

ISPO Canada - RehabWeek Poster Presentations		
ABSTRACT NO. ABSTRACT TOPIC ABSTRACT TITLE	PRESENTER AUTHORS AFFILIATION	SESSION DETAILS
11 ORTHOTICS <i>Efficacy of flexible brace (All Line™) on idiopathic scoliosis</i>	PRESENTER: JEONG HWAN SEO Jeonbuk National University Hospital, Jeonju, South Korea	ISPO Hall
15 WHEELCHAIR AND SEATING <i>Older adults' perceptions and experiences with a community-based peer-led wheelchair- training program</i>	PRESENTER: ALICE PELLICHERO AUTHORS: Alice Pellichero (1); Krista L Best (1); François Routhier (1); William C Miller (2) (1) Université Laval, Québec City, Canada; (2) University of British Columbia, Vancouver, Canada	ISPO Hall
16 OTHER <i>A review of knee and hip osteoarthritis in transfemoral amputees</i>	PRESENTER: TRACIE J HUTTON Sheridan College, Brampton, Canada	ISPO Hall
17 WHEELCHAIR AND SEATING <i>Satisfaction in living and social activities by using walking aids among people with physical disability in korea</i>	PRESENTER: YOUNGSHIN SONG AUTHORS: Youngshin Song; Soo-Kyung Bok Chungnam National University, Daejeon, South Korea	ISPO Hall
18 PROSTHETICS <i>The rare rehabilitation experience on becoming a blind amputee: A case study</i>	PRESENTER: JACQUILINE NESTICO University of Toronto, Toronto, Canada	ISPO Hall
20 OTHER <i>Reliability, validity, and agreement of the full and short-form activities-specific balance confidence scale in people with lower extremity amputations</i>	PRESENTER: KATHERINE A FULLER AUTHORS: Katherine A Fuller, Humberto Omana, Courtney Frengopoulos, Michael Payne, Ricardo Viana, Susan Hunter Western University, London, Canada	ISPO Hall
21 PROSTHETICS <i>Development and assessment of a wearable vibrotactile biofeedback system to improve gait of individuals with lower-limb amputation</i>	PRESENTER: REFAEL ESCAMILLA AUTHORS: Rafeal Escamilla (1,2); Jan Andrysek (1,2) (1) University of Toronto, Toronto, Canada; (2) Holland Bloorview Kids Rehabilitation Hospital, Toronto, Canada	ISPO Hall
22 PROSTHETICS <i>Examining the use of lower limb prostheses in older adults with amputations following inpatient prosthetic training</i>	PRESENTER: BRITTANY POUSETT Barber Prosthetics Clinic, Vancouver, Canada	ISPO Hall
23 ORTHOTICS <i>A dynamic arm orthosis to assist powered wheelchair control for a man with Multiple Sclerosis: a case study</i>	PRESENTER: FRANÇOIS ROUTHIER AUTHORS: François Routhier (1); Jason Bouffard (1); Bruno Lemelin (2); Alexandre Campeau-Lecours (1); Audrey Lebrasseur (1); David Pacciolla (3) (1) Université Laval, Québec City, Canada; (2) Institut de réadaptation en déficience physique de Québec (IRDQP), Québec City, Canada; (3) Kinova, Boisbriand, Canada	ISPO Hall
25 PROSTHETICS <i>Modular adaptable transhumeral prosthetic socket for evaluating myoelectric control</i>	PRESENTER: BEN HALLWORTH AUTHORS: Ben Hallworth, James Austin, Heather Williams, Mayank Rehani, Ahmed Shehata, Jacqueline Hebert University of Alberta, Edmonton, Canada	ISPO Hall

26 ORTHOTICS Accuracy and repeatability of using smartphone-based sensors for orthotic tuning	PRESENTER: BRANDON NGUYEN AUTHORS: Brandon Nguyen, Darrin Howell, Nick Baicoianu, Katherine M. Steele University of Washington, Seattle, USA	ISPO Hall
