

**Tuesday, June 4 (9:00am – 10:00am)**

**Podium Session 1 – Methods & Modelling I**

**Co-chairs: Ibrahim Mohammed Hasan (KTH Royal Institute of Technology)  
& David Lipps (University of Michigan)**

9:00am-9:12am	<b>Carrie Peterson</b> <i>Virginia Commonwealth University</i>	SCALING A GENERIC MUSCULOSKELETAL MODEL TO REPRESENT INDIVIDUALS WITH PARAPLEGIA
9:12am-9:24am	<b>Amedeo Ceglia</b> <i>Université de Montréal</i>	A NEW MARKERLESS APPROACH FOR UPPER LIMB KINEMATICS USING A SINGLE RGBD CAMERA
9:24am-9:36am	<b>Jennifer Maier</b> <i>Stanford University</i>	PERSONALIZED SHOULDER MODELING IMPROVES KINEMATIC TRACKING
9:36am-9:48am	<b>Margaux Peixoto</b> <i>École de Technologie Supérieure Centre de recherche du CHUM</i>	A MUSCULOSKELETAL SHOULDER MODEL ALLOWING TRANSLATIONS OF THE HUMERAL HEAD: SENSITIVITY TO ACROMION LENGTH
9:48am-10:00am	<b>Félix Lefebvre</b> <i>Université Claude Bernard Lyon 1 TRINOMA</i>	MARKERLESS POSE ESTIMATION OF 3D ANATOMICAL LANDMARKS FOR UPPER-LIMB

**Tuesday, June 4 (1:00pm – 1:50pm)**

**Podium Session 2 – Undergraduate & MSc Awards**

**Co-chairs: Mike Watterworth (Ontario Tech University) &  
Rebekah Lawrence (Washington University in St. Louis)**

<b>1:00pm-1:12pm</b>	<b>Fergus Lam</b> <i>University of Waterloo</i>	THE INFLUENCE OF SIMULATED LABRAL CONDITIONS ON SHOULDER MUSCLE ACTIVATION DURING SEVERAL TASKS
<b>1:12pm-1:24pm</b>	<b>Skyelar Herriman</b> <i>University of Michigan</i>	SUBACROMIAL SPACE PARAMETERS IN BREAST CANCER SURVIVORS WITH AND WITHOUT ROTATOR CUFF IMPINGEMENT
<b>1:24pm-1:36pm</b>	<b>Lauryn Campbell</b> <i>University of Saskatchewan</i>	INFLUENCE OF TIME SINCE PAIN ONSET ON KINEMATICS IN WORK-RELATED FUNCTIONAL TASKS
<b>1:36pm-1:48pm</b>	<b>Guiomar Santos Carvalho</b> <i>Technische Universiteit Delft</i>	REVISITING PRIMARY MUSCLE CONTRIBUTORS TO MANUAL WHEELCHAIR PROPULSION

**Tuesday, June 4 (1:50pm – 2:40pm)**

**Podium Session 3 – PhD Awards**

**Co-chairs: Matt Russell (York University) and Julie Côté (McGill University)**

1:50pm-2:02pm	<b>Zoe Moore</b> <i>The Pennsylvania State University</i>	TENDON INJURY MODELS INFLUENCE RESULTANT MECHANICAL PROPERTIES IN AN EX VIVO BOVINE MODEL
2:02pm-2:14pm	<b>Matthew Heindel</b> <i>University of Southern California</i>	BASEBALL PITCHERS: AN ECOLOGICAL MODEL FOR TENDON ADAPTATION
2:14pm-2:26pm	<b>Daanish Mulla</b> <i>McMaster University</i>	EMERGENT VERSUS FEASIBLE SHOULDER MUSCLE ACTIVITY PATTERNS
2:26pm-2:38pm	<b>Erin Lee</b> <i>Queen's University</i>	TEAR-ASSOCIATED SCAPULAR MORPHOLOGY ALTERS THE STABILIZING ROLE OF SUPRASPINATUS

