted Using Static Optimization | B. I. Prilutsky, W. Herzog, T. L. Allinger | 3 |
| 42 | An Evaluation and Validation of Parkinsonian Gait | N. Chockalingam, S. Yogaraj, C. U. Velmurugendran | 3 |
| 43 | Structural and Functional Factors that Determine Peak Plantar Pressure under the Foot during Walking | * E. Morag, P. R. Cavanagh | 3 |
| 44 | Intrinsic Muscle Properties Facilitate (Loco-) Motor Control | * K. G. M. Gerritsen, A. J. van den Bogert, M. Hulliger | 3 |
| 45 | 3D Kinematics of the Ankle Joint and Medial Arch of the Foot and Activity of Selected Extrinsic Muscles during the Stance Phase of Walking | A. E. Hunt, R. M. Smith | 3 |
| 46 | Achilles Tendon Force during Walking: Measurements with the Optic Fiber Technique | T. Laitinen, P. V. Komi, J. Lukkariniemi | 3 |

47
25th
48
49
50
51
52
53
54
55
56
57
58
59
60
25th
61
62
63
64
65
66
67
68
69
70

	47 Freezing and Freeing Degrees of Freedom in a Model Neuro-Musculo-Skeletal System for Development of Locomotion	<i>G. Taga</i>	3
	25th August, Hall E		
	48 Kinematics and Dynamics of Ankle Joint in Normal and Pathologic Gait	<i>M. Galli, M. Crivellini, F. Motta, M. Tarter, A. Vallatta</i>	5
	49 Unrestrained Monitoring of Stride Length and Walking Velocity Using a Piezoelectric Gyroscope	<i>S. Miyazaki</i>	5
	50 Plantar Pressure Distribution during Gait after Reconstruction of Severe Tibial Fractures and Large Soft-Tissue Damage	<i>J. Perttunen, H. Nieminen, E. Tukiainen, S. Asko-Seljavaara, P. V. Komi</i>	5
	51 Transtibial Amputee Gait Adaptations as a Result of Prosthetic Inertial Manipulation	<i>S. C. Hillery, E. S. Wallace</i>	5
	52 Trans-tibial Amputee Knee and Hip Kinematics and Kinetics for Natural and Fast Walking Using a Custom-Made DER Prosthesis	<i>S. C. Hillery, E. S. Wallace</i>	5
	53 Pain Preventive Gait Synergy Hypothesis in Leg Amputees	<i># M. R. Pitkin</i>	5
	54 The Passive Elastic Moment of ACL Deficient Knee Joint with and without a Functional Knee Brace	<i>M. Lamontagne, P. Johnson, B. Diallo, J. P. Desrochers</i>	5
	55 Effects of Using a Semitendinosus/Gracilis Tendon Autograft for ACL Reconstruction on Muscle Activation Patterns during a Landing Task	<i>J. M. Manning, J. R. Steele, A. J. Clingeffer, L. A. Pinczewski</i>	5
	56 Effects of Chronic ACL Deficiency on Muscle Activation Patterns during an Abrupt Deceleration Task	<i># J. R. Steele, J. M. M. Brown</i>	5
	57 The Feasibility of Using Video Stereography to Predict the Displacement of Anterior Cruciate Ligament - Cadaveric Study	<i>W. W. N. Tsang, K. M. Chan, A. F. T. Mak</i>	5
	58 Computerized Pendulum Test for Spasticity Evaluation in Paraplegic Patients: Measure Repeatability and Daily Variability	<i>M. Ferrarin, L. Brunati, V. Samarani, R. Spadone, A. Pedotti</i>	5
	59 The Influence of Medial and Lateral Orthotic Wedges on Loading of the Plantar Aponeurosis. In Vitro Study	<i># G. F. Kogler, F. B. Veer, S. E. Slomonidis, J. P. Paul</i>	5
	60 Reproducibility of Non-Cyclic Upper Extremity Movement in Clinical Arm Function Evaluation	<i>R. Kastein, H. A. M. Seelen, Y. J. M. Potten</i>	5
	25th August, Hall PA		
	61 Analysis of Fractal Fluctuation in the Stride Interval Series of Human Walking	<i>* K. Masani</i>	1
	62 Analysis of Movement at Lower Limb during Uphill and Downhill Walking	<i>K. Takahashi, T. Isaka, S. Noge, F. Kuki, T. Mori</i>	1
	63 Mechanical Energy Expenditure and Effectiveness of Mechanical Energy Utilization of Walking for the Elderly and the Young Males	<i>* H. Okada, M. Ae, N. Fujii</i>	1
	64 Normalization and Quantitative Analysis of EMG Signal on Lower Limb Muscles in Normal Walking as Compared with Walking Up/Down Stairs	<i>Y. Nishijima, M. Yoshizawa, S. Kumagai, K. Shimizu, R. Ogawa, O. Kameyama</i>	1
	65 Characteristics of Recognition between Aged Persons and Young Adults on Downstair Walking: By Using an Eye-camera System	<i>K. Tamura, K. Watanabe, K. Yamanobe</i>	1
	66 Impact Acceleration of Lower Extremity in Stepping Down Stairs	<i>H. Karasuno, K. Sakamoto</i>	1
	67 Biomechanical Implications of Torsional Deformities in Children Gait	<i>J. S. Her, Y. L. Chou, F.C. Su, C.J. Lin, W.K. Huang</i>	1
	68 Relationship between Anthropometric Data and Gait Pattern in Children	<i>K. Tsunoda, S. Noriyasu, H. Takeda, T. Sasaki, T. Suda</i>	1
	69 Gait Analysis of 60-80 Years Old People during Level Walking	<i>A. Y. Lu, X. Wu</i>	1
	70 Lower Limb Joint Moments during Normal and Fast Walking of Elderly Women	<i>M. Uematsu, M. Kaneko</i>	1

71 Biomechanical Evaluation of Dynamic and Electrophysiologic Responses during Gait in Diabetic Patients	I. C. N. Sacco, A. C. Amadio	1	25th 97
72 Gait of the Elderly Women with Load Carriage	A. Iiboshi, M. Suenaga, T. Matsushita	1	98
73 Ventilatory Threshold and Mechanical Efficiency during Wheelchair Propelling on a Treadmill	A. Azuma	1	99
74 Shoe-Surface Influence on Impact Shock Transmission and Attenuation	E. C. Hardin, J. Hamill	1	100
75 Evaluation of Rearfoot Kinematics as a Function of Shoe Mileage	B. Van Gheluwe, W. Lofgren, K. Rutgeers	1	101
76 Biomechanical Analysis of Drop Landing from Different Heights in Taiwan College Students	C. Huang, I. J. Chang, R. H. Tu	1	102
77 The Pattern Difference during Sustained Long Standing between Trained and Untrained Young Males	J. Kataoka, M. Sacragi, H. Kikuchi, A. Hayami, K. Maie	1	103
78 A Study on the Biomechanics of Slipping Accidents	K. W. Seo, Y. J. Yoon, J. S. Lee, Y. J. Kim, S. J. Jo, H. S. Lee, M. R. Jung, S. B. Park	1	104 105
25th August, Hall PB			
79 Investigations on Kinematics of Giant Slalom's Tactics in Alpine Skiing	W. S. Erdmann, V. Giovanis	1	106
80 Biomechanics of Ski Slalom -Comparison of Slaloms with Pole Setting and without Pole Setting-	H. Ikegami, H. Sodeyama, Y. Ando, Y. Ikegami, S. Sakurai, K. Yabe	1	107
81 Kinematic Analysis of Snowboard Turn -Comparison with Ski Turn-	Y. Ikegami, S. Sakurai, K. Yabe, H. Nunome, H. Ikegami, H. Sodeyama, A. Okamoto, T. Terashima, Y. Ando	1	108
82 Joint Torques of the Support Leg in Speed Skating	M. Yuki, M. Ae	1	109
83 A Biomechanical Study of Dynamics and EMG in Gymnastics : Backward to Handstand	L. Mochizuki, I. C. N. Sacco, A. Faro, A. C. Amadio	1	110
84 Evaluation of Symmetry in Snatch Pull Technique	T. Isaka, A. Albrecht, M. M. Ryan, B. I. Prilutsky, R. J. Gregor	1	111
85 A New Approach to Appreciating the Mechanical Output of Individual Joints in Vertical Jump	* A. Nagano, Y. Ishige, S. Fukushima	1	112
86 Does the Isometric Strength Affect the Vertical Jump Performance?	J. Janiak, J. Gajewski	1	25th 11
87 A Research of Forces and Their Timings of Ski Jumping	K. Yamanobe, K. Tamura, K. Watanabe	1	11
88 Motion Analysis at Clearance the Fence during the Show Jumping	K. Terada, A. Nagata, K. Akihiro	1	11
89 Leg Length Determines Ankle Speed in Planar Soccer Instep Kick	M. Isokawa, T. Kojima	1	11
90 Biomechanical Analysis of the Wushu Jump-Slap-Kick	C. Y. Chen, C. Huang, D. Y. Chen, J. P. Tang	1	11
91 Biomechanical Analysis of Two Different Flying-Kicks of Chinese Martial Arts	C. Huang, C. Y. Chen, T. Y. Chen, J. P. Tang	1	11
92 The Impact Effect of the Chinese Martial Arts Forward-Kick	Y. Liu, L. R. Chuang	1	11
93 The Second Impact Force of Tai Chi Fist Punches	L. R. Chuang, N. Yang, S. Chen, C. J. Chuang	1	11
94 A Biomechanical Study of Karate Strikes	* A. Shibayama, S. Fukushima	1	11
95 A Study of the Relationship between the Weight of Shinai and Striking Motion in Elementary School Aged Kendoists	K. Miyamoto, S. Yamagami	1	11
96 A Biomechanical Characteristics on the Striking Motion of High Trained Aged Kendo Man	S. Yamagami, F. Nakiri, N. Yokoyama, K. Miyamoto	1	1

