Sunday August 11th Pre-Conference Workshops			Monday August 12th	Tuesday August 13th		Wednesday August 14th	Thursday August 15th
Registration Desk Opens 8:30-4:00pm (Convention Centre)		8:00-8:30am	Registration Desk Opens (Convention Centre)	Registration Desk Opens	8:00-8:30am	Registration Desk Opens	Registration Desk Opens
		8:30-9:00am	Buffet Breakfast (Pointe St-Anne B)Vendor Workshop Point Designs	Buffet Breakfast Vendor Workshop Coapt	8:30-9:00am	Buffet Breakfast Vendor Workshop Aether Biomedical	Buffet Breakfast Vendor Workshop Delsys
		9:00-9:15am	Welcome Address	Morning Comments	9:00-9:15am	Morning Comments	Morning Comments
9:00-12:00pm	10:30 - 12:00pm BLINCdev Workshop (Nashwaaksis Room)	9:15-10:15am	Keynote Helen Huang (Pointe St-Anne CD)	User Feedback Panel	9:15-10:15am	Keynote Corry van der Sluis	Session F - Paper Presentations (5 papers)
Fillauer Workshop (Barkers Point		10:15-10:45am	Networking with Vendors (Pointe St-Anne B)	Networking with Vendors	10:15-10:45am	Networking with Vendors	Networking with Vendors
Room)		10:45-12:00pm	Session A - Paper Presentations (5 papers) (Pointe St-Anne CD)	Session C - Paper Presentations (5 papers)	10:45-12:00pm	Session D - Paper Presentations (5 papers)	Session G - Paper Presentations (3 papers)
							Closing Remarks
		12:00-1:00pm	Lunch Networking with Vendors (Pointe St-Anne B)	Lunch Networking with Vendors	12:00-1:00pm	Lunch Networking with Vendors	
<b>1:00-4:00pm</b> Embodiment Workshop (Barkers Point Room)		1:00-2:00pm	Perspective Talk - Phil Stevens (Pointe St-Anne CD)	Vendor Workshop   Infinite Biomedical	1:00-1:30pm	Perspective Talk - Greg Bowring	
		1:00-2:00pm	Session B - Paper Presentations (2 papers)	Unconference Conference	1:30 - 2:15pm	Vendor Workshop	
		2:00-2:30pm	Networking with Vendors	(1:20-2:45pm)	2:15 - 2:45nm	Networking with Vendors	
	1:00-5:00pm		Fast-Track Poster Presenters		2.10 - 2.40011		
	LibEMG Workshop (Nashwaaksis Room)	ibEMG Workshop (Nashwaaksis Room) 2:30-3:45pm	(Pointe St-Anne CD) Poster Session (Atrium) Nutrition Break/Vendor Displays (Pointe St-Anne B)	Poster Session (Atrium) Nutrition Break/Vendor Displays (2:45-3:45pm)	2:45 - 3:45pm	Session E - Paper Presentations (4 papers)	
		3:45-4:15pm	Perspective Talk - Levi Hargrove	Perspective Talk - Richard Weir	3:45-4:00pm	End of Day Comments	
		4:15-4:30pm	End of Day Comments	End of Day Comments		6:30pm - MEC Dinner & Student Award	
		4.15-4.30pm	End of Day Comments	End of Day Comments	J	(SUB Bottom Floor)	
			7:00-9:00pm - Welcome Event (Farmers Market - 665 George St.)				

