## **First International Motor Impairment Conference 2018**



## **Provisional Program**

DAY 1: MONDAY 26 NOVEMBER 2018		
Session 1:	<b>MUSCLE -</b> 9.00am-10.30am	
Chairpersons:	TONY BLAZEVICH	
SIMON GANDEVIA and	Training-induced changes in muscles	
KAREN SØGAARD	JAMES WAKELING	
	Prediction of performance from muscle models	
	BART BOLSTERLEE	
	Regional hypertrophy in the human quadriceps following	
	progressive resistance training	
	TREVOR ALLEN	
	What can isometric contractions tell us about muscle injury and	
	rehabilitation?	
	JOANNA DIONG	
	Involuntary muscle activity reduces passive range of motion at	
	known torque	
Morning tea	10:45-11:15am	
Session 2:	RESPIRATION - 11:15am-12.30pm	
<u>Chairpersons</u> :	BILL SHEEL	
JANE BUTLER and	The respiratory musculature: impairments and limitations in	
(DANNY ECKERT or	health and disease	
<b>LYNNE BILSTON</b> – to be	ANNA HUDSON	
confirmed)	Age-related adaptions in the neural control of the human	
	diaphragm muscle	
	DAVID NGUYEN	
	Neural drive to the diaphragm in cervical spinal cord injury	
	HANNA HENSON	
	Sleep apnoea in people with multiple sclerosis	
	TIM CARROLL	
	Transient, broad field, visual input strongly modulates reactive	
	saccade latency	
Lunch	12:45-1:30pm	
Session 3:	<b>POSTERS</b> 1:30-3:00pm	
	See separate poster list	
Session 4:	<b>BALANCE</b> - 3.30pm-5:00pm	
<u>Chairpersons</u> :	BRIAN DAY	
STEPHEN LORD and	Am I the right way up? Disturbances of spatial orientation in	
	variants of Alzheimer's disease	
DAINA STURNIEKS	ELEFTHERIA GIANNOULI	
	A novel group-based stepping exercise program to improve fall	
	risk factors in older adults: first results of a pilot study	
	MIRJAM PIJNAPPELS	
	Adaptive, reactive and daily life gait in older populations	
	MORAG TAYLOR	
	The relationship between white matter hyperintensity clusters	
	(size and location) and prospective falls in older adults across the	
	cognitive spectrum	

DAY 2: TUESDAY 27 NOVEMBER 2018		
Session 1:	CONTRACTURE & MORE - 9.00am-10.45am	
Chairpersons:	RICK LIEBER	
ROBERT HERBERT and	Mechanisms of contracture	
GLEN LICHTWARK	AMY ADKINS	
	Early Evidence for a decrease in biceps optimal fascicle length	
	based on in vivo muscle architecture in Chronic Hemiparetic	
	stroke	
	ZEV RYMER	
	Changes in muscle architecture after hemispheric stroke can	
	adversely affect efficiency of muscle contraction in pennate	
	muscles	
	TAYLOR DICK	
	A speed-adaptive myoelectric ankle exoskeleton to improve post-	
	stroke walking performance	
	PETER MALLIARAS	
	People with Achilles tendinopathy display greater force	
	fluctuations than controls at low force levels	
	MATTHEW BRODIE	
	A finite element method for integrated design and testing of 3D	
	printed ankle and foot orthoses for children with cerebral palsy	
	and motor impairment	
Morning tea	10:45-11:15am	
Session 2:	BRAIN STIMULATION & STROKE - 11:15am-12.30pm	
<u>Chairpersons</u> :	JOHN ROTHWELL	
JANET TAYLOR and	Brain stimulation and treatment of motor impairments	
IRENE DI GIULIO	ANN-MAREE VALLENCE	
	Characterizing age-related changes in supplementary motor area-	
	primary motor cortex connectivity.	
	IRENE DI GIULIO	
	Effect of STN-DBS frequency on postural performance in	
	Parkinson's disease	
	CJ HECKMAN	
	Distortions in the synaptic organization of motor commands to	
	proximal and distal muscles following hemiparetic stroke	
	JULIUS DEWALD	
	Increased dependence on contralesional cortico-reticulospinal	
	pathways a form of maladaptive plasticity post hemiparetic	
l I	stroke?	
Lunch	12:45-end of day	
	Sightseeing and enjoying Sydney followed by conference dinner.	