**Tuesday, June 4 (3:05pm – 4:20pm)**

**Podium Session 4 – Rotator Cuff & Scapular Kinematics**

**Co-chairs: Oscar Vila Dieguez (University of Southern California) &  
Ursina Arnet (Swiss Paraplegic Research)**

<b>3:05pm-3:17pm</b>	<b>Stacey Chen</b> <i>Washington University School of Medicine</i>	GEOMETRIC AND KINEMATIC ACCURACY OF LOW DOSE CT PROTOCOLS FOR SHOULDER ANALYSIS
<b>3:17pm-3:29pm</b>	<b>Clarissa LeVasseur</b> <i>University of Pittsburgh</i>	THE EFFECTS OF ABDUCTION ANGLE AND LOAD ON GLENOID TRACK SIZE AND LOCATION
<b>3:29pm-3:41pm</b>	<b>Alyssa Schnorenberg</b> <i>University of Wisconsin- Milwaukee</i>	QUANTITATIVE ULTRASOUND FINDINGS AND GLENOHUMERAL JOINT DYNAMICS VARIABILITY IN PEDIATRIC AND ADULT MANUAL WHEELCHAIR USERS
<b>3:41pm-3:53pm</b>	<b>Florent Moissenet</b> <i>Geneva University Hospitals and University of Geneva</i>	SPARTACUS: AN OPEN DATASET OF NORMAL SHOULDER GIRDLE KINEMATICS
<b>3:53pm-4:05pm</b>	<b>Gaura Saini</b> <i>University of Minnesota</i>	SHOULDER MUSCLE ACTIVITY IN INDIVIDUALS WITH REDUCED SCAPULAR UPWARD ROTATION
<b>4:05pm-4:17pm</b>	<b>Sarah Remedios</b> <i>Dalhousie University</i>	SHOULDER KINEMATICS AND MUSCLE ACTIVATION IN OLDER INDIVIDUALS: INSIGHTS FROM LOADED AND UNLOADED FLEXION AND ABDUCTION LIFTING TASKS

**Wednesday, June 5 (8:30am – 9:30am)**

**Podium Session 5 – Clinical Biomechanics**

**Co-chairs: Dan Mulla (McMaster University) & Paula Ludewig (University of Minnesota)**

<b>8:30am-8:42am</b>	<b>Ursina Arnet</b> <i>Swiss Paraplegic Research</i>	SHOULDER LOAD EXPERIENCED BY MANUAL WHEELCHAIR USERS DURING ACTIVITIES OF DAILY LIVING
<b>8:42am-8:54am</b>	<b>Justin Staker</b> <i>University of Minnesota</i>	KINEMATIC EFFECTS OF TWO THERAPEUTIC INTERVENTIONS FOR GLENOHUMERAL JOINT INSTABILITY: A PRELIMINARY FEASIBILITY TRIAL
<b>8:54am-9:06am</b>	<b>Anna Lampert</b> <i>University of Michigan</i>	DIFFERENCES IN MUSCLE ECHOINTENSITY OF THE PECTORALIS MAJOR AFTER RADIATION THERAPY FOR BREAST CANCER
<b>9:06am-9:18am</b>	<b>Oscar Vila-Dieguez</b> <i>University of Southern California</i>	ROTATOR CUFF TENDINOPATHY: EARLY, LATE AND NEGATIVE RESPONSE TO EXERCISE
<b>9:18am-9:30am</b>	<b>Wiebe de Vries</b> <i>Swiss Paraplegic Research</i>	CHANGES IN SHOULDER LOAD DUE TO FATIGUING WHEELCHAIR PROPULSION IN PERSONS WITH SPINAL CORD INJURY