# Monday, August 12<sup>th</sup>

Paper Session A - 10:45am - 12:00pm				
Time	Authors	Title	Track	
10:45 - 11:00am	Chris Baschuk	Designed for Additive Manufacturing: Upper Limb Prostheses	Devices and Materials	
11:00 - 11:15am	Xinyu Jiang, Chenfei Ma and Kianoush Nazarpour	Toward Self-Calibrating Plug-and-Play Myoelectric Control	Myoelectric Control Algorithms	
11:15 - 11:30am	Heather Daley, Wendy Hill and Dan Dafonseca	A Modular Solution to a Unique Design Request for a Shoulder Disarticulation Prosthesis: A Case Study	Clinical Practice	
11:30 - 11:45am	Melissa Schmitt, Alexandra Zanowick-Marr, Debra Kelty, Linda Resnik and Emily Graczyk	User Perspectives on Features of Upper Limb Prostheses: A Qualitative Cross- Case Comparison	User Experience and Pain	
11:45 - 12:00pm	Laura Miller, Quinn Boser, Vikram Darbhe, Jacqueline Hebert, Kevin Brenner and Kristi Turner	Kinematic Changes with Powered Wrist Flexion for Transradial Prosthetic Users Completing the Gaze and Movement Assessment (GAMA) Pasta Box Task	Devices and Materials	
Paper Session B - 1:30 - 2:00pm				
Time	Authors	Title	Track	
1:30- 1:45pm	Shriram Tallam Puranam Raghu, Dawn MacIsaac and Erik Scheme	Enabling Myoelectric Control Training Using Continuous Data Through Self- Supervised Representation Learning	Myoelectric Control Algorithms	
1:45 – 2:00pm	Joshua Siegel and Jonathon Schofield	Exploring the Perspectives of Different Professions on Task-Based Upper-Limb Prosthesis Assessment Techniques	Clinical Practice	

#### **Fast-Track Poster Presentations**

Monday 2:30 – 3:00pm					
Poster #	Authors	Title	Track		
1	Debra Latour and Megan Hodgson	UnLIMBited Wellness: Program Expansion	User Experience and Pain		
2	Luke Osborn, Courtney Moran, Breanne Christie, Meiyong Himmtann, Rama Venkatasubramanian, Matthew Fifer and Robert Armier	Creating Pressure and Thermal Tactile Sensations in the Phantom Hand Using Non-Invasive Stimulation	Control and Sensory Feedback		
3	Kristi L. Turner, Wendy Hill, Eric J. Earley, Maria Munoz- Novoa, Liselotte Hermansson and Helen Lindner	Refinement of New Items in the Assessment of Capacity for Myoelectric Control for Multi-Articulating Hands	Other		
4	Eric Earley, Cristina Piazza and Kristi Turner	A Taxonomy for Commercially Available Myoelectric Terminal Devices	Prosthetic Devices and Materials		
5	Nicolò Boccardo, Michele Canepa, Samuel Stedman, Lorenzo Lombardi, Andrea Marinelli, Dario Di Domenico, Emanuele Gruppioni, Lorenzo De Michieli and Matteo Laffranchi	A Compact 2-DOFs Actuated Wrist for Improving Dexterity of Upper Limb Prosthetics	Prosthetic Devices and Materials		
6	Samantha G Rozevink, Bart Maas, Alessio Murgia, Raoul M Bongers and Corry K van der Sluis	Assessing Control and Feedback in Virtual Reality for Myo- Electric Prosthesis Training	User Experience and Pain		
7	Mitchell Dumba, Michael Dawson, Glyn Murgatroyd, Patrick Pilarski, Jacqueline Hebert and Ahmed Shehata	A Virtual Reality Training Environment For Myoelectric Prosthesis Grasp Control With Sensory Feedback	Control and Sensory Feedback		
8	Laura Petrich, Heather Williams, Matthew Taylor, Jacqueline Hebert, Pierre Lemelin, Ahmed Shehata and Patrick Pilarski	A Preliminary Investigation into Bio-Inspired Data Collection for Transhumeral Targeted Muscle Reinnervation Prosthetic Control	Control and Sensory Feedback		
9	Stephanie Lorelli and Richard Weir	Exploration of Fuzzy Logic As a Means to Handle Imprecise EMG Signals In Pattern Recognition Classifiers	Myoelectric Control Algorithms		
10	Alix Chadwell, Laurence Kenney, Michael Prince, Jennifer Olsen and Matthew Dyson	An Approach to Replicating Clinical Prosthetic Sockets to Support Research	Prosthetic Devices and Materials		
11	Brittney Curcio	Integrating Novel Components into Bilateral Pediatric Shoulder Disarticulation Prosthetic Fittings: A Case Study	Other		