25th August, Hall PC

97	Discharge Properties of Human Motor Unit during Submaximal Voluntary Contraction	M. Kamo, S. Morimoto	3
98	Fractal Dimension of Surface EMG during Isometric Contraction is Not Related to Muscle Activation, but to Muscle Fatigue	* M. Shinohara, M. Kozaki, T. Yoshihisa, T. Fukunaga	3
99	Electromechanical Delay of Concentric, Eccentric and Isometric Muscle Actions in Men and Women	T. Takase, M. Taguchi	3
100	Effects of Stretch Reflex Modulation on the Movement Performance during Adjustment Movements	T. Kizuka, T. Asami, K. Tanii, M. Okada	3
101	Effect of Initial Joint Angles on Stretch Reflex Sensitivity in Elbow Flexor Muscles	* K. Nakazawa, S. Yamamoto, T. Fukunaga, M. Itoh, H. Yano	3
102	Modulation of Stretch Reflex Responses with Initial Joint Angles in Elbow Flexor Muscles	* S. Yamamoto, K. Nakazawa, T. Ohtsuki, H. Yano	3
103	Reflexive Control of the Delft Shoulder Model	L. A. Rozendaal	3
104	Soleus H-Reflex during Voluntary Lumbar Muscle Contraction	S. Tanaka, A. Nagata	3
105	Non-Linear Property of the Triceps Surae H-Reflexes during Fast Plantarflexion in Humans	T. Komiyama, M. Humoto	3
106	Force Trajectory and EMG Activity in Ballistic Knee Extension	S. Mizumura, T. Yoneda, T. Kimura	3
107	Muscle Activation Patterns and Performances during Successive Jumps on a Various Inclined Platform	H. Nishizono, A. Matsuo, H. Kintaka, M. Kon, Y. Ohmura, H. Shibayama, A. Maeda	3
108	EMG Responses in the Rotator Cuff Muscles Elicited by Electrical Stimulation of Human Shoulder Joint Afferents	M. Voigt, J. Jackobsen, T. Sinkjaer	3
109	Effect on Motor Neuron Activation of the Triceps Surae in Co-Activation of the Sternocleidomastoid Muscles during Clenching Occlusion	M. Muro, M. Yona, C. Tadano, H. Seki, K. Oka, K. Kawada, T. Yamagata	3
110	Effects on Motor Unit Activity during Changes of Skin Temperature by Instantaneous Cold Treatment	M. Yona, M. Muro, C. Tadano, H. Seki	3
111	Lower-Limb EMG Activities in a Patient with Spinal Cord Injury during Walking with the Aid of the Weight-Bearing Control Orthosis	N. Kojima, K. Nakazawa, S. Yamamoto, H. Yano	3
112	Effects of Psychological Pressure on Ball-Stroking Movements	* N. Matsumoto, M. Yanase-Fujiwara, T. Ohtsuki	3

25th August, Hall PD

113	Picturing Activities of Daily Living	W. H. Groeneveld, K. Kiani, M. P. J. M. van Riel	5
114	3D-Kinematic and Kinetic Analysis of the Biomechanical Effects on the Walking Pattern among Patients with Drop-Foot Using the Peroneal Nerve Stimulator	M. Voigt, T. Sinkjaer	5
115	The Biomechanics of Partial Foot Amputee Gait	M. Dillon, T. M. Bach	5
116	Geometrical Assessment of the Range of Motion of Lower Limb Joints	H. Kuno, N. Suzuki, K. Akataki, M. Watakabe, K. Mita, M. Ito	5
117	Study of Anterior Displacement of the Tibia in Motion	T. Fukui, S. H. Kim, Y. Kuroki, Y. Mori, A. Fujimoto, H. Kanai	5
118	The Angular Damping Coefficient of ACL Deficient Knee Joint with and without a Functional Knee Brace	M. Lamontagne, P. Johnson, B. Diallo, J. P. Desrochers	5
119	Kinematic Analysis of the Hip Joint Motion in Baseball Pitching	K. Miyashita, H. Kobayashi, K. Yokoe	5
120	Effect of Gamma-Irradiation on Microhardness of Bone	M. Ramrakhiani	4
121	Finite Element Analysis of the Stress Distribution within the Seated Buttock and Cushion	C. J. Chiang, Y. L. Chou, H. L. Wang, S. Z. Lou	4

122	The Effect of Task-Related Training of Sit-to-Stand in a Group of Chronic Stroke Patients	<i>J. H. Carr, C. K. Monger, V. Fowler</i>	5	147
123	Maximal Voluntary Ventilation during Water Immersion	<i>M. Kimura, A. Nagata</i>	5	148
124	Analysis of the Intensity of the Prone Back Exercise to Strengthen the Back Muscles	<i>A. Plamondon, C. Marceau, S. Stainton, P. Desjardins</i>	5	149
125	Feature of Power Spectrum of Pathological Tremor	<i>H. Makabe, K. Sakamoto</i>	5	150
126	The Effect of Magnitude and Duration of Pressure on Cerebral Cortex in the Rat	<i>M. S. Tsai, Y. L. Chou, G. L. Chang, C. L. Shen</i>	5	151
26th August, Hall A				
127	The Effects of Clipless Float Pedal on the Articulations of the Leg in Cycling	<i>F. Maronneaud, F. Barbier, J. C. Angue</i>	1	152
128	Cycling Kinematics at Three Power Outputs - Bilateral Differences	<i>R. J. Neal, P. E. Martin, T. D. Royer, P. F. Vint, S. McLean, D. A. Aitken</i>	1	26th 153
129	Effects of Footwear on Posture Control of Running Target Shooters	<i>J. T. Viitasalo, P. Era, K. Norvapalo, H. Mononen, K. Mononen, M. Salonen</i>	1	154 155
130	Force Affecting between Butt and Shoulder during Aiming Phase in Running Target Shooting	<i>H. V. Mononen, J. T. Viitasalo</i>	1	156
131	Posture Control in Competitive and Novice Shooters in Running Target Rifle Shooting	<i>K. Norvapalo, P. Era, H. Mononen, K. Mononen, M. Salonen, J. T. Viitasalo</i>	1	157
132	Posture Control in Running Target Shooting	<i>J. T. Viitasalo, P. Era, K. Norvapalo, H. Mononen, K. Mononen, M. Salonen</i>	1	158
133	Posture Stability of Shooters	<i>W. L. Wu, F. C. Su, W. D. Lee, C. C. Chang</i>	1	159
134	Automatic Method for Cycle Extraction and Segmentation in Human Gait Kinematic Data	<i>E. Cordier, R. A. Inria</i>	1	160
135	Mechanical Energy Contribution of the Segments to Human Locomotion	<i>S. C. Correa, A. C. Amadio, U. Glitsch, W. Baumann</i>	1	161
136	Uncertainty in 3-D Joint Moments Associated with Human Gait	<i>B. L. Davis, A. S. de Vasconcellos, T. M. Lundin</i>	1	162
137	Moment-Based Parameterization of Cyclograms of Slope-Walking	<i>* A. Goswami, E. Cordier</i>	1	163
138	Pendular Efficiency at Various Speeds of Walking in Elderly Women	<i>M. Kaneko, H. Fujiwara, T. Fuchimoto</i>	1	164
139	Plantar Pressure and Dynamic Similarity (Spontaneously Chosen Walking Velocity vs Normalised Velocity)	<i>P. Moretto, P. Pelayo, M. A. Lafortune</i>	1	165
140	Three-Dimensional Kinematics of Normal Walking Gait Using a Five Segment Model	<i>U. Rattanaprasert, R. Smith, W. Gilleard</i>	1	166
141	A Detailed Analysis of Motion Occurring in the Talocalcaneal Joint during Normal Walking	<i>P. Westblad, A. Lundberg, I. G. Winson, K. Halvorsen, T. Hashimoto</i>	1	167
26th August, Hall B				
142	A New Quantitative Approach for Archery Stability Analysis	<i>T. Y. Shiang, C. J. Tseng</i>	8	26th 168
143	Computer Simulation in Biomechanical Testing of Tennis Rackets	<i>U. Glitsch, C. Detlefs, W. Baumann</i>	8	169
144	About the Dynamic Behaviour of the Ski-Binding-Boot-System during Turns in Alpine Skiing Focused on the Use of Binding Plates	<i>W. Niessen, E. Muller, C. Raschner, H. Schwameder</i>	8	170
145	Biomechanical Estimate of Motion Kinetics Under Varying Motion Intensity in Weightlessness	<i>A. V. Zinkovsky, V. A. Sholukha, D. G. Arsenjev, A. A. Ivanov</i>	1	171
146	Human Motor Strategies Evaluation in Long Term mGravity Exposure	<i>* G. Baroni, G. Ferrigno, G. Andreoni, A. Pedotti</i>	1	172

