WEDNESDAY 15 APRIL 2009

8.00am – 8.30am	**Conference Registration** Central Lecture Block			
8.30am - 9.00am	**Opening Address** Central Lecture Theatre C1	**Dr Rod Carr** *Vice Chancellor, University of Canterbury*		
9.00am - 10.30am	**Oral Presentation Session 1**			
	Commerce 009 **Cardiovascular Mechanics**	**Commerce 011** **Musculo-Skeletal Biomechanics**	**Commerce 012** **Bone and Ligament**	**Commerce 013** **Orthopaedic & Rehabilitation Biomechanics**
9.00am - 9.15am	Shimpei Kohri *Development of a miniaturized fiber-optic LDV sensor for measurement of local and instantaneous blood velocity in pulsatile flow*	Jia-Jin Jason Chen *Biomechanical and Electrophysiological Analysis of Repetitive Transcranial Magnetic Stimulation Effect on Parkinsonian Rats*	Takako Osawa *Biomechanical evaluation of degenerated articular cartilage based on viscoelastic anisotropic inhomogeneous model considering tissue microstructure*	Behrooz Sepehri *Analyzing Visco-elastic Indices of Rigidity in Parkinson's Disease*
9.15am - 9.30am		Katja Onerhofer *Comparison of two modeling techniques in predicting muscle-tendon lengths during walking*	Hirohito Kobayashi *A new technique for evaluating the axial properties of stretched ligament/tendon*	Ming-Shaung Ju *Control of Active Ankle Muscle Torque by using Electromyography-based Model for Robot-Assisted Rehabilitation of Stroke Patients*
9.30am - 9.45am	Muneichi Shibata *Atrial Vortex Measurement by Magnetic Resonance Imaging*	Sota Yamamoto *Effects of Torso Posture on the Risk of Hip Fracture*	Shuichi Wakayama *AE Monitoring of Damage Accumulation during Fatigue Fracture of Cortical Bone*	Caroline Grant *Creation of a validated 3D finite-element model of an ovine tibia*
9.45am - 10.00am		Allan Bruce Carmen *Expanded marker sets in 3D Motion Analysis*	Bijay Giri *Characterization of mineral crystallites deformation under tensile loading*	Shojiro George Terashima *Development of Mouthpiece Type Remote Controller for Disability Persons ---3rd report---*
10.00am - 10.15am	ChangHo Yu *Study on a Catheter Movement with Poly (vinyl alcohol) Hydrogel for the Development of an In-Vitro Tracking System*	Seonhong Hwang *Gait Initiation and Termination in Patient with Hemiplegia*	Masao Tanaka *Computational study on effect of osteocyte apoptosis and targeted remodeling in trabecular bone remodelling*	Jongsang Son *An algorithm for estimating muscle force from joint angles*
10.15am - 10.30am		Yongwoo Yi *Linear motion perception and Lower limb somatosensation*	Ei Yamamoto *Effects of non-destructive overloading on the microstructure and mechanical properties of rabbit patellar tendons*	

WEDNESDAY 15 APRIL 2009 (continued)