**Wednesday, June 5 (9:30am – 10:30am)**

**Podium Session 6 – Ergonomics & Athletics**

**Co-chairs: Amedeo Ceglia (Université de Montréal) & Peter Keir (McMaster University)**

9:30am-9:42am	<b>Kathryn Webster</b> <i>University of Waterloo</i>	THE EFFECT OF SWIM BENCH ROTATION SETTINGS ON SIMULATED FREESTYLE SWIMMING KINEMATICS
9:42am-9:54am	<b>Nicholas La Delfa</b> <i>Ontario Tech University</i>	ESTIMATING MAXIMAL ACCEPTABLE DUTY CYCLES FOR ABOVE-SHOULDER WORK
9:54am-10:06am	<b>Jacklyn Kurt</b> <i>University of Waterloo</i>	PASSIVE UPPER EXTREMITY EXOSKELETON REDUCES FATIGUE IN ROTATOR CUFF MUSCLES DURING OVERHEAD WELD CHECK TASK
10:06am-10:18am	<b>Denise Balogh</b> <i>University of Saskatchewan</i>	EXPLORATION OF UPPER LIMB POSTURAL RISK FACTORS FOR INJURY ON A NORTHERN SASKATCHEWAN MINE SITE
10:18am-10:30am	<b>Kara-Lyn Harrison</b> <i>University of Manitoba</i>	SIMILAR PATTERNS OF UPPER TRAPEZIUS EXCITATION DISTRIBUTION AT REST AND WITH FATIGUE DURING REPEATED ARM ELEVATION BETWEEN THE SEXES

**Wednesday, June 5 (1:00pm – 2:00pm)**

**Podium Session 7 – Methods & Modelling II**

**Co-chairs: Erin Lee (Queen’s University) & Andy Karduna (University of Oregon)**

1:00pm-1:12pm	<b>Jaylan Hamad</b> <i>University of Victoria</i>	OPENSIM MOCO TRACKING SIMULATIONS EFFICIENTLY REPLICATE PREDICTIVE SIMULATION RESULTS ACROSS MORPHOLOGICALLY DIVERSE SHOULDER MODELS
1:12pm-1:24pm	<b>Jakub Targosinski</b> <i>Western University</i>	AN IN VITRO MECHANICAL ANALYSIS OF GLENOID PEG-CEMENT INTERFACIAL BEHAVIOUR THROUGH NEURAL NETWORK-BASED SEGMENTATION AND DIGITAL VOLUME CORRELATION
1:24pm-1:36pm	<b>Ibrahim Mohammed Hasan</b> <i>KTH Royal Institute of Technology</i>	SHOULDER TO SHOULDER: COMPARING ESTIMATES OF SHOULDER LOADING FROM A GENERIC MODEL TO IN VIVO MEASURES OF CONTACT FORCES
1:36pm-1:48pm	<b>Nikolas Knowles</b> <i>University of Waterloo</i>	PROXIMAL HUMERUS BONE STIFFNESS BUT NOT DENSITY VARIES BY CT RECONSTRUCTION KERNEL
1:48pm-2:00pm	<b>Matthew Russell</b> <i>York University</i>	PREDICTING SCAPULOTHORACIC KINEMATICS USING AN OPTIMAL CONTROL FRAMEWORK