147	Effect of Orientation on Human Posture in Neutral Buoyancy and Parabolic Flight	J. Zimmerman, D. L. Akin	1
148	Aircraft Control Forces and Electromyographic Activity during Landings in an Aermacchi MB339CB Flight Simulator	D. J. Hewson, P. J. McNair, R. N. Marshall	1
149	3-D Quantitative Assessment of Neutral Body Posture	G. Andreoni, G. Ferrigno, G. Baroni, A. Pedotti	1
150	Mechanical Power at the Ankle Joint during Standing	H. Lanshammar, A. Karlsson	1
151	Incidence of Falls Resulting from Trips Induced in Older Adults	M. J. Pavol, T. M. Owings, K. T. Foley, M. D. Grabiner	1
152	Ground Reaction-Force Characteristics of Healthy Young Adults in Negotiating Obstacles	R. K. Begg, W. A. Sparrow, N. D. Lythgo, S. Lewis	1
26th August, Hall C			
153	Magnetic Resonance Imaging in Gait Analysis: Direct Determination of Joint Centres from Skin Marker Locations	K. Kuspert, D. Scale, A. Arndt, G. P. Bruggemann, W. Hauger	2
154	A Procedure for Quantitative Kinematic Analysis in Cycling	R. Rodano, R. Squadrone	2
155	Reliability of Pool Testing: Ability of Swimmers to Swim at Predetermined Speeds	K. L. Keskinen	2
156	Shoulder Loads and Force Distribution during Sanding of a Ceiling	L. Lindbeck, D. Karlsson, S. Kihlberg, K. Kjellberg, K. Rabenius, B. Stenlund, J. Tollqvist	2
157	Methodology for the "Drag Crisis" Detection in Services Executed by High Level Volleyball Athletes	P. Depra, R. Brenzikofer, R. Barros, E. C. Lima	2
158	Drag, Lift, Lift-to-Drag Ratio and Pitching Moment during Early Flight in Ski Jumping Measured Using a 2/3 Scale Model in Wind Tunnel	P. H. Luhtanen, M. Pulli, P. P. Kempainen	2
159	Multifactorial Method for Driving Posture Analysis	G. Andreoni, M. Rabuffetti, A. Tarzia, A. Pedotti	2
160	Force Platform Studies to Assess Foot and Footwear Comfort	N. Chockalingam, E. Rajesh	2
161	A Comparison of Force Plate and Insole Pressure Sensor Measurements	P. Fiolkowski, J. Bauer, M. Tillman, D. Brunt	2
162	An Accelerometer Based Posture Detection System	R. Toivonen, E. -P. Takala, E. Viikari-Juntura, T. Haapio	2
163	Opto-Electronic Analysis of In-Vitro Knee Kinematic. A Preliminary Study	M. Vernizeau, Y. Lefebvre, R. Minfelde, J. Y. Jenny, F. Lavaste	2
164	Quality Assessment of the Performance of a Motion Analysis Laboratory	M. Rabuffetti, F. Benvenuti, R. Mecacci, S. Nicolodi, S. Stanhope	2
165	Ground Reaction Artifact: Identification and Correction algorithm	M. Rabuffetti, C. A. Frigo	2
166	Wavelets Representation of Human Movement Kinematics Signals	S. Fioretti, T. Leo, F. Verdini	2
167	Extraction of Repeating Patterns via Optimally Weighted Ensemble Averaging	V. P. Stokes, H. Lanshammar, A. Thorstensson	2
26th August, Hall D			
168	Exhausting Stretch-Shortening Cycle (SSC) Exercise Causes Greater Impairment in SSC than in Concentric Performance	T. Horita, P. V. Komi, I. Hamalainen, J. Avela	3
169	Effects of Eccentric and Concentric Training on Muscle Strength, Morphology and EMG	J. Y. Seger, A. Thorstensson	3
170	Fatigue Effects of Differently Intensive Exhaustive Stretch-Shortening Cycle Exercises	V. Strojnik, P. V. Komi	3
171	Application of Neuromuscular Electrical Stimulation in Developing Rowers' Muscles	* D. Guo, C. Sun, Y. Lie, H. Guo, K. Jin	3

172	Short and Long Term Effects of Rhythmical Neuromuscular Stimulation on the Flexibility	<i>J. Kunne Meyer, D. Schmidtbleicher</i>	3	197
173	Neuromuscular Adaptations during Strength Training in Middle-Aged and Elderly Men and Women	<i>K. Hakkinen, M. Kallinen, M. Alen, M. Izquierdo, K. Jokelainen, H. Lassila, E. Malkia, W. Kraemer, R. Newton</i>	3	26th 198
174	Neuromuscular Function after Marathon	<i>T. Pullinen, M. Leynaert, P. V. Komi</i>	3	199
175	Motor Unit Recruitment and Rate Coding during Voluntary Low Force Shoulder Abduction	<i>B. R. Jensen, M. Pilegaard, G. Sjogaard</i>	3	200
176	Dynamic Postural Stability of the Shoulder	<i>L. A. Rozendaal</i>	3	201
177	Quasi-Static Postural Stability of the Shoulder	<i>L. A. Rozendaal</i>	3	202
178	A New Kinematic Model of the Shoulder Complex	<i>D. Cote, M. Hubbard</i>	3	203
179	Contribution of Cutaneous Mechanoreceptors to the Stability of Human Upright Posture - An Experimental Investigation	<i>G. Wu</i>	3	204
180	The Body Orientation as a Controlled Variable in Human Upright Stance	<i>G. Wu</i>	3	205
181	The Role of Intrinsic Muscle Properties and Reflexive Feedback during Perturbed Posture Tasks of the Human Arm	<i>G. G. Brouwn</i>	3	206
26th August, Hall E				
182	Sacrum Load-Displacement Behavior and Sacroiliac Self-Locking in A Weightlifter	<i>G. Gosselin, M. C. Normand, D. Lafond</i>	5	207
183	Intervertebral Movements Produced by Posteroanterior Mobilisation	<i>R. Y. W. Lee, J. H. Evans</i>	5	208
184	Stability of the Whole Lumbar Spine after Graded Fenestrations and Discectomies	<i>W. W. Lu, D. K. Ruan, K. D. K. Luk, J. C. Y. Leong</i>	5	209
185	Spinal and Rib Cage 3-D Kinematics for Normal and Idiopathic Scoliosis Subject	<i>W. W. Lu, J. C. Y. Leong, K. D. K. Luk, M. K. Lee</i>	5	210
186	Prolonged Biomechanical Load on Spinal Tissues is a Risk Factor for Occupational Low Back Pain	<i># R. Norman, R. Wells, P. Neumann, M. Kerr, J. Frank, H. Shannon, the OUBPS Group</i>	5	211
187	The Relationship between Arm Posture and Trapezius EMG Activity in Vocational Work Tasks	<i>R. H. Westgaard, O. Vasseljen jr</i>	5	212
188	Regaining of Postural Stability after Traumatic Thoracic Spinal Cord Injury: a Longitudinal Clinical Study	<i>H. A. M. Seelen, Y. J. M. Potten</i>	5	213
189	Relationship between Muscle Strength and Postural Sway in Subjects Following Inversion Sprain of Ankle	<i>R. J. Cherng, C. P. Lin, F. C. Su, J. S. Her</i>	5	214
190	Diverging Activity Patterns in Deep Trunk Muscles during Trunk Rotations	<i>E. A. Andersson, H. Grundstrom, A. Thorstensson</i>	5	215
191	Trunk Flexion Force during Pregnancy	<i>W. L. Gilleard</i>	5	216
192	Function of Intra-Abdominal Pressure in Ballistic and Non-Ballistic Isometric Force Exertion of the Trunk	<i>K. Gamada, M. Harimoto, T. Fukubayashi, H. Nakajima</i>	5	26th 21
193	Biomechanics of Abdominal Belts	<i>K. Miyamoto, S. Ueki, N. Iinuma, A. Kaneko, Y. Miyata</i>	5	21
194	Differences in Braced and Nonbraced Maximum Concentric and Eccentric Knee Extension Strength in Subjects with Patellofemoral Joint Pain	<i>T. M. Owings, M. D. Grabiner</i>	5	21
195	Effects of Strength Training and Detraining on Muscle Strength and Force-Time Variables in Patients with Recent Onset Inflammatory Arthritis	<i>A. Hakkinen, P. Hannonen, I. Jappinen, L. Laitinen, K. Hakkinen</i>	5	21
196	Ankle Spasticity and Strength in Children with Spastic Diplegia Cerebral Palsy	<i>S. A. Ross, J. R. Engsberg, K. S. Olree, T. S. Park</i>	5	22