DAY 3: WEDNESDAY 28 NOVEMBER 2018		
Session 1:	MOTOR CONTROL - 9.00am-10.30am	
Chairpersons:	RANDY FLANAGAN	
MARTIN HÉROUX and	Coming to grips with sensorimotor control	
GRAHAM KERR	LEAH BENT	
	Stochastic Resonance can enhance cutaneous reflex responses in the	
	lower limb	
	JAYNE GARLAND	
	Do reactions to balance perturbations improve with Fast muscle	
	Activation and Stepping Training (FAST) in sub-acute stroke?	
	SEAN DUKELOW	
	Using robots and other techniques to guide stroke rehabilitation	
Morning tea	10:30-11:00am	
Session 2:	STANDING AND FALLS - 11:00am-12.30pm	
<u>Chairpersons</u> :	IAN HARRIS	
KIM DELBAERE and	Evidence-based surgery	
MIRJAM PIJNAPPELS	JOANNE KUA	
	The effects of a specialized treadmill system on gait speed and gait	
	parameters for older adults with high falls risk	
	KIM VAN SCHOOTEN	
	The effect of central processing and muscle torque development speed on balance recovery during standing	
	KATE CARROLL	
	Footsteps, falls and functional ambulation in children with	
	neuromuscular disease	
	GRAHAM KERR	
	Objective assessment of upper limb tremor distinguishes Parkinson's	
	fallers and non-fallers and is predictive of future falls	
Lunch	12:30-1:30pm	
Session 3:	YOUNG INVESTIGATORS - 1:30-3:00pm	
Chairpersons:	KEVIN GILMORE	
JOHN ROTHWELL and	The effects of demyelination in Chronic Inflammatory Demyelinating	
JAYNE GARLAND	Polyneuropathy on neuromuscular properties, muscle quantity & quality.	
	HARRISON FINN	
	Firing of fatigue-sensitive small-diameter afferents of the calf muscles	
	impairs maximal contractions of the knee extensor muscles	
	SHARI O'BRIEN	
	Visuomotor ankle force training in individuals with spastic cerebral palsy	
	compared to their typically developed peers.	
	ZOE DJAJADIKARTA	
	Ankle proprioception in people with Multiple Sclerosis	
	LYNDON SMITH	
	Impaired sensorimotor control of the hand in congenital absence of functional muscle spindles	
	PAULO PELICIONI	
	Cognitive contributions to the control of balance during stepping in young & older adults - a fNIRS study.	
Afternoon Tea	2:42pm – 3:25pm	

DAY 3: WEDNESDAY 28 NOVEMBER 2018 (Cont.)		
Session 4:	PAIN & FATIGUE - 3.25pm-5:00pm	
<u>Chairpersons</u> :	KAREN SØGAARD	
ANDREW CRESSWELL and	Muscle pain, fatigue and performance in motor impairments	
SIOBHAN SCHABRUN	JANET TAYLOR	
	Muscle fatigue and training: roles for the spinal cord (draft title)	
	CHRIS MCNEIL	
	Peripheral fatigue in young and old females and males	
	SIOBHAN SCHABRUN	
	Motor function and motor cortical reorganization in the transition to	
	sustained pain	
	PAUL HODGES	
	Physical activity reduces dysregulation of the inflammatory mediators in	
	the multifidus muscle after spontaneous intervertebral disc	
	degeneration in SPARC-null mice	
End of day 3	5:00pm	
CONFERENCE CONCLUDES		

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