

**2023 GCMAS Meeting**

**Schedule of Presentations**

<b>Saturday, June 24</b>	
<b>4:00 – 7:00</b>	<b>Pre-Course: Fine Wire EMG (3hrs)</b>

<b>Sunday, June 25</b>	
<b>8:30 – 4:00</b>	<b>Pre-Course: Fine Wire EMG (7.5hrs)</b>
<b>6:00 – 8:00</b>	<b>Welcome Reception</b>

## 2023 GCMAS Meeting

### Schedule of Presentations

<b>Monday, June 26</b>	
<b>8:00 – 8:15</b>	<b>Welcome/Day's Announcements</b>
<b>8:15 – 9:30</b>	<b>Session 1: Cerebral Palsy (75mins)</b>
<b>8:15</b>	<b>Kinematic Trajectories in Youth with Cerebral Palsy Throughout Childhood: Influence of Age and Orthopedic Surgery</b> <u>Nancy Lennon</u> , Chris Church, Daniel Wagner, Tim Niiler, John Henley, Freeman Miller, Wade Shrader, Jason Howard
<b>8:25</b>	<b>Real World Walking Activity in Ambulatory Adults with Cerebral Palsy</b> Adriana Liang, <u>Tishya AL Wren</u>
<b>8:35</b>	<b>Short Term Effect of Selective Dorsal Rhizotomy on Musculoskeletal Health: Preliminary Results</b> <u>Marianne Gagnon</u> , Alessandra Carriero, Bettina Willie, Louis-Nicolas Veilleux, Jean-Pierre Farmer, Elizabeth Zimmermann
<b>8:45</b>	<b>The Predictors for Changes in Pelvic Rotation after Surgery with or without Femoral Derotational Osteotomy in Ambulatory Children with Cerebral Palsy</b> <u>Reiko Hara</u> , Susan A Rethlefsen, Tishya AL Wren, Robert M Kay
<b>8:55</b>	<b>Anterior Distal Femoral Hemiepiphyodesis Does Not Change Pelvic Tilt in Children with Cerebral Palsy</b> Alison M Hanson, Tishya AL Wren, Susan Rethlefsen, <u>Eva Ciccodicola</u> , Boris Rubel, Robert M Kay
<b>9:05</b>	<b>Sagittal Gait Kinematics in Adults with Cerebral Palsy at GMFCS I, II, or III with and without Hamstrings Surgery</b> Peter Cirrincione, Erikson Nichols, <u>Colson Zucker</u> , Vishnu Chandran, Silvia Zanini, Jennifer Jezequel, Bridget Assip, Sherry Backus, Dara Jones, David Scher, Paulo Selber
<b>9:15</b>	<b>Sagittal Gait Kinematics and Pelvic Incidence-Lumbar Lordosis Mismatch of Patients with Cerebral Palsy</b> <u>Erikson Nichols</u> , Peter Cirrincione, Vishnu Deep Chandran, Silvia Zanini, Jennifer Jezequel, Bridget Assip, Sherry Backus, Dara Jones, David Scher, Paulo Selber
<b>9:30 – 10:00</b>	<b>Break &amp; Networking (30mins)</b>
<b>10:00 – 11:30</b>	<b>Session 2: Orthopedics &amp; Pathological Gait (90mins)</b>
<b>10:00</b>	<b>Surgical Correction of Acquired Pes Equinovarus Resulting as a Complication of Orthotopic Liver Transplantation: A Case Study</b> <u>Jacob E Copeland</u> , Joanna E Ferreri, F Keith Gettys, David E Westberry, Lauren C Hyer, Prabhav Saraswat
<b>10:10</b>	<b>Orthopedic Surgical Outcomes in Children with Charcot-Marie-Tooth Disease: A Multisite Investigation</b> Sylvia Öunpuu, <u>Kristan Pierz</u> , Susan Rethlefsen, Jennifer Rodriguez-MacClintic, Gyula Acsadi, Tishya AL Wren
<b>10:20</b>	<b>Kinematic Knee Asymmetry after Total Knee Arthroplasty Compared to Controls</b> <u>Theresa Libera</u> , Jill Streamer, Kelli Allen, Robin Queen
<b>10:30</b>	<b>Gait Analysis Reveals Varied Deviations Post Total Hip Arthroplasty in Adolescent Patients</b> <u>Eva Ciccodicola</u> , Susan Rethlefsen, Alison Hanson, Tishya AL Wren
<b>10:40</b>	<b>Investigating Pelvic Drop Gait Abnormality in Pre-Operative Hip Pathology Patients</b>