10.30am - 11.00am	**Morning Tea** Central Lecture Block Foyer			
11.00am - 12.00pm	**Plenary Session 1** Central Lecture Theatre C1	**Professor Tim Secomb** *The mechanics of red blood cell motion in microvessels*		
12.00pm - 2.00pm	**Lunch and Poster Session** Central Lecture Block			
2.00pm - 3.30pm	**Oral Presentation Session 2**			
	Commerce 009 **Cardiopulmonary & Respiratory Mechanics**	**Commerce 011** **Dental Biomechanics**	**Commerce 012** **Micro and Nano Biomechanics**	**Commerce 013** **Computational Physiological Modelling**
2.00pm - 2.15pm	Toshihiro Sera *Airflow simulation in the pulmonary acinar model imaged by synchrotron micro-CT*	Hun Park *Comparison of Surface Roughness in Various Combinations of Orthodontic Archwires/ Brackets Interface by AFM*	Kenkichi Ohba *Estimation of the capability of shape recovery of each erythrocyte by using a micro-channel technique*	Nicole Kleinstreuer *A Mathematical Model of Renal Autoregulation in the Rat*
2.15pm - 2.30pm	Gijs Ijpma *Airway Smooth Muscle dynamics*	Keisuke Mamada *Measurement of Dynamic Vscoelasticities and Sensory Evaluations of Poly (Vinyl Alcohol) Hydrogel for Development of Oral Mucosa Model*		Gregory Sheard *Alteration in wall shear stress caused by non-axisymmetric flow in a fusiform abdominal aortic aneurysm*
2.30pm - 2.45pm		Keyoung Jin Chun *The Mechanical Behaviors of the Mandibular First Premolar*	Ashvin Thambyah *A microstructural analysis of load distribution in compressed cartilage*	Taiji Adachi *Average Turnover Rate of Actin Filament Accelerated by Severing: Coarse-grained Modeling and Simulation*
2.45pm - 3.00pm	Caroline Grant *Gravity dependant ventilation/perfusion ratios in healthy adults measured with Electrical Impedance Tomography*	John Middleton *Innovations in Facial Imaging, Muscle Movement and Expression*	Yoshihiro Ujihara *Effect of passive reorientation of actin filaments on the whole cell stiffness in a tensile test*	Choengryul Choi *Dynamics of Blood Cells in a Simple Shear Flow*
3.00pm - 3.15pm		Warwick Duncan *Micro-computerised tomography for the measurement of bone mineral density around titanium dental implants*	Kazuaki Nagayama *Effects of cyclic stretch waveform and cell density on the cyclic stretch-induced stress fiber reorientation in osteoblast-like cells*	Jennifer Siggers *Flow in the vitreous humour of the eye induced by saccadic eyeball motion*

WEDNESDAY 15 APRIL 2009 (continued)

3.30pm - 4.00pm **Afternoon Tea**

Central Lecture Block Foyer

4.00pm - 5.30pm **Oral Presentation Session 3**

	Commerce 009 **Artificial Organs and Implants**	**Commerce 011** **Cardiovascular Mechanics 2**	**Commerce 012** **Musculo-Skeletal Biomechanics 2**	**Commerce 013** **Bone and Ligament 2**	**Commerce 101** **Cardiopulmonary & Respiratory Mechanics 2**
4.00pm - 4.15pm	Kazuo Takakuda *ACL Reconstruction Using Chitin Coated Fabrics in a Rabbit Model*	Ashis Mookerjee *Detection of central arterial diseases using aortic impedance*	Yu-Chih Lin *Human Recognition Based on Foot Pressure Patterns during Gait*	Kozaburo Hayashi *Effects of Restressing after Stress Shielding on Mechanical Properties of Regenerated and Residual Tissues in Rabbit Patellar Tendon after Removal of Central One-Third*	Jacqui Jauncey-Cooke *Lung de-recruitment and re-recruitment following suction of the endotracheal tube in paediatrics*
4.15pm - 4.30pm	Yukiya Yamada *AE Monitoring of Microdamage during Compression Test of Ceramic Femoral Head*	Patrick Geoghegan *Experimental investigation of flow in compliant tubes to validate numerical models of aneurysms*	Gongfa Chen *Influences of Blood Supply on Bone Fracture Healing - Numerical Investigations*	Masao Tanaka *Microscopic evaluation of mechanical and material properties in rat cortical bone by nanoindentation and Fourier-transform infrared microspectroscopy*	Callum Spence *Upper Airway Stereoscopic Particle Image Velocimetry Measurements with High-Flow Nasal Cannula*
4.30pm - 4.45pm		Mushtak Al-Atabi *Experimental Study of the Flow through a Two Dimensional Mitral Valve Model*	Marcus Pandy *Subject-specific Evaluation of Patellofemoral Joint Biomechanics*	Samuel Peter Veres *Morphological Signatures of Flexion Related Disc Herniation*	Caroline Grant *Ventilation inhomogeneity during quiet breathing*
4.45pm - 5.00pm	Yi-Hsuan Peng *Effect of different velocity and shoulder joint angle in activation of shoulder muscle*	Kiyoshi Kumahata *Fluid-Structure Interaction Simulation in Heart driven by Myocardium Cell Behavior based on Eulerian Frame*	Sanjay Mishra *Investigation of the mechanical environment in normal and injured equine superficial digital flexor tendons by FE Analysis*		Prasika Reddy *Viscoelastic and Surface Tension Models of the Neonatal Respiratory System*
5.00pm - 5.15pm	Kanchana Rathnayaka *Quantification of the Accuracy of MRI Generated 3D Models of Long Bones*	Koji Fumoto *Study on flow and heat transfer characteristics of pharyngeal cooling cuff for brain hypothermia treatment*	Sung-Jae Hwang *Joint movements and muscle length during sit-to-stand at various sitting heights in the Korean elderly daily life*		
5.15pm - 5.30pm		Harvey Ho *A Haemodynamics Study for Intracranial Aneurysm Rupture*	Yasuaki Ohtaki *Kinematic Analysis of Patellar Tendon Reflex Responses in Healthy Subjects Utilizing Six-axis Inertial Sensor*		