3	197	The Feasibility of Using Accelerometry in the Assessment of Muscle Strength	W. W. N. Tsang, K. S. C. Kwong	5
1, 3		26th August, Hall PA		
	198	The External Power Output in Simulated Movements for Running and the Movements of Lower Extremities in Sprint Running	A. Matsuo, Y. Kaku, H. Kintaka, H. Hirata	1
mi 3	199	Body Segmental Functions in the Support Phase of Sprinting	K. Ogiso, T. Yasui, K. Aoyama, A. Kushima	1
ard 3	200	A Longitudinal Study on the Development of Running Motion of Boys Aged Seven to Fifteen	K. Katoh, M. Miyamaru, M. Ae	1
3	201	Changes of Running Speed, Step Frequency and Stride Length during 800m Race	M. Sugita, A. Matsuo, K. Kobayashi, M. Ae	1
3	202	The Description of the Variability of Ground Reaction Forces during Running Using Mechanical Model Parameters	H. Yukawa	1
3	203	Effectiveness of Mechanical Energy Utilization in Long Distance Runners	Y. Enomoto, M. Ae, H. Okada	1
3	204	Optimal Running Economy among Elite Runners may be Related to a Low Relative Level of Muscle Activation	M. Voigt, H. Arnbjerg, H. O. Mogensen, K. Klausen	1
3	205	Three Dimensional Analysis of the Hip Joint Torques and Powers for Japanese Female Hurdlers	N. Fujii, M. Ae, K. Miyashita	1
ond 5	206	Analysis of the Race-Patterns of Men's 400m Hurdles -The Races of the XXVIth OLYMPIAD in Atlanta, 1996 -	Y. Morioka, M. Ae, M. Sugita, A. Matsuo, K. Kobayashi	1
5	207	The Analysis of Race in 400M Hurdle for Women	T. Yasui, K. Ogiso, K. Aoyama, Y. Sekioka, J. Nagai, K. Miyashita, M. Ogata	1
ik, 5	208	Electromyographic Activity and Biomechanics of the Transfer of Horizontal Speed into Angular Velocity during the Takeoff in the Long Jump	W. Kakihana, S. Suzuki	1
5	209	A Three-Dimensional Analysis of Angular Momentum in the Asian Top Discus Throwers.	T. Miyanishi, S. Sakurai, A. Wakayama	1
5	210	Three-Dimensional Analysis of Pole Moment and Joint Torques in Elite Pole Vaulters	J. Takamatsu, M. Ae, N. Fujii	1
5	211	A Three Dimensional Analysis of Wheelchair Basketball Shooting In Quadriplegic Players	H. Nunome, W. Doyo, S. Sakurai, Y. Ikegami, K. Yabe	1
5	212	Changes in Joint Torques and Momenta of the Body Segments by the Practice in a Medicine-Ball Backward Throwing	Y. Kubo, M. Ae, N. Fujii	1
5	213	Energy Control at Contact Phase of Biomechanical System with Ball	G. P. Ivanova	1
5	214	Relationship between Left Forearm Muscle Activities and Additional Torques about Grip of Japanese Bow in Release	S. Hosoya, M. Okada, C. Miyaji, K. Ohyama Byun	1
5	215	Ground Reaction Forces of Japanese Drum Playing	N. Yasuda, H. Yamamoto, A. Azuma, M. Fukushima	1
5		26th August, Hall PB		
5	216	How to Quantify Postural Control with Force Plate Data?	A. Karlsson	1
5	217	Structural and Parametrical Variations of the Vertebral Column Model for the Dynamical Loads Assessments	V. A. Sholukha, A. V. Zinkovsky, K. J. van Zwieten, P. L. Lippens, A. A. Ivanov	1
5	218	Low Back Forces and Muscle Activity in New Zealand and Australian Traditional Sheep Shearing Techniques	R. N. Marshall, A. Burnett	1
5	219	Range of Motion and Muscle Activity during Active Trunk Rotation of Tractor Drivers and Office Workers	A. Boden, K. Oberg	1
5	220	Trunk Muscle Strength in Eccentric and Concentric Lateral Flexion	Q. M. Huang, A. Thorstensson	1

221	Trunk Extension and Flexion Torque in Athletes	<i>S. Ikegawa, M. Shimoda, H. Nagareda, K. Kubo, J. Okada, Y. Kawakami, K. Funato, T. Fukunaga</i>	1	245
222	Biomechanical Analysis of Chair-Rise and Picking Up From Floor in the Pregnancy	<i>Y. C. Chen, Y. L. Chou, H. C. Chen</i>	1	246
223	The Relationship between Body Mass Index and Plantar Pressure Distribution and Lower Limb Alignment in Prepubescent Children	<i>D. L. Riddiford, J. R. Steele, L. H. Storlien</i>	1	247
224	Biomechanical Evaluation of Wrist Movement during Meatcutting	<i>K. Sogaard, B. Juul-Kristensen, L. Birch, H. Christensen</i>	1	248
225	Evaluation of Palmar Grasp in People with Tetraplegia Using a Mathematical Model of the Hand	<i>A. Esteki, J. M. Mansour</i>	1	26th 249
226	Lower Extremity Power and Work in Level and Uphill Cycling	<i>G. E. Caldwell, D. G. E. Robertson, L. Li, J. M. Hagberg</i>	1	250
227	Modeling of Rider's Braking Force Control in Bicycling by Neural Network with Time Delay Inputs	<i>Y. Ohgi, C. Miyaji, M. Okada</i>	1	251
228	Monopolar Surface EMGs Capture Dynamic Features of Muscle Activation upon Rapid Isometric Extensions of the Elbow	<i>Y. Yamazaki, M. Suzuki, T. Ohkuwa, H. Itoh</i>	1	252
229	Effects of Fatigue Induced by Repeated Dynamic Efforts on Hamstring Muscle Function	<i>* G. J. Pinniger, J. R. Steele, H. Groeller</i>	1	253
230	Muscle Damage and Muscle Stiffness Induced by Eccentric Exercise	<i>* M. Murayama, K. Nosaka, T. Yoneda</i>	1	254
26th August, Hall PC				
231	In Vivo Fascicle Length Changes of the Human Vastus Lateralis Muscle during Squatting	<i>K. Kubo, Y. Kawakami, T. Fukunaga</i>	1	255
232	Function of the Gastrocnemius-Tibialis Anterior Muscle Complex in Rapid Knee Flexion	<i>K. Ohyama Byun, M. Okada</i>	1	256
233	Muscle Fiber Behavior of Gastrocnemius during Vertical Jumping	<i>S. Kurokawa, H. Yan, H. Nagareda, K. Funato, T. Fukunaga</i>	3	27th
234	Relationships between Architectural Characteristics of Knee Extensor Muscles and Jumping Power during Squat Jumping	<i>H. Akima, H. Shirakura, H. Takahashi, H. Okada, Y. Kubo, M. Ae, Y. Muraki, S. Katsuta</i>	3	257 258
235	Sex Differences in Limitation of Fat-Free Mass and Characteristics of Skeletal Muscle Architecture	<i>T. Abe, W. E. Brechue, S. Fujita, J. B. Brown</i>	1	259
236	Shortening Velocity of Muscle Fibers is not Constant during 'Isokinetic' Joint Action	<i>* Y. Ichinose, M. Ito, Y. Kawakami, T. Fukunaga</i>	3	260
237	In Vivo Moment Arm Estimations of Human Vastus Lateralis during Contractions	<i>* M. Ito, Y. Ichinose, Y. Kawakami, T. Fukunaga</i>	3	27th 261
238	Spectral Decomposition of Mechanomyogram (MMG) Associated with Lateral Expansion and Bulk Movement	<i>Y. Ito, K. Akataki, M. Watanabe, K. Mita, K. Ando, M. Ito</i>	3	262
239	Non Linear Behaviour of the Muscular Equivalent Viscosity Factor at Different Muscle Length	<i>A. Martin, B. Morlon, M. Pousson, J. Van Hoecke</i>	3	263
240	Human Muscle Stiffness: In-Vivo Measurement Using Conventional Dynamometry	<i>R. Skoss, G. R. Strauss, P. J. Hamer, G. A. Wood, B. J. Gibson</i>	3	264
241	Stiffness Changes Disproportional to Muscle Force after Concentric Contractions of Rat Medial Gastrocnemius Muscle	<i>K. Meijer, H. J. Grootenboer, H. F. J. M. Koopman, P. A. Huijing</i>	3	27th 265
242	Oxygen Kinetics in Two Different Thigh Muscles during Dynamic Knee-Extension Exercise	<i>T. Homma, S. Homma, A. Kagaya</i>	4	266
243	The Iliotibial Tract and Associated Muscles	<i>J. G. Reid, J. M. Johnson</i>	3	
244	Muscle Sound Characteristics of Different Muscle Fiber Types during Voluntary and Stimulated Contractions	<i>* Y. Yoshitake, M. Shibata, H. Ue, T. Moritani</i>	3	267