27 PROSTHETICS Bicycling participation of people with lower limb amputation in Thailand	PRESENTER: JUTAMANEE POONSIRI AUTHORS: Jutamanee Poonsiri (1); Rienk Dekker (1,2); Pieter U. Dijkstra (1,2); Yasmin Nutchamlomg (3); Chanapak Dismanopnarong (4); Chiraphan Puttipaisan (5); Samai Suakonburi (6); Pensupa Pimchan (7); Juha M. Hijmans (8); Jan H.B. Geertzen (1,2) (1) University of Groningen, Groningen, Netherlands; (2) University Medical Center Groningen, Groningen, Netherlands; (3) Mahidol University, Nakhon Pathom, Thailand; (4) Veterans General Hospital, Bangkok, Thailand; (5) Chulalongkorn Hospital, Bangkok, Thailand; (6) Lerdsin Hospital, Bangkok, Thailand; (7) Phramongkutklao Hospital, Bangkok, Thailand	ISPO Hall
28 PROSTHETICS Fast and easy hand motion changing algorithm	PRESENTER: SEHOON PARK AUTHORS: Sehoon Park (1); Seunggi Kim (1); Shinki Kim (1) (1) Korea Orthopedics and Rehabilitation Engineering Center (KOREC), Incheon, South Korea	ISPO Hall
30 PROSTHETICS Comparison between two kinematic algorithm and ground reaction force technique for determining gait events during overground walking in trans-tibial population	PRESENTER: MANUNCHAYA SAMALA Sirindhorn School of Prosthetics & Orthotics, Faculty of Medicine, Siriraj Hospital, Bangkok, Thailand	ISPO Hall
33 OTHER Field validation of an early indicator of muscle fatigue during gait with an exoskeleton in an urban environment: A pilot study	PRESENTER: MATHIEU BIELMANN AUTHORS: Mathieu Biemann (1,2); Isabelle Poitras (2); Gabriel Diamond (3); Etienne Lamoureux (3); Krista L Best (2); Laurent Bouyer (1,2) (1) Centre interdisciplinaire de recherche en réadaptation et intégration sociale (CIRRIS) (2) Université Laval, Québec City, Canada; (3) Mawashi Science & Technology, Saint-Jean-Richelieu	ISPO Hall
34 PROSTHETICS The association between changes in subjective and objective measures of mobility in lower limb amputees after inpatient rehabilitation	PRESENTER: HUMBERTO OMANA AUTHORS: Humberto Omana, Gabrielle Cieslak, Michael Payne, Ricardo Viana, Susan Hunter Western University, London, Canada	ISPO Hall
35 PROSTHETICS Fear of falling as a cognitive distractor affecting mobility in people with a lower limb amputation	PRESENTER: HUMBERTO OMANA AUTHORS: Humberto Omana, Michael Payne, Ricardo Viana, Susan Hunter Western University, London, Canada	ISPO Hall
37 ORTHOTICS Ankle foot orthoses for young children with cerebral palsy: A multi-methods study protocol	PRESENTER: PEGAH FIROUZEH AUTHORS: Pegah Firouzeh, Lyn Sonnenberg, Lesley Pritchard-Wiart University of Alberta, Edmonton, Canada	ISPO Hall

39 <i>PROSTHETICS</i> <i>Development of passive MCP joint thumb prosthesis</i>	<i>PRESENTER: MANKEE JEON AUTHORS: Mankee Jeon (1); Yoonhee Chang (1); Bora Jeong (1); Jeongsun Kang (1); Shinki Kim (1) (1) Korea Orthopedics & Rehabilitation Engineering Center (KOREC), Incheon, South Korea</i>	<i>ISPO Hall</i>
40 <i>WHEELCHAIR AND SEATING</i> <i>A digital peer-led approach to physical activity counselling among manual wheelchair users: Preliminary findings</i>	<i>PRESENTER: SOPHIE BOURASSA AUTHORS: Sophie Bourassa, Krista L Best, François Routhier Université Laval, Québec City, Canada</i>	<i>ISPO Hall</i>
41 <i>PROSTHETICS</i> <i>Education after lower limb amputation: A qualitative study on clients' perspectives to develop an online self-management program</i>	<i>PRESENTER: ELHAM ESFANDIARI AUTHORS: Elham Esfandiari (1), William C. Miller (1), Sheena King (2); Maureen C Ashe (1); Ben Mortenson (1) (1) University of British Columbia, Vancouver, Canada; (2) Vancouver Coastal Health, Vancouver, Canada</i>	<i>ISPO Hall</i>