THURSDAY 16 APRIL 2009

8.00am – 8.30am	**Conference Registration** Central Lecture Block			
8.30am - 10.30am	**Oral Presentation Session 4**			
	Commerce 009 **Additional Session**	**Commerce 011** **Cardiovascular Mechanics 3**	**Commerce 012** **Sports and Impact Biomechanics**	**Commerce 013** **Cellular and Molecular Mechanics Global COE Session** **Chair: Kazuhiko Yanai**
8.30am - 8.45am	Jaw-Lin Wang *The Rheological Properties of Intervertebral Disc Change with Creep Magnitude and Creep History*	Vickie Shim *Knee contact forces during gait: Part 2 – Finite Element analysis of tibio-femoral articulation*	Chen Hua Yeow *ACL injury prevention during landing requires substantial inhibition of anteriortibial translation and axial tibial rotation using effective bracing*	Koki Oya *Mechanical cyclic stretch stimulates matrix metalloproteinases production from macrophages*
8.45am - 9.00am	Bummo Ahn *Minimally Invasive Motorized Indenter for Measurement and Modeling of Soft Tissue Behavior*	Futoshi Mori *Influence of Transformation by Stent Expansion on Blood Flow in Carotid Artery*	Keane Wheeler *Agility Skill Execution in Rugby Union*	Tsubasa Matsui *In vitro measurement of viscoelastic properties of actin bundles using micro-tensile tester with visual feedback control*
9.00am - 9.15am		Shunichi Kobayashi *Influence of Cyclic Change of Distal Resistance on Pulsatile Flow and Deformation in Coronary Stenosis Model*	Yi-Jung Tsai *Effect of Gender on Lower Extremity Biomechanics during Shuttle Running*	Shun Kumano *Significant increase of active prestin molecules by single amino acid replacement*
9.15am - 9.30am		Tong-Miin Liou *Intra-aneurysmal Hemodynamics for Curved Vessel Installed with Wallstent*	Yusuke Miyazaki *Deformation measurement of a brain part in head physical model during rotational impact*	Toshihiro Omori *Effect of the membrane bending stiffness on the deformation of a red blood cell*
9.30am - 9.45am		Hai Lan *Mechanical Factors in Non-invasive Blood Pressure Measurements*	Liu Yin-Yin *The Acute Effect of Whole Body Vibration Training in Foot Pressure Distribution in Static Standing of the Stroke Patient*	Noriaki Matsuki *Low voltage pulses can induce apoptosis*
9.45am - 10.00am			Lan-Yuen Guo *Reliability and Validity of Ankle Proprioceptive Measurements: Using a Novel Designed Two-axis Device*	Natsuko Chiba *Identification of a new target of cancer therapy by a proteomic study*
10.30am - 11.00am	**Morning Tea** Central Lecture Block Foyer			
11.00am - 12.00pm	**Plenary Session 2** Central Lecture Theatre C1	**Professor Mark J. Pearcy** *The Value of Modelling to Biomechanics*		
12.00pm - 1.15pm	**Lunch** Central Lecture Block Foyer			
1.15pm - 4.30pm	Tamaki Heritage Village Excursion			
7.30pm - 11.00pm	Conference Gala Dinner, Hotel Grand Chancellor			