eda, K.	1	245	Dependence of the Force Evoked in the Collagen Helix of Muscle Fibre on the Length of Sarcomere in Contraction and Stretching	A. Vain, A. Kaljuvee	3
ien	1	246	Effects of Slanted Contact Surface on Neuromuscular Control of the Human Triceps Surae Muscle in Stretch-Shortening Cycle Exercises	* S. Yoon, K. Ohyama Byun, H. Okada, N. Fujii, K. Takamatsu	3
	1	247	Neuromuscular Fatigue of Individual Muscles during Walking in Healthy Young Women	M. Shibata, Y. Ohmura, T. Takaishi, Y. Yoshitake, T. Moritani	3
	1	248	Adaptive Changes in Responses to Repeated Locomotor Perturbations	* M. K. Rand, D. A. Wunderlich, P. E. Martin, G. E. Stelmach, J. R. Bloedel	3
		26th August, Hall PD			
	1	249	Computer Simulation of Curve-Ball Kicking Using Coupled Euler-Lagrange Approach	T. Asai, M. Nasako, O. Murakami, T. Akatauka	1
i, L.	1	250	Computer Simulation of the V Style Technique in Ski Jumping Using Computational Fluid Dynamics	T. Asai, M. Kaga, T. Akatauka	1
	1	251	Comparison of Kinematic Gait Parameters of Elderly Thai Women with Young Thai Women	U. Rattanaprasert, C. Akamanon, R. Smith, K. Chaipackdee, S. Pichaiyongwongdee	1
ia,	1	252	Laryngeal Dynamic Gestures and Muscle Activities in Human Suspensory Propulsion	M. Okada, H. Oka, M. Miyashita, S. Niimi, T. Kimura, S. Hayama	1
ller	1	253	Standing Up and Sitting Down at Two Different Seat Heights	R. B. Shepherd, C. Dean, A. D. Hirschhorn	1
a	1	254	Multi-Joint Links in Application to Hand Prosthesis Designing	M. N. Vasiljev, V. P. Tregoubov, V. M. Velikson	1
a	1	255	Using the Cam Device in Cable Controlled Prostheses	V. M. Velikson, V. P. Tregoubov, M. N. Vasiljev	1
	1	256	From 3D Video Motion Analysis to Patterns of Movement by Factorial Trajectories (Principal Component Analysis). Application to Cross Country-Skiing: V1 Skate	A. Ruby, J. Pontier, M. Tavernier	1
K.	3	27th August, Hall A			
hi,	3	257	Application of Vertical Jump in Evaluating Athletes' Motor Recovery	R. Rodano, A. Mingrino, R. Squadrone	1
B.	1	258	Classification of Ski Jump Take-Off Techniques by Joint Power	T. Sasaki, K. Tsunoda, E. Uchida, H. Hoshino	1
	3	259	How to Gain Speed Running over Waves in Alpine Skiing	H. -B. Schmiedmayer, P. Lugner	1
	3	260	Simulated and Actual Ski Jumping Take-Offs Differ in Plantar Pressure and Muscle Activation Patterns	M. Virmavirta, P. V. Komi, J. Perttunen	1
		27th August, Hall B			
	3	261	The Development of Sprint Training Machine	K. Kobayashi, M. Sugita, N. Matsugaki	8
	3	262	An Adaptable Risk-Free Strength Training Device without Physical Constraints	Y. Matsuoka, L. C. Miller	8
	3	263	Evaluation of Cushioning Properties of Running Footwear	D. G. E. Robertson, J. Hamill, D. A. Winter	8
	3	264	Prosthetic Foot as Simulator for Athletic Shoe Testing	M. R. Pitkin	8
		27th August, Hall C			
	3	265	A Method for the Study of the Distance between Ankle Ligament Insertions in Vivo	A. Lundberg, I. G. Winson, T. Hashimoto, C. Saro, P. Westblad	2
	4	266	Measuring System for In Vivo Recording of Force Systems in Orthodontic Treatment-Technical Implementation and Experimental Tests	D. Friedrich, G. Rau, P. Diedrich	2
	3	267	Intersegment Moments of the Lower Extremity Joints in Running - Influence of Inertia	B. Krabbe, R. Farkas, W. Baumann	2

27th August, Hall D

- 268 Strategy of Muscle Coordination in a Multi-Joint Dynamic Task
- 269 Effect of Muscle Contractions on Beat-by-Beat Measured Hemodynamic Parameters and Cardiac-Locomotor Coupling during Cycling
- 270 Coordination in Cycling at Increasing Pedalling Rates is not Compatible with Invariant Relative Timing Models
- 271 The Effect of Pedaling Rate on Coordination in Cycling

B. I. Prilutsky, T. Isaka, A. Albrecht, M. M. Ryan, R. J. Gregor 3

T. Moritani, Y. Nishijima, H. Ue 3

T. G. Welter, W. M. M. Dorssers, A. Beelen, G. J. van Ingen Schenau 3

R. R. Neptune, M. L. Hull, S. A. Kautz 3

27th August, Hall E

- 272 Three-Dimensional Kinematics of the Forefoot, Rearfoot, and Leg without Tibialis Posterior Function during Stance Phase of Walking: a Case Study
- 273 A Selforganized Neural Network for Gait Analysis
- 274 Influence of Walker Height on Upper Extremity Joint Moments during Walker-Assisted Gait

U. Rattanaprasert, R. Smith, M. Sullivan, W. Gilleard 5

** O. Schmid, W. Schollhorn, H. U. Bauer* 5

G. G. Simoneau, G. W. Hambrook, R. A. Bachschmidt, G. F. Harris 5

28th August, Hall A

- 275 The Influence of Energy Transfer between the Human Body and the Horizontal Bar or Upper Asymmetric Bar upon the Gymnastic Performance
- 276 Analysis of the Double Back Salto Dismount from the Parallel Bars
- 277 3D Angular Momentum Analysis of Dismount Landing in Gymnastics
- 278 Analysis of Motion on Speed Skating
- 279 Biomechanical Analysis for the Races of Short Track Skate
- 280 The Effects of a Short-Term Power Training of the Ankle Joint on the Starting Technique of Korean Female National Short-Track Speed Skaters
- 281 The Maximal Power Output and Isometric Strength of Lower Limbs in Junior Tennis Players
- 282 Timing at the Lower Extremity Joints in Vertical Landing
- 283 Is Joint Load in Squat Lifting Related to Interjoint Coordination?
- 284 Modifications of Kinematic Strategies during Leg Raising in Below Knee Amputees
- 285 The Mechanics of the Double Leg Circles at the Pommel Horse: a Two-Segment Compound Conical Pendulum
- 286 Lifting Techniques and Some Biomechanical Back Variables - a Study on Women
- 287 Knee Joint Kinematics during Sidestepping - Gender Comparisons
- 288 Comparison of the Mechanical Load during Pushing and Pulling of Two-Wheeled Containers
- 289 Kinetics and Energetics during Load Carrying
- 290 Analysis of the Power Balance during Wheelchair Propulsion Using a 3-D Musculoskeletal Shoulder and Elbow Model