43 <i>PROSTHETICS</i> <i>Integrated type remote EMG sensor for the partial-hand prosthetics</i>	<i>PRESENTER: SEHOON PARK AUTHORS: Sehoon Park (1); Shinki Kim (1) (1) Korea Orthopedics & Rehabilitation Engineering Center (KOREC), Incheon, South Korea</i>	<i>ISPO Hall</i>
46 <i>PROSTHETICS</i> <i>Development of the myoelectric hand control system for an upper limb amputee</i>	<i>PRESENTER: SEUNGGI KIM AUTHORS: Seunggi Kim; Sehoon Park Korea Orthopedics & Rehabilitation Engineering Center (KOREC), Incheon, South Korea</i>	<i>ISPO Hall</i>
47 <i>ORTHOTICS</i> <i>Successful sport orthotic intervention after chronic wound closure at the post-traumatic degenerated ankle of a high-demand para-badminton athlete</i>	<i>PRESENTER: SHIAUFU HSIEH AUTHORS: Shiaufu Hsieh (1); Hung-Bin Chen (2) (1) MacKay Memorial Hospital, Taipei, Taiwan; (2) Mennonite Christian Hospital, Hualien, Taiwan</i>	<i>ISPO Hall</i>
48 <i>ORTHOTICS</i> <i>Knee kinematics of gait for patients with knee osteoarthritis using the 2D/3D registration method</i>	<i>PRESENTER: KAZUTOSHI HATAKEYAMA AUTHORS: Kazutoshi Hatakeyama, Hiroaki Tsukamoto, Kotaro Suzuki, Satoaki Chida, Motoyuki Watanabe, Yusuke Takahashi, Kai Kagami, Tomohiro Suda, Kazuki Okura, Hikaru Kikuchi, Kimio Saito, Toshiki Matsunaga, Takehiro Iwami, Yoichi Shimada Akita University, Akita, Japan</i>	<i>ISPO Hall</i>
49 <i>OTHER</i> <i>Gender difference in trunk stability using new device</i>	<i>PRESENTER: KIMIO SAITO Akita University Hospital, Akita, Japan</i>	<i>ISPO Hall</i>
53 <i>OTHER</i> <i>Can an individual with altered synergies control an unimpaired gait pattern?</i>	<i>PRESENTER: KATHERINE M STEELE AUTHORS: Katherine M Steele (1); Naser Mehrabi (1); Michael Schwartz (2) (1) University of Washington, Seattle, USA; (2) Gillette Children's Specialty Healthcare, St. Paul, USA</i>	<i>ISPO Hall</i>
55 <i>PROSTHETICS</i> <i>A motor unit based neural interface for real-time control of upper-limb prostheses</i>	<i>PRESENTER: MICHAEL D TWARDOWSKI AUTHORS: Michael D Twardowski (1); Serge Roy (1); Zhi Li (2); Paola Contessa (1); Gianluca De Luca (1); Joshua Kline (1) (1) Delsys & Altec Inc., Natick, USA; (2) Worcester Polytechnic Institute, Worcester, USA</i>	<i>ISPO Hall</i>

56 PROSTHETICS <i>Testing a novel implant for transfemoral amputation</i>	PRESENTER: LARRY SMITH Authors: Larry Smith; Eric D Rush (1) (1) SIMED Health, Gainesville, USA	ISPO Hall
58 WHEELCHAIR AND SEATING <i>Design of a measurement system for the analysis of vibration and impact during powered wheelchair use</i>	PRESENTER: AUDREY LABRASSEUR AUTHORS: Audrey Labrasseur, Alexandre Campeau-Lecours, François Routhier Université Laval, Québec City, Canada	ISPO Hall
59 OTHER <i>Outcomes of JACO robotic arm as viewed by users, their caregivers and rehabilitation practitioners: A study protocol</i>	PRESENTER: JASON BOUFFARD AUTHORS: Jason Bouffard (1); Alexandre Campeau-Lecours (1); David Pacciolla (2); François Routhier (1) (1) Université Laval, Québec City, Canada; (2) Kinova, Boisbriand, Canada	ISPO Hall
62 PROSTHETICS <i>Effects of prosthetic socket suspension on knee proprioception and dynamic balance in transtibial amputees</i>	PRESENTER: FAN GAO University of Kentucky, Lexington, USA	ISPO Hall