12	Sarah Mehigan and Sigrid Dupan	Limitations to the Sense of Agency Over Myoelectric Controlled Movements	User Experience and Pain
13	Peyton R. Young, Eden J. Winslow, Giancarlo K. Sagastume, Marcus A. Battraw, Richard S. Whittle and Jonathon S. Schofield	The Effects of Limb Position and Applied Load on Hand Gesture Classification Accuracy Using Electromyography and Force Myography	Other
14	Kiriaki J. Rajotte, Anson Wooding, Todd Farrell, Jianan Li, Xinming Huang, Edward A. Clancy and Benjamin E. McDonald	Power Consumption, Latency, and Maximum Number of Supported Nodes for BLE Biosensor Applications	Prosthetic Devices and Materials
15	Josh McGinnis, Lana Wong, Marcus Battraw and Jonathon Schofield	Ice is Nice: A Modular Gamified Research and Training Platform for Pediatric Upper Limb Prosthetic Control	Control and Sensory Feedback
16	Daniel DaFonseca, Heather Daley and Wendy Hill	Enhancing Upper Limb Prosthetic Fabrication with 3D Printing Technology: Opportunities and Applications	Prosthetic Devices and Materials
17	Barathwaj Murali and Richard Weir	A Responsive Myoelectric Control Signal Processing Technique Using Muscle Excitation-Contraction Modeling	Myoelectric Control Algorithms
18	Evan Campbell, Ethan Eddy, Ulysse Côté-Allard and Erik Scheme	Improving User-in-the-Loop Myoelectric Control Using Context Informed Incremental Learning	Myoelectric Control Algorithms
19	Amber Bollinger and Richard Weir	Comparison Of Differential Surface EMG Circuits And Interelectrode Spacing For Use With Regenerative Peripheral Nerve Interfaces	Control and Sensory Feedback
20	Robert Midura and Mark Brinton	Effect of Biomimicry on Perceived Intensity, Naturalness, and Pleasantness Using Non-Invasive Electrical Stimulation	Control and Sensory Feedback
21	Charles Moore, B. Ulgen Kilic, Federico Masiero, Marta Gherardini, Christian Cipriani and Paul Marasco	Comparative Kinematic Analysis of Two Kinesthetic Interfaces from Distinct Recording Methodologies	Control and Sensory Feedback
22	Seyedeh Nadia Aghili and Kianoush Nazarpour	Feasibility of Spatio-Temporal Linear Feature Learning for Myoelectric Control: A Small Window Size Approach	Myoelectric Control Algorithms
23	Chenfei Ma, Xinyu Jiang and Kianoush Nazarpour	3-Stage Neural Network Training Protocol for Generalisable Myoelectric Control	Myoelectric Control Algorithms

### Tuesday, August 13<sup>th</sup>

Paper Session C - 10:45am - 12:00pm				
Time	Authors	Title	Track	
10:45 - 11:00am	Christian Morrell, Evan Campbell and Erik Scheme	Exploring User Compliance in the Training of Regression-Based Myoelectric Control	User Experience and Pain	
11:00 - 11:15am	Miriam Rafferty, Paulo Aco, Kristi Turner, Laura Miller, Blair Lock and Zachary Wright	Barriers and Facilitators to Adopting a Clinician Dashboard Supporting Upper Limb Myoelectric-Controlled Prostheses	Clinical Practice	
11:15 - 11:30am	Félix Chamberland, Xavier Isabel, Evan Campbell, Gabriel Gagné, Benoit Gosselin, Erik Scheme, Gabriel Gagnon- Turcotte and Ulysse Côté-Allard	BioPoint: Single-site, Multi-sensor Compound Gesture Recognition	Myoelectric Control Algorithms	
11:30 - 11:45am	Jacopo Franco, Simon Stuttaford, Patrick Degenaar and Matthew Dyson	Optical Sensing of Muscle Activity	Prosthetic Devices and Materials	
11:45 - 12:00pm	Bart Maas, Jack Tchimino, Bram Van Dijk, Alessio Murgia, Corry K. van der Sluis and Raoul M. Bongers	The Effectiveness of Virtual Reality Training for Arm Prosthesis Control Compared with Prosthesis Simulator Training	Clinical Research	