A. Arampatzis, G. P. Bruggemann 1

P. Gervais 1

Y. Liu 1

K. Okamoto, T. Nishimura, N. Watanabe, Y. Koga, T. Sakata, Y. Fukagawa 1

K. Ueya, A. Yoshihara, K. Asaba 1

Y. H. Kwon, M. K. Jun 1

Z. Trzaskoma, P. Lipinski, J. Janiak 1

M. Ayalon, D. Ben-Sira, A. Ayalon 1

L. Lindbeck, K. Kjellberg 1

M. Cincera, L. Mouchnino, M. L. Mille, A. Pedotti, J. Massion 1

P. de Leva 1

K. Kjellberg, L. Lindbeck, M. Hagberg 1

S. G. McLean, R. J. Neal, P. Myers, M. MacDonald 1

B. Schibye, K. Sogaard, K. Klausen 1

G. Sjogaard, B. Laursen, D. Ekner, E. Simonsen, M. Voigt 1

F. C. T. van der Helm, H. E. J. Veeger, L. A. Rozendaal 1

28th

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

28th

307

308

309

310

311

31

31

31

31

28th August, Hall B

ht,	3	291	Three-Dimensional Head-Neck Model for Impact and High-Acceleration Studies	S. C. Huang	7
	3	292	A Three-Dimensional Dynamic Model of the Human Neck	N. Bertholon, S. Robin, J. Y. Le Coz, W. Skalli, F. Lavaste	7
A.	3	293	Method for Optimal Calculation in Swing Phase Motion of Trans-Femoral Prosthesis	Y. Suzuki, E. Genda, T. Kasahara, Y. Tanaka	7
Kautz	3	294	Three Dimensional Finite Element Model of the Cemented Replaced Femur. Effects of the Metaphyseal Filling on the Femur Mechanical Behavior	E. Astoin, M. Simondi, F. Lavaste	7
	5	295	3-D Finite Element Analysis of Prosthetic Joint Implants for the Thumb	K. Hollerbach, S. Perfect, A. Hollister, M. Truman, E. Ashby	7
auer	5	296	A 3-D Finite Element Model of the Human Index Finger	K. Hollerbach, S. Perfect, A. Hollister, J. Pearlman, B. Beaubien.	7
R.	5	297	Dynamical Model of the Human Finger for Assessing Multijoint Tendons Kinematics with Arbitrary Interconnection Structure	V. A. Sholukha, K. J. van Zwieten, P. L. Lippens, A. V. Zinkovsky	7
	1	298	Gastrocnemius Activation and Plantar Pressure Distribution during the Sprint Start	M. J. Harland, A. Mero, S. Kuitunen, P. V. Komi	1
	1	299	Changes in Muscle Activity Patterns with Increasing Running Speed	H. Kyrolainen, P. V. Komi	1
	1	300	Biomechanical Analysis of Hurdle Running: in Comparison with Sprinting	A. Ito, M. Togashi	1
	1	301	Interrelationships between Ground Reaction Forces and Velocity during Acceleration Phase of the Sprint Start	A. Mero, M. Harland, S. Kuitunen, P. V. Komi	1
	1	302	Evaluation of Training Based on Feedback on Performance in the 110 Meters Hurdles	C. Papadopoulos, S. Prassas, K. Valasotiris, A. Giavroglou, L. Tsarouchas	1
	1	303	Swing Phase Kinetics of Preferred and Nonpreferred Speed of Walking and Running	M. M. Ryan, R. J. Gregor	1
	1	304	Distance Running Biomechanics in Relation to Injury - A Case Study Approach	K. R. Williams	1
	1	305	The Biomechanical Analysis of Fatigue in Tibia	Z. Fang	1
	1	306	Joint Coordinate System (JCS) Application to Different Joint Mechanisms	R. L. Van Vorhis, A. M. Hollister, K. Hollerbach	1
	1		28th August, Hall C		
	1	307	Computational Techniques for Establishing Foot Sizing Systems for Biomechanical Applications	G. Gopalakrishna, N. Chockalingam, M. Surendra, B. N. Das	2
	1	308	Local Proportional Scaling of Time Series Data of Human Movement	K. Kanatani-Fujimoto, B. V. Lazareva, V. M. Zatsiorsky	2
g	1	309	Uniqueness and Commonality Analyses of Time Series Data of Human Movement	K. Kanatani-Fujimoto, G. A. Smith, V. M. Zatsiorsky	2
	1	310	Effects of Spontaneous Respiration on Pulmonary Artery Input Impedance	P. Castiglioni, M. Morpurgo, M. Di Rienzo	2
	1	311	Characteristics of Regional Hemodynamics in Free-Moving Rats	M. Di Rienzo, A. Daffonchio, P. Castiglioni	2
	1	312	Deformation-Induced Hierarchical Flows and Streaming Potentials in Bone : Predictions from a Computational Model	J. D. Zhang, A. F. T. Mak	4
	1	313	The Building-up of Subcutaneous Tissue Compaction and Distortion under Combined Pressure and Shear Epidermal Loadings	J. D. Zhang, A. F. T. Mak	4
		314	Modeling Mechanical Responses of Biphasic Cartilage under Dynamic Loading	J. Z. Wu, W. Herzog, M. Epstein	4

315	Grasp Specification Using a 3-D Glove in Virtual Reality Based Point-and-Direct Telerobotics	<i>M. H. Yun, G. H. Park, D. Cannon, A. Freivalds</i>	6	341
316	Modeling Compact Bone as a Composite Material: Prediction of the Elastic Properties of Single Lamellae and of Osteons	<i>E. Lucchinetti, G. Kress, E. Stussi</i>	4	342
317	Experimental Evaluation of Skin Rupture under Different Loading Conditions	<i>W. Chang, A. A. Seireg</i>	4	343
318	Compression of Swine Brain Tissue; Experiment In Vivo	<i>K. Chinzei, K. Miller</i>	4	344
319	Stress Relaxation Measurements in Linear Region of Brain Tissue	<i>Z. Liu, N. Phan-Thien, L. Bilston</i>	4	345
28th August, Hall D				
320	Precision of the Vestibulo-Okular Reflex in Athletes with Different Rotational Experience	<i>W. Stangl, A. Gollhofer</i>	3	346
321	Task-State-Diagrams in Complex Motor Behavior	<i>J. Edelmann-Nusser, A. Gollhofer</i>	3	347
322	Disparate Elbow Flexion Synergist Activation Patterns during Maximum Voluntary Isometric and Anisometric Contractions	<i>M. D. Grabiner, J. E. Kasprisin</i>	3	348
323	Measures of Static and Quasi-Static Ankle Complex Function are not Correlated to Ankle Complex Kinematics during A Dynamic Motor Task	<i>J. E. Kasprisin, M. D. Grabiner, G. G. Weiker</i>	3	349
324	Combined Stretch and Reflex Potentiations Depend on Their Respective Timing	<i>C. Nicol, P. V. Komi</i>	3	350
325	Kinetic Description for Several Regimes of Muscle Contraction	<i>V. P. Tregoubov, V. V. Baranov</i>	3	351
326	Cutaneous Reflexes from the Foot Dorsum are Maintained in Stroke Patients	<i>E. P. Zehr, K. Fujita, R. B. Stein</i>	3	352
327	How to Obtain CE Force-Velocity and SEE Force-Extension Relationships from Isokinetic Releases	<i>* J. P. van Zandwijk, G. C. Baan, P. A. Huijing, M. F. Bobbert</i>	3	353
328	Biomechanical Stimulation of the Human Skeletal-Muscular Apparatus in Zones of the Active and Passive Insufficiency	<i>A. V. Zinkovsky, V. V. Kuznetsov, K. P. Schmidt, I. A. Zoubova</i>	3	354
329	A Model for Simulating Force Output of Fully Recruited Submaximally Activated Muscle	<i>* P. Bosch, B. Roszek, P. A. Huijing</i>	3	355
330	Development of EMG-Driven Musculoskeletal Models for Estimation of Human Joint Moments	<i>T. S. Buchanan, D. G. Lloyd, T. Besier, R. V. Gonzalez</i>	3	356
331	External Impact Loading and Tibial Strains in Cadaveric Lower Limbs	<i>A. C. Courtney, G. P. Perusek, B. L. Davis, J. Sferra, H. E. Kambic</i>	3	357
332	Nonlinear Twitch Summation of the Human Tibialis Anterior	<i>J. J. Dowling, P. Kennedy</i>	3	358
333	A Cubic Function Describes Hamstrings (Eccentric) / Quadriceps (Concentric) Isokinetic Torque Ratios in Professional Footballers	<i>G. Garbutt, W. Dunn</i>	3	359
334	A Method for Measuring Voluntary Muscle Activation during Dynamic Contractions	<i>R. D. Herbert, S. C. Gandevia, J. B. Leeper</i>	3	360
335	Contact Pressure Distribution on the Human Fingerpad	<i>D. T. V. Pawluk, R. D. Howe</i>	3	361
336	A New System for the Measurement of the Forces Generated during Lumbar Spinal Manipulation	<i>P. J. Rowe, J. McCrea, P. M. Salter</i>	3	362
28th August, Hall E				
337	Functional Evaluation of Psoas Major Muscle by Three-Dimensional Musculo-Skeletal Model	<i>T. Nagura, Y. Yabe, K. Wakano, N. Yamazaki</i>	5	363
338	A New Method to Monitor Dental Implant Osteointegration by Vibration Tests	<i>F. Casolo, V. Lorenzi</i>	5	364
339	The Effect of Electrical Stimulation on Sit to Stand Task	<i>M. Galli, V. Lorenzi, M. Crivellini</i>	5	365
340	About the Evidence of Different Balance Strategies during Functional Reach Test	<i>S. Fioretti, T. Leo, S. Murphy</i>	5	366