64 PROSTHETICS <i>Biofidelic 3D printed trans-tibial residual limbs to facilitate bench testing of new socket technologies</i>	PRESENTER: JAMES TUNG AUTHORS: James Tung (1); Robin Murdock (1); Douglas Dittmer (2) (1) University of Waterloo, Waterloo, Canada; (2) Grand River Hospital, Kitchener, Canada	ISPO Hall
65 ORTHOTICS <i>Patient-oriented design criteria for an assistive powered hand exoskeleton</i>	PRESENTER: QUINN BOSER AUTHORS: Quinn Boser (1); Michael Dawson; Jonathon Schofield (2); Gwen Dziwenko (3); Jacqueline Hebert (1) (1) University of Alberta, Edmonton, Canada; (2) Cleveland Clinic Lerner Research Institute, Cleveland, USA; (3) Glenrose Rehabilitation Hospital, Edmonton, Canada	ISPO Hall
66 PROSTHETICS <i>Assessing a 2D video gait analysis tool for lower limb prosthetic users in under-resourced countries</i>	PRESENTER: ALEXANDRIA MICHELINI AUTHORS: Alexandria Michelini (1,2); Arezoo Eshraghi (2); Jan Andrysek (1,2) (1) University of Toronto, Toronto, Canada ; (2) Holland Bloorview Kids Rehabilitation Hospital, Toronto, Canada	ISPO Hall
68 OTHER <i>Wearable hip-assist robot for reducing muscle fatigue and metabolic energy cost during walking in elderly</i>	PRESENTER: HWANG-JAE LEE AUTHORS: Hwang-Jae Lee (1); Su-Hyun Lee (1); Jinuk Kim (2); Won Hyuk Chang (1); Byung-Ok Choi (1); Gyu-Ha Ryu (1); Yun-Hee Kim (1) (1) Samsung Medical Center, Seoul, South Korea; (2) Sungkyunkwan University, Seoul, South Korea	ISPO Hall
69 WHEELCHAIR AND SEATING <i>Development of an intelligent wheelchair that addresses the needs of the power wheelchair users</i>	PRESENTER: NATHALIE TODAM NGUEPNANG AUTHORS: Nathalie Todam Nguepnang (1); Dahlia KAIRY (1); Philippe S. Archambault (2) (1) Université de Montréal, Montréal, Canada; (2) McGill University, Montréal, Canada	ISPO Hall
72 ORTHOTICS <i>Mechanisms for tendon actuated soft hand orthosis: A comparison.</i>	PRESENTER: MOHAMED ABDELHAFIZ AUTHORS: Mohamed Abdelhafiz, Lotte N.S. Andreasen Struijk, Strahinja Dosen, Erika G. Spaich School of Medicine and Health, Aalborg University, Aalborg, Denmark	ISPO Hall

74 WHEELCHAIR AND SEATING <i>Introducing EOG in the loop of P300 wheelchair control interface</i>	PRESENTER: CHUNG-HSIEN KUO AUTHORS: Chung- Hsien Kuo; Yi-Tseng Lin; Yu-Cheng Kuo; Chun-Ju Wu National Taiwan University of Science and Technology, Taipei, Taiwan	ISPO Hall
76 PROSTHETICS <i>The effects of remote subthreshold electrical stimulation on skin sensitivity in the lower extremity</i>	PRESENTER: EMMA PLATER University of Guelph, Guelph, Canada	ISPO Hall
77 PROSTHETICS <i>Intuitive clinician control interface for a powered knee-ankle prosthesis: A case study</i>	PRESENTER: EMMA REZNICK AUTHORS: Emma Reznick (1) ; Leslie Gray (2) (1) University of Texas at Dallas, Dallas, USA; (2) University of Texas Southwestern Medical Center, Dallas, USA	ISPO Hall
79 PROSTHETICS <i>IE-HD-EMG: Online information-enhanced high-density EMG technique with artifact detection and attenuation for myoelectric control of neuroprosthetic devices</i>	PRESENTER: MARTYNA STACHACZYK AUTHORS: Martyna Stachaczyk; Seyed Farokh Atashzar; Dario Farina Imperial College London, London, England	ISPO Hall