FRIDAY 17 APRIL

8.00am – 9.00am	**Conference Registration** Central Lecture Block			
9.00am - 10.30am	**Oral Presentation Session 5**			
	Commerce 009 **Computational Physiological Modelling 2**	**Commerce 011** **Micro and Nano Biomechanics 2**	**Commerce 012** **Cardiovascular Mechanics 4**	**Commerce 013** **Imaging and Measurement Integration Global COE Session** **Chair: Tetsu Tanaka**
8.30am - 8.45am	Sheikh Rashed Buksh *Study of Flea Jumping Mechanism for Biomimic Robot Design*	Shinji Matsushita *Evaluation of extensional stiffness of a single actin filament by molecular dynamics simulation*	Marie Oshima *Numerical simulation of blood flow and mass transport in atherosclerotic artery*	Kentaro Imagawa *Formulation for Eigenvalue Analysis of Error Dynamics of Measurement Integrated Simulation*
8.45am - 9.00am	Xiaobing Chen *Numerical Simulation of Septal Deviation Effects in Nasal Flow*	Susumu Kudo *Intercellular Ca2+ communication in cultured endothelial cells in response to caged compounds*	Hiroyuki Kosukegawa *Study on the Development of Blood Vessel Biomodeling with Realistic Mechanical Properties By Using Poly (vinyl alcohol) Hydrogel*	Kenichi Funamoto *Effect of Aliasing on Ultrasonic-Measurement-Integrated Simulation of Three-Dimensional Unsteady Blood Flow*
9.00am - 9.15am		Takeo Matsumoto *Microscopic heterogeneity in the mechanical environment of porcine thoracic aorta*	Nicolas Buchmann *Three-dimensional In-Vitro Measurements of Carotid Artery Haemodynamics*	Takahito Miki *Numerical Simulation of Inpiratory and Expiratory Pulmonary Airflow using a Patient-specific Model*
9.15am - 9.30am	Juliana Hee-Kyung Kim *The Effects of Skeletal Muscle Fibre Distributions on Action Potential Distributions*	Yeongjin Kim *Nanomechanical analysis of AFM probing on living cells with cytoskeleton disassembly*	Hugh Blackburn *Transient growth in stenotic flow with a physiologically realistic waveform*	Hiroshi Kanai *Propagation of Electric Excitation and Vibrations in the Human Heart*
9.30am - 9.45am	Yoshitaka Nakanishi *Box Training System for Arthroscopic Surgery*	Teruo Murakami *Roles of adsorbed film and gel layer in hydration lubrication in natural synovial joints*		Hideyuki Hasegawa *High Frame Rate Ultrasonic Imaging of Artery-Wall Strain and Blood Flow*
9.45am - 10.00am				Kazuhiko Yanai *Molecular Imaging and its Application to Drug Development*
10.30am - 11.00am	**Morning Tea** Central Lecture Block Foyer			
11.00am - 12.00pm	**Plenary Session 3** Central Lecture Theatre C1	**Professor Shigeo Wada** *Spring network modeling for multiscale mechanics from cells to organs*		
12.00pm - 1.00pm	**Lunch** Central Lecture Block Foyer			

FRIDAY 17 APRIL (continued)