n,	6	341 The Screw Loosening after Screw Tightening	H. Muratsu, J. T. Andrish, H. E. Kambic, T. E. Manning	5
	4	342 Infusion of Saline into the Human Nucleus Pulposus and Establishing the Pressure-Volume Relation	H. S. Ranu	5
	4	343 Effect of Computer Keyboard Design on Wrist and Forearm Position while Typing	G. G. Simoneau, R. W. Marklin, J. F. Monroe	5
	4	344 Influence of Previous Ankle Sprains on Neuromuscular Response during Simulated Inversion Injury	W. Alt, H. Lohrer, A. Gollhofer	5
	4	345 Influence of Body Position on the Ankle Response to Functional Electrical Stimulation	M. Kljajic, F. Gider, M. Tomsic, U. Bogataj, J. Florijancic	5
	3	346 The Influence of Ankle Flexibility on the Performance of Three Tasks	* A. M. Moseley, J. Crosbie, R. Adams, H. Dickson	5
	3	347 Relationship of In-Vivo Bone Resonance Analysis to Healing Callus Microstructure	M. J. Chehade, N. L. Fazzalari, M. J. Pearcy, T. J. Lawes, A. P. Pohl	5
G.	3	348 Is Hiking Safe after Total Knee Replacement?	M. Kuster, E. Spalinger, M. Schoch, U. Wyss	5
	3	349 How to Define the Contact Point of the Tibiofemoral Joint of the Prosthesis in the in vitro Biomechanical Testing	J. J. Liau, C. K. Cheng, C. H. Huang	5
	3	350 3D Pelvic Movement and Postural Muscle Responses during Task Performance in Paraplegic Subjects	Y. J. M. Potten, H. A. M. Seelen, J. Drukker	5
	3	351 Biomechanical Evaluation of Taping in Controlling Knee Joint Extension and Rotation Angle	Y. Urabe, K. Kawaguchi, K. Onari	5
		28th August, Hall PA		
u.	3	352 Upper Extremity Torques during Tennis Forehand Volley	N. Inoue, Y. Iino, T. Kojima	1
K.	3	353 A Kinetic Analysis of Lower Extremities during the Tennis Forehand Stroke	Y. Iino, N. Inoue, T. Kojima	1
	3	354 Joint Moments during Tennis Forehand Drive: an Analysis of Rotational Movements on a Horizontal Plane	T. Fujisawa, T. Fuchimoto, M. Kaneko	1
	3	355 Evaluation of Smash Technique from the Viewpoint of Conservation of Angular Momentum	H. P. Tang, S. Toyoshima	1
	3	356 Biomechanical Analysis of Different Badminton Forehand Overhead Strokes of Taiwan Elite Players	C. L. Tsai, C. Huang, S. C. Jyh	1
	3	357 Biomechanical Analysis of Catching in Lacrosse	M. Yanase-Fujiwara, E. Maruyama, A. Kido, Y. Yaoi	1
	3	358 Stick Angles on Ball Control during the Push-Stroke in Field Hockey	A. Kuga, A. Nagata, K. Terada	1
	3	359 A Kinematic Analysis of the Upper Torso Motion in Japanese Elite Amateur Baseball Pitchers	K. Shimada, M. Ae, N. Fujii, Y. Kunugi, M. Yuki, T. Kawamura, K. Shinohara	1
	3	360 Relationship between Accuracy of Pitched Ball and Pitching Motion in Baseball	K. Ishida, Y. Hirano	1
	3	361 Biomechanical Analysis on Tenpin Bowling Techniques	Y. Hong, L. Weiping	1
	5	362 A Biomechanical Comparison of the Swing Techniques of Men and Women Golfers	J. Park	1
	5	363 Kinematical Analysis of Foot Force during the Golf Swing	K. Kawashima	1
	5	364 Wave Motion of Butterfly Dolphin Kick	S. Shimonagata, M. Taguchi, S. Taba	1
	5	365 Safe Techniques for the Starting Motion in Young Swimmers	T. Nomura, Y. Mutoh, M. F. Ohta, H. Kamioka, K. Mochizuki	1

366	Effects of the Foot Frontal Area and the Lower Limb's Flexibility on the Maximal Swimming Velocity during Leg Kick and Whole Body Stroke of Front Crawl	<i>H. Fujiwara, F. Ogita</i>	1	389
367	The Influence of Paddle Grip Point on the Kinematical Variables during Strokng in Canadian Canoe	<i>J. S. Ryu, Y. J. Lee, C. K. Park</i>	1	390
28th August, Hall PB				391
368	Statistical Estimation of Force-Velocity Relationship during Dynamic Muscle Contraction	<i>K. Itoh, K. Mita, K. Akataki, A. Katoh</i>	2	392
369	Explanation for Systematic Errors in Determining the Point of Force Application with Force Plates	<i>H. -B. Schmiedmayer, J. Kastner</i>	2	393
370	Computer Investigation of Influence of Geometrical and Mechanical Properties of Joints Contact Surfaces on Dynamics of Human Motion	<i>A. A. Ivanov, V. A. Sholukha, A. V. Zinkovsky</i>	7	394
371	Computer Simulation Analysis of the Effect of a Ball's Mass and Shape to One's Upper Limb from Throwing	<i>Y. Mochizuki, H. Amano, T. Matsumoto, K. Tezuka, S. Yamashita, K. Omura</i>	7	395
372	Measurement of Muscle Shape Using MR Images and Active Contour Model	<i>H. Tanaka, N. Yamazaki, T. Nagura</i>	2	29th 396
373	Establishment of an Equation for VO2 Estimation from HR	<i>T. Sasaki, K. Tsunoda, I. Katoh</i>	2	397
374	New Method of the Energy Losses Measuring in Sport Shoes Soles' and Artificial Surfaces Materials	<i>B. Dychko</i>	8	398
375	Impulse Force of the Shoes Sole during Landing Motion of Human	<i>A. Nagata, K. Terada, A. Kuga, Y. Sakurai</i>	2	399
376	Effects of the Hallux Separated Shoes during Walking	<i>T. Kawai, Y. Hasegawa, H. Ihara</i>	8	400
377	New Athletic Spiked Shoes Considering the Power Transmissive Functions	<i>Y. Takamoto, A. Kataoka, M. Inohara</i>	8	401
378	Subject and Material Analysis of Tennis Racket Power	<i>T. Y. Shiang, R. L. Su</i>	8	402
379	Influence of Brushing on Curling Stones	<i>J. G. Reid</i>	8	402
28th August, Hall PC				29th 403
380	Comparison of Dynamic and Isometric Knee Extensor Muscles Strength and Power Output in Nordic Combined Athletes	<i>M. Paasuke, J. Ereline, H. Gapeyeva</i>	3	404
381	Effect of Balance of Isokinetic Leg Strength on the Relationship between the 100m Records and the Leg Strength in Male Sprinters	<i>T. Tagawa, M. Fukuoka</i>	3	405
382	Relationship between Thigh Muscle Composition and Sprinting Performance in Junior Elite Sprinters: 4-yr Follow-up Study	<i>Y. Kano, S. Kuno, S. Katsuta, M. Miyamaru</i>	3	406
383	Cross-Sectional Area of Coxal Psoas Major Regulates Sprint Time	<i>S. Kuno, Y. Enomoto, K. Miyashita, H. Akima, Y. Kano, K. Yamanaka, M. Okada, S. Katsuta</i>	3	407
384	Difference of Pedaling Performance Estimated by Electromyogram between Cyclists and Nuncyclists	<i>T. Takaishi, T. Moritani</i>	3	408
385	Velocity Dependence of the Work Done at the Elbow Joint during Cyclical Movements	<i>D. L. Benoit, J. J. Dowling</i>	3	409
386	Maintenance of Perturbed Standing Posture in the Medio-Lateral Plane -- A Kinematic and Kinetic Analysis	<i>S. E. Walt</i>	3	410
387	Slide of COF on the Foot According to the Change of the Standing Condition and Postural Sway	<i>R. Kawamoto, K. Watarai</i>	3	29th 411
388	Effects of Strength Training on Force-Time Characteristics in Voluntary and Electrostimulation Evoked Actions in Middle-Aged Men and Women	<i>K. Hakkinen, U-M. Pastinen, R. Karsikas, V. Linnamo, W. J. Kraemer, R. U. Newton</i>	3	412