80 PROSTHETICS <i>Interface pressure and shear stress inside socket with and without liner during different standing conditions</i>	PRESENTER: THUC V TRAN AUTHORS: Thuc V Tran (1); Kenta Takizawa (1); Akihiko Hanafusa (1); Shin-Ichiroh Yamamoto (1); Kengo Ohnishi (2); Tokyo Denki University (3); Yukio Agarie (4) (1) Shibaura Institute of Technology, Tokyo, Japan; (2) Tokyo Denki University, Tokyo, Japan; (3) University of Human Arts and Science, Saitama, Japan; (4) Niigata University of Health & Welfare, Niigata, Japan	ISPO Hall
82 PROSTHETICS <i>Enabling agile powered prosthetic legs over continuously varying speeds and inclines</i>	PRESENTER: KYLE EMBRY University of Texas at Dallas, Dallas USA	ISPO Hall
83 ORTHOTICS <i>Feasibility of a task-invariant control scheme for a knee ankle exoskeleton designed for stroke rehabilitation</i>	PRESENTER: NIKHIL V DIVEKAR AUTHORS: Nikhil V Divekar; Christopher Nesler; Robert Gregg University of Texas at Dallas, Dallas, USA	ISPO Hall
84 ORTHOTICS <i>Inter-limb central pattern generator based control for exoskeletons towards hemiplegic patients</i>	PRESENTER: DINGGUO ZHANG AUTHORS: Dingguo Zhang; Xu Cheng Shanghai Jiao Tong University, Shanghai, China	ISPO Hall
85 ORTHOTICS <i>The modified novel device for the stiffness measurement of an ankle foot orthosis</i>	PRESENTER: MITSUHIRO OCHI AUTHORS: Mitsuhiro Ochi, Noriaki Kato, Satoru Saeki University of Occupational & Environmental Health (UOEH); Kitakyushu, Japan	ISPO Hall
87 OTHER <i>Using augmented performance feedback (APF) activities during lokomat® therapy results in moderate intensity cardiovascular exercise in subacute stroke patients.</i>	PRESENTER: NICOLE PRIDEAUX AUTHORS: Nicole Prideaux (1); Christopher Barr (2); Claire Drummond (2); Maayken van den Berg (2) (1) SA Health, Adelaide, Australia; (2) Flinders University, Adelaide, Australia	ISPO Hall
88 PROSTHETICS <i>Effect of increasing prosthetic ankle power on the EMG activity of individuals with transtibial amputation during walking</i>	PRESENTER: KIMBERLY INGRAHAM AUTHORS: Kimberly Ingraham (1); Claire Ford (1); David Remy (1,2); Deanna Gates (1) (1) University of Michigan, Ann Arbor, USA; (2) University of Stuttgart, Stuttgart, Germany	ISPO Hall

89 PROSTHETICS Lowering the barrier to entry with an open source robotic leg prosthesis	PRESENTER: ALEJANDRO F AZOCAR AUTHORS: Alejandro F Azocar (1); Luke Mooney (2); Jean-François Duval (2); Ann Simon (3); Levi Hargrove (4); Elliott J Rouse (1) (1) University of Michigan, Ann Arbor, USA; (2) Dephy Inc., Maynard, USA; (3) Shirley Ryan Ability Lab, Northwestern University, Chicago, USA; (4) Northwestern University, Chicago, USA	ISPO Hall
90 PROSTHETICS Clinical effectiveness of an electronic prosthesis alignment sensor	PRESENTER: SATRIA ARDIANUARI AUTHORS: Satria Ardianuari, David M Brienza University of Pittsburgh, Pittsburgh, USA	ISPO Hall
91 PROSTHETICS Utilizing multiple degrees of freedom in myoelectric prostheses for transhumeral and shoulder disarticulation level TMR prosthetic users	PRESENTER: WENDY COX AUTHORS: Wendy Cox, Donna Langel George Brown College, Toronto, Canada	ISPO Hall
94 PROSTHETICS Pediatric running with lower-limb amputation: A review of the literature	PRESENTER: NICOLE DRAKE AUTHORS: Nicole Drake, Dean Drasnin George Brown College, Toronto, Canada	ISPO Hall
96 PROSTHETICS Is more prosthetic foot energy storage and return better?	PRESENTER: MAX SHEPHERD Northwestern University, Chicago, USA	ISPO Hall