**Wednesday, June 5 (2:00pm – 3:00pm)**

**Podium Session 8 – Muscle**

**Co-chairs: Kaitlyn Kuchinka (University of Victoria) &  
Stefan van Drongelen (Goethe University Frankfurt)**

2:00pm-2:12pm	<b>Sabrina Koch-Borner</b> <i>Swiss Paraplegic Center Swiss Paraplegic Research University of Lucerne</i>	MANUAL MUSCLE TESTING OF DONOR MUSCLES AND ELBOW EXTENSION MOVEMENT IN PEOPLE WITH CERVICAL SPINAL CORD INJURY UNDERGOING ELBOW EXTENSION RECONSTRUCTION: A SCOPING REVIEW
2:12pm-2:24pm	<b>Stephen Boulanger</b> <i>York University</i>	EXAMINING DIFFERENCES IN ROTATOR CUFF FATTY INFILTRATION ACROSS ANTHROPOMETRIC SPECTRA IN HEALTHY YOUNG ADULTS
2:24pm-2:36pm	<b>David Axford</b> <i>Western University Macquarie University</i>	CONTINUOUS MULTIPLANAR MUSCLE MOMENT ARM MAPS FOR THE ANATOMICAL SHOULDER
2:36pm-2:48pm	<b>Kathryn Rex</b> <i>The Pennsylvania State University</i>	CHANGES IN SUPRASPINATUS MUSCLE MECHANICS AFTER ROTATOR CUFF TEAR AND SURGICAL REPAIR
2:48pm-3:00pm	<b>Taylor Wilson</b> <i>University of Oregon</i>	SHOULDER MUSCLE ACTIVITY INCREASES AFTER ACUTE BUT NOT CHRONIC PAIN RELIEF



## Wednesday, June 5 (3:00pm – 4:30pm)

### 1-minute Poster Introductions & Poster Session

1	<b>Rebecca Franklin</b> <i>University of Manitoba</i>	MUSCLE STIFFNESS, LENGTH AND RANGE OF MOTION ARE UNCHANGED IN MALES AND FEMALES IN RESPONSE TO STATIC PECTORAL STRETCHING
2	<b>Tewodros Alemneh</b> <i>Jimma University</i>	ARTICULATED STATISTICAL SHAPE MODELING OF THE SHOULDER JOINT
3	<b>Linda Charaf</b> <i>University of Manitoba</i>	EFFECTS OF INTENSITY-BASED PECTORAL STRETCHING ON MUSCULOSKELETAL PARAMETERS IN ASYMPTOMATIC INDIVIDUALS
4	<b>Cristina Herrera Valerio</b> <i>University of Waterloo</i>	THE INFLUENCE OF RADIATION THERAPY ON FUNCTIONAL SHOULDER HEALTH INDICATORS IN BREAST CANCER PATIENTS: AN EXPLORATORY STUDY
5	<b>Donovan Bronstein</b> <i>University of Minnesota Twin Cities</i>	IN VIVO KINEMATIC EVALUATION OF A CUSTOM-DESIGNED GLENOID IMPLANT IN COMPLEX REVERSE TOTAL SHOULDER ARTHROPLASTY
6	<b>Motoki Sakurai</b> <i>University of Oregon</i>	FAULTY VISION INFLUENCES TIMING ERROR MORE THAN SPATIAL ERROR IN VIRTUAL REALITY ENVIRONMENT
7	<b>Zoe Moore</b> <i>The Pennsylvania State University</i>	OLDER ADULT FEMALES USE A LARGER PROPORTION OF THEIR MUSCLE CAPACITY THAN OLDER ADULT MALES WHILE PERFORMING LOADED FUNCTIONAL TASKS
8	<b>Paula Ludewig</b> <i>University of Minnesota</i>	CHARACTERIZING THE COMPLEX LOADING ENVIRONMENT OF GLENOHUMERAL JOINT TENDONS
9	<b>David Axford</b> <i>Western University</i>	ACROMION AND SCAPULAR SPINE STRAIN DURING SIMULATED EX-VIVO ACTIVE ARM MOTION
10	<b>Angelica Lang</b> <i>University of Saskatchewan</i>	SEX DIFFERENCES IN SCAPULAR MUSCLE ACTIVATION RATIOS AND KINEMATICS DURING FUNCTIONAL TASKS
11	<b>Ursina Minder</b> <i>Swiss Paraplegic Research University of Lucerne</i>	RELIABILITY AND VALIDITY OF PORTABLE DYNAMOMETERS IN TESTING SHOULDER STRENGTH: A SYSTEMATIC REVIEW