389	Functional and Morphological Effects of Different Resistance Training with and without a Counter Movement in Elbow Flexors	J. Okada, S. Fukushima	3
390	Velocity Specificity Training in Elbow Flexors	M. Pousson, I. G. Amiridis, G. Cometti, B. Morlon, J. Van Hoecke	3
391	Changes of Firing and Contractile Property of Human Neuromuscular System after Six-Week Resistance Training	Y. Taniguchi, K. Seki, M. Narusawa	3
392	Effects of Eccentric Training of the Elbow Flexor Muscles upon Torque-Angular Velocity (T/AV) Relationships and Activation	S. Colson, A. Martin, M. Pousson, B. Morlon, J. Van Hoecke	3
393	No Torque Gain during Slow Eccentric Action in Knee Extensors	H. Nagareda, K. Funato, T. Fukunaga	3
394	Strength Gains and Fatigue are Unrelated in the Recovery of Muscular Strength after Immobilization	T. Hortobagyi, W. Dempsey, D. Fraser, P. DeVita	3
395	Spectrum Analysis at the Surface Oscillation and M-Wave about the Lower Limb Atrophy Muscles	T. Miura, A. Nagata	3
29th August, Hall A			
396	3D Angular Velocities Most Related to Ball Release Velocity in Throwing	C. P. Sherwood, R. N. Hinrichs, G. T. Yamaguchi	1
397	Compensational Coordination of Release Variables in Ball-Throwing Movements	* K. Kudo, S. Tsutsui, T. Ishikura, T. Ito, Y. Yamamoto	1
398	How and Why Does a Forkball Break Downward? - Trajectory of a Pitched Baseball -	S. Sakurai, Y. Ikegami, Y. Yamamoto, A. Okamoto, T. Terashima, H. Nunome, K. Yabe	1
399	Kinematic and Electromyographic Changes with Fatigue in Baseball Pitching	Y. Takada, S. W. Barrentine, G. S. Fleisig, N. Zheng, J. R. Andrews	1
400	Dynamic Analysis of the Tennis Serve	G. Legnani, B. Zappa, R. Perini	1
401	The Relationship of Segment Rotation with Racket Velocity at Impact in Tennis Groundstroke	K. Takahashi, B. Elliott, G. Noffal	1
402	A Comparison of Upper Limb Movement between Tennis and Soft-Tennis Player	L. H. Wang, H. W. Wu, F. C. Su	1
29th August, Hall A			
403	Micro-Fracture Simulation in Indian Olympic Field Hockey Players	H. S. Ranu, M. S. Hasan, J. E. Lander	7
404	Simulation of Micro-Fracture in the Human Vertebral Bone during Weight Lifting	J. E. Lander, H. S. Ranu, M. S. Hasan	7
405	Three Dimensional Numerical Modeling and Optimization of an Intervertebral Disc Prosthesis	A. Templier, W. Skalli, J. P. Lemaire, F. Mendes, A. Diop, F. Lavaste	7
406	ANI-MAN3D: A 3D Motion Analysis System Using a Numerical Human Model. Application to Cross Country Skiing	M. Tavernier, P. Cosserat, S. Emmendoerffer, A. Ruby, J. P. Verriest, J. M. Lavest, M. Dhome	7
407	Three Dimensional Simulation of Running	I. C. Wright, R. R. Neptune, A. J. van den Bogert	7
408	Optimization of Flight Trajectory of Ski Jump on the Basis of Wind Tunnel Data	K. Yoshida, M. Murakami, I. Watanabe, T. Ohtsuka, S. Kazama	7
409	A Model for Determining Optimal Ski Skating Techniques	A. J. van den Bogert, T. L. Allinger	7
29th August, Hall A			
410	Mechanical and Functional Properties of Cat Knee Articular Cartilage 16 Weeks Post ACL Transection	W. Herzog, J. Z. Wu, T. R. Leonard, E. Suter, S. Diet, C. Muller, P. Mayzus	4
411	Effects of Age on Stress-Strain and Stress-Relaxation Behaviours of the Rat Incisor Periodontal Ligament	K. Komatsu, Y. Watanabe, M. Kanazashi, M. Chiba	4

412	Changes in Periarticular Bone Mineral Density Following Anterior Cruciate Ligament Transection	G. R. Wohl, R. C. Chan, R. Kloiber, M. E. Adams, J. R. Matyas, R. F. Zernicke	4
413	Analysis of Strain Distribution in Ligaments using Photoelastic Coating Method: the Influence of Photoelastic Material on the Mechanical Properties of Ligament	T. Kawada, T. Abe, A. Inoue, K. Yamamoto, S. Hirokawa	4
414	Analysis of Strain Distribution in Ligaments using Photoelastic Coating Method: Study on Simulated Knee Model	K. Yamamoto, S. Hirokawa, T. Kawada	4
415	Three Dimensional Deformation and Strain Distribution of the Cruciate Ligament: Model Analysis of Fiber-Reinforced Hyperelastic Material	S. Hirokawa, R. Tsuruno	4
29th August, Hall D			
416	Three Dimensional Measurement of the Quadriceps Forces at the Patella and the Moments Generated about the Knee Joints in Cats	T. Abelew, T. R. Nichols	3
417	Individual Muscle Contributions to the In Vivo Achilles Tendon Force	A. N. Arndt, P. V. Komi, G. P. Bruggemann, J. Lukkariniemi	3
418	Knee Flexor Moment Arm Patterns for the Medial and Lateral Gastrocnemius Muscles during Normal Movement in the Cat	R. J. Gregor, T. A. Abelew, A. Albrecht	3
419	An Alternative Relation between Muscle and Fiber Force in Planimetric Models	H. F. J. M. Koopman, B. J. J. J. van der Linden, P. A. J. B. M. Huijing, H. J. Grootenboer	3
420	Experimental Validation of a Knee Joint Model with Electrical Stimulation	M. K. Lebedowska, R. B. Stein	3
421	Estimation of Muscle Moment Arms in Flexion-Pronation Movements	H. E. J. Veeger, F. C. T. van der Helm	3
29th August, Hall E			
422	Adaptation of the Human Calcaneus to Impact Forces during Running	U. G. Kersting, G. -P. Bruggemann	5
423	Effects of Shoe Construction on Skeletal Movements during Running	A. Stacoff, B. M. Nigg, C. Reinschmidt, A. J. van den Bogert, A. Lundberg, J. Denoth, E. Stussi	5
424	Common Gait Patterns Based on the Knee Abnormalities in Cerebral Palsy	F. C. Su, L. Y. Guo, Y. L. Chou, C. J. Lin, R. J. Cherng	5
425	Different Support Systems Result in Different Ankle Biomechanics during Gait	T. Nishikawa, T. M. Lundin, M. D. Grabiner	5
426	Gait Adaptations in Below Knee Amputees and Effect of Weight Change in Prosthetic Components: a Pilot Study	S. J. Olney, H. Bateni, M. P. Griffin, I. D. McBride	5
427	Cerebral Palsy and Rhizotomy: a 10 Year Follow-Up with Gait Analysis	N. Subramanian, C. Vaughan, J. Peter, L. Arens	5