1.00pm - 2.00pm	**Plenary Session 4** Central Lecture Theatre C1	**Professor James Goh** *Functional biomimetic silk-based scaffold for tissue engineering application*		
2.00pm - 3.30pm	**Oral Presentation Session 6**			
	Commerce 009 **Sports and Impact Biomechanics 2**	**Commerce 011** **Orthopaedic & Rehabilitation Biomechanics 2**	**Commerce 012** **Medical Devices from Nano to Macro Scales** **Global COE Session** **Chair: Hiroshi Fukuda**	**Commerce 013** **Bone and Ligament 3**
2.00pm - 2.15pm	Bing-Shiang Yang *Gait Modulation following Floor Surface Change*	Keiji Imado *Development of simple goniometer for hip joint utilizing universal joint*	Matsuhiko Nishizawa *Electrochemistry-Based Biointerface Engineering*	Zhongqing Su *Quantitative Evaluation of Coupling Effect of Soft Tissues on Propagation of Anti-symmetric Lamb Wave Mode in Cortical Bones*
2.15pm - 2.30pm		Ryanghee Sohn *A potable electrical gait assistive system for the correction of drop foot*	Kiyoshi Oda *The auditory brainstem responses by the electrical stimulation of cochlear nucleus using multi-channel surface bipolar electrode*	Jiro Sakamoto *Stress Analysis of the Spinal Cord in Circumspinal Decompression*
2.30pm - 2.45pm	Ying Yu Chen *The Effect of Ankle Taping in Landing Deacceleration of Foot*	Yoon Hyuk Kim *Biomechanical Evaluation of Double Bundle PCL Augmentation Method*	Tetsu Tanaka *Study of Electrical Stimulation for Fully Implantable Retinal Prosthesis*	Ya-wen Kuo *The Rheological Properties of Intervertebral Disc Change with Creep Magnitude and Creep History*
2.45pm - 3.00pm	YueLin Zhang *The simulation of cerebral contusion based on judicial autopsy report*	Laura Hollingsworth *The effect of Triceps function on wheelchair propulsion for people with tetraplegia*	Shin'ichiro Kanoh *A Brain-Computer Interface (BCI) System Using Selective Attention to Auditory Streams*	
3.00pm - 3.15pm	Alan Leung *Transient Response of Surrogate Head Subjected to Local Impacts: Computational Analysis*		Yasuhisa Hirata *Human-adaptive Fitting Method of Assistive Device for Sit-to-Stand Movement*	
3.15pm - 3.30pm		Pai-Chin Tsao *The immediate effect of myofascial release on 3-dimensional scapular kinematics in patients with subacromial impingement syndrome*	Hisataka Maruyama *Fabrication of Functional Gel-Microtool for On-Chip Local Environment*	
3.30pm - 4.00pm	**Afternoon Tea** Central Lecture Block Foyer			

FRIDAY 17 APRIL (continued)

4.00pm - 5.30pm	Oral Presentation Session 7			
	Commerce 009 **Biorheology & Microcirculation**	**Commerce 011** **Cellular & Tissue Engineering & Biomaterials**	**Commerce 012** **System Level NanoBNE Global COE Session** **Chair: Hiroshi Kanai**	**Commerce 013** **Musculo-Skeletal Biomechanics 3**
4.00pm - 4.15pm	Yohsuke Imai *A Micro Scale Blood Flow Model to Study Pathology of Malaria*	Hiroshi Miyazaki *Comparison of strains in fibroblasts embedded in collagen matrix with applied matrix strain*	Takami Yamaguchi *Computational Biomechanics of the Human Cardiovascular System - an overview*	Kumar Mithraratne *Knee Contact Forces During Gait: Part 1 - Joint kinematics and muscle force optimisation*
4.15pm - 4.30pm	Ken-ichi Tsubota *Computer simulation study on blood cell motion near vessel wall under viscous flow with adhesion force*	Hiroshi Yamada *Finite element models with dense focal adhesions reproduce the deformation of anendothelial cell under substrate stretching*	Manabu Tashiro *Human functional imaging of skeletal muscles and brain during sports activity using positron emission tomography*	David Saloner *Hemodynamic Forces in the Progression of Vascular Disease*
4.30pm - 4.45pm	Yasuhiko Sugii *Measurement of Morphological Responses of Endothelial Cells Cultured in Microchannel by Fluid Shear Stress*		Hiroshi Fukuda *Age-Related Structural Change of the Human Brain-Analysis of Brain Magnetic Resonance Image of Healthy Japanese Subjects*	Anthony John Medland *Modelling the movements of the human hand*
4.45pm - 5.00pm	Takuji Ishikawa *Motion of individual red blood cells in a concentrated suspension flowing through micro-channels*	Takeru Naiki *The role of microtubules in the contraction of cardiomyocytes*	Kai Wu *Anatomical networks in the human brain revealed by regional gray matter volume with Japanese brain MRI database*	Alireza Hashemi Oskouei *Relationship between hand grip force and forearm surface EMG, a reliability study*
5.00pm - 5.15pm		Toh Siew Lok *Using the Digital Image Correlation Technique for Determination of Soft Tissue Strains*	Yasuyuki Taki *Correlation between global gray and white matters volume and age in Japanese children*	Pei-Lin Yang *Secondary motions of the humerus and scapula kinematics: arm elevation test in patients with shoulder anterior/posterior tightness.*
5.15pm - 5.30pm		Kazuo Takakuda *Accelerated fusion of surgical wound with low reactive-level laser therapy*	Tomoyuki Yambe *Effect of Alternanive medicine on Autonomic function*	Yasuhiro Matsuda *Development of Finger Braille Recognition System*