# Wednesday, August 14<sup>th</sup>

Paper Session D - 10:45am - 12:00pm					
Time	Authors	Title	Track		
10:45 - 11:00am	Phillip Stevens, Dwiesha England, Bretta Fylstra, Todd Castleberry and Shane Wurdeman	Prosthesis Receipt Is Associated with Improved Participation and Decreased Pain Following Upper Limb Amputation	User Experience and Pain		
11:00 - 11:15am	Heather E. Williams, Jacqueline S. Hebert, Patrick M. Pilarski and Ahmed W. Shehata	Evidence That a Deep Learning Regression-Based Controller Mitigates the Limb Position Effect for an Individual with Transradial Amputation	Control and Sensory Feedback		
11:15 - 11:30am	Milad Jabbari and Kianoush Nazarpour	Spatio-Temporal Convolutional Networks for Myoelectric Control	Myoelectric Control Algorithms		
11:30 - 11:45am	Salma Soliman, Anna Rita Moukarzel, Inhwa Lee, Megan Hodgson, Christopher Hunt, Rahul Kaliki, Ahmed Shehata and Jacqueline Hebert	Effects of Augmented Reality Training on Pattern Recognition Control in Myoelectric Prostheses Users: A Case Study	Clinical Research		
11:45 - 12:00pm	Eisa Aghchehli, Chenfei Ma, Matthew Dyson and Kianoush Nazarpour	Medium Density Digital Electromyography Sensing System	Control and Sensory Feedback		
		Paper Session E - 2:45 – 3:45pm			
Time	Authors	Title	Track		
10:45 - 11:00am	Felix Jarto and Sigrid Dupan	Investigating the Speed-Accuracy Tradeoff in Electrotactile Stimuli	Control and Sensory Feedback		
11:00 - 11:15am	Laura Miller, Kristi Turner, Kevin Brenner and Levi Hargrove	Functional Outcomes of a Transradial Prosthesis with and without Wrist Flexion and Extension	Prosthetic Devices and Materials		
11:15 - 11:30am	Eden Winslow, Marcus Battraw, Justin Fitzgerald, Michelle James, Anita Bagley, Wilsaan Joiner and Jonathon Schofield	Affected Muscles Retain Dextrous Motor Capabilities in Children Born with Upper-Limb Deficiencies	Clinical Research		
11:30 - 11:45am	Afsana Hossain Rima, Zahra Taghizadeh, Ahmed Bashatah, Brian Monroe, Siddhartha Sikdar, Abhishek Aher and Gabriel Gibson	First Evaluation of an Integrated Sonomyographic Prosthesis in Individuals with Congenital Limb Difference	Control and Sensory Feedback		

# Thursday, August 15<sup>th</sup>

Paper Session F - 9:15am - 10:30am					
Time	Authors	Title	Track		
9:15 - 9:30am	Christopher Hunt, György Lévay, Megan Hodgson, Damini Agarwal and Rahul Kaliki	Feasibility of the Glide Myoelectric Control Algorithm for Partial Hand Prosthesis Control	Myoelectric Control Algorithms		
9:30 - 9:45am	Lincoln Inglis and Dan Blustein	Development and Assessment of an Augmented Reality Feedback System for Prosthesis Users	Control and Sensory Feedback		
9:45 - 10:00am	Christopher Fink, Timothy Bump and Debra Latour	Rethinking the Shoulder Disarticulation Prosthesis: Let's Stop Thinking Outside the Box and Make the Box Bigger	Clinical Practice		
10:00 - 10:15am	Brian Monroe and Phillip Stevens	Preliminary Evaluation of Variations in Control Strategy Following Transhumeral Osseointegration	Other		
10:15 - 10:30am	Simon Stuttaford, Jacopo Franco, Patrick Degenaar and Matthew Dyson	Investigating the Universality of Optical Myography	Control and Sensory Feedback		
Paper Session G – 11:00 - 11:45am					
Time	Authors	Title	Track		
11:00 - 11:15am	Gyorgy Miklos Levay, Ruichen Yang, Christopher L. Hunt, Megan C. Hodgson, Rahul R. Kaliki and Nitish V. Thakor	Pattern Separability Visual Feedback to Improve Pattern Recognition Decoding Performance	Control and Sensory Feedback		
11:15 - 11:30am	Zachary Wright, Blair Lock, Kristi Turner, Andrea Ikeda, Katie Cai, Xavier Oberhelman, Carlos Martinez and Levi Hargrove	A Portable Myoelectric Pattern Recognition-Driven Virtual Training System for Phantom Limb Pain Management	User Experience and Pain		
11:30 - 11:45am	Kristi Turner, Andrea Ikeda, Zachary Wright, Blair A. Lock and Levi J. Hargrove	Preliminary Results of a Portable Take Home Phantom Limb Pain Management System	User Experience and Pain		