	<u>Nicholas Anable</u> , Lauren A Luginsland, Carlos Jr, Wilshaw Stevens Jr
<b>10:50</b>	<b>Mid to Long-term Follow-up of Hip Dysplasia Adolescents Treated with Periacetabular Osteotomy</b> <u>Nicholas Anable</u> , David Podeszwa, William Morris, Lauren Osborne, Daniel Sucato
<b>11:00</b>	<b>Evaluation of Activity Monitor Efficacy in a Healthy Cohort with and without Simulated Gait Impairments</b> <u>Aaron Drake</u> , Meredith Lewis, Zhaoxing Pan, James Carollo
<b>11:10</b>	<b>Hemophilic Arthropathy and Increased Modeled Muscle Co-Contraction During Squatting</b> <u>Joseph Mah</u> , Caden Robertson, Niamh Mah, Joanna Roybal, Laura Singer-Fox, Sharon Funk, Marilyn J Manco-Johnson, James Carollo, Beth Boulden Warren, Brecca MM Gaffney
<b>11:20</b>	<b>Normalized Symmetry Index in Simulated Sports Activities in Persons with Hemophilia and Healthy Controls</b> <u>Caden Robertson</u> , Joseph Mah, Niamh Mah, Joanna Roybal, Laura Singer-Fox, Sharon Funk, Marilyn Manco-Johnson, James Carollo, Brecca MM Gaffney, Beth Boulden Warren
<b>11:30 – 12:30</b>	<b>CMLA Luncheon (60mins)</b>
<b>12:30 – 1:30</b>	<b>Keynote Address: Mission Impossible: Working to Gain Consensus for the Orthopaedic Treatment of Children with Ambulatory Cerebral Palsy</b> <u>James McCarthy, MD (60mins)</u>
<b>1:30 – 3:00</b>	<b>Clinical Gait Analysis Symposium</b> <b>Part I: Data Interpretation (90mins)</b> Ross Chafetz, Sylvia Öunpuu, Kirsten Tulchin-Francis
<b>3:00 – 3:15</b>	Break & Networking (15mins)
<b>3:15 – 5:15</b>	<b>Clinical Gait Analysis Symposium (120mins)</b> <b>Part II: Case Review</b> James McCarthy, Kristan Pierz, Tom Novacheck, Wade Shrader, Ross Chafetz, Kirsten Tulchin-Francis
<b>Evening</b>	<b>User Group Meetings/Dinner on your own</b>

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<b>Tuesday, June 27</b>	
<b>7:00 – 8:00</b>	<b>Breakfast Session I (60mins): Reimbursement Committee meeting</b> Chris Church
<b>8:00 – 8:15</b>	<b>Welcome/Day's Announcements</b>
<b>8:15 – 9:30</b>	<b>Session 3: Data Analysis &amp; Methods (75mins)</b>
<b>8:15</b>	<b>Is It Visual Valgus or True Valgus? A Comparison of 3-D Gait Analysis Utilizing Marker-Based Versus Markerless Data</b> Alison Hanson, Eva Ciccodicola, Susan Rethlefsen, Pavel Isakov, Oussama Abousamra, <u>Tishya AL Wren</u>
<b>8:25</b>	<b>Equivalence Of Functional Movement in Female Athletes with Opencap and Theia Markerless</b> <u>Avery Takata</u> , John Collins, Rebecca Gow, Berat Gulecyuz, Swithin Razu, Henry Chambers, James D Bomar, Patrick Curran
<b>8:35</b>	<b>Using Markerless Motion Capture to Improve Screening for Ballet Pointe Readiness: A Demonstration Case</b> <u>Mia J Katzel</u> , Tishya AL Wren, Tracy Zaslow, Bianca Edison
<b>8:45</b>	<b>Validating Markerless Motion Capture of Volitional Maximal Dynamic Postural Sway</b> <u>Cole Wieggers</u> , Christan Maron, Trevor Lopatin, Jacqueline Groen, Joshua Haworth
<b>8:55</b>	<b>Time Continuous Comparison of The Effect of Speed on Lower Extremity Kinematics During Gait: A Temporal Alignment Approach</b> <u>Elham Alijanpour</u> , Daniel M Russell
<b>9:05</b>	<b>Mitigating Artifactual Shifts in Reconstructed Marker Coordinates Stemming from Camera Dropout</b> <u>Peter M Quesada</u> , John Powers, Jarrod Richards, Joseph Kitchen, Arthur L Malkani
<b>9:15</b>	<b>The Shriners Gait Index (SGI): A Deep Autoencoder Gait Summary Metric</b> <u>Shou-Jen Wang</u> , Thasina Tabashum, Joseph Krzak, Karen Kruger, Ross Chafetz, Judi Linton, Jon Davids, Anita Bagley, Mark V Albert
<b>9:30 – 10:30</b>	<b>Poster Session A (60mins)</b>
<b>10:30 – 12:00</b>	<b>Tutorials (60mins)</b>
	<b>Tutorial A:</b> <b>Consistent Interpretation of Gait Analysis Data: A Case-Based Quality Assurance Approach</b> Tom F. Novacheck, Katie Walt, Michael T. Healy, Jean L. Stout
	<b>Tutorial B:</b> <b>Standardizing Fourteen Motion Analysis Centers: Shriners Children's Experience and a Blueprint for CMLA</b> Ross Chafetz, Karen Kruger, Patrick Fischer, Prabhav Saraswat, Nancy Scullion, Adam Graf
<b>12:00 – 1:00</b>	<b>GCMAS Member Business Meeting (60mins)</b>
<b>1:15 – 2:30</b>	<b>Session 4: Balance, Muscles and Motion (90mins)</b>
<b>1:15</b>	<b>Application of Joint Reaction Force Analysis in Patients with Knee Height Asymmetry</b>

	Lauren Gallagher, Christina MR Garman, Haluk Altiok, Ann Flanagan, Joseph Krzak, Karen Kruger
1:25	<b>Dynamic Balance in the Gait Cycle Prior to a Ninety-Degree Turn in Individuals with and Without Parkinson's Disease</b> <u>Gordon Alderink</u> , Rebecca Prevost, Dorothy Kilvington, Paige Pryson, Cathy Harro, David W Zeitler, Lauren Hickox
1:35	<b>Validity of a Novel Clinical Approach to Measure Ankle Joint Proprioception</b> <u>Maxine L Olson</u> , Anna Zahn, Frank E DiLiberto
1:45	<b>Knee and Ankle Co-Contraction in Children with Spastic Hemiplegic Cerebral Palsy</b> <u>Kirsten Tulchin-Francis</u> , Jessica Lewis, Mallory Rowan, Jan Klamar
1:55	<b>Assessment of Selective Voluntary Motor Control in Ambulatory Children with Cerebral Palsy</b> <u>Jennifer Jezequel</u> , Andrew Kraszewski, Silvia Zanini, Sherry Backus, Ashwini K Rao
2:05	<b>Statistical Parameter Mapping for Time-Varying Differences in Margin of Stability in Patients with End-Stage Ankle Arthritis</b> <u>Sara Arena</u> , Robin Queen
2:15	<b>Gait Speed-Associated Changes in Minimum Toe Clearance in Young Adults</b> <u>Sylvester Carter</u>
2:30 – 3:00	<b>Vendors, Break &amp; Networking (30mins)</b>
3:00 – 5:00	<b>Session 5: Foot &amp; Ankle/Gait Analysis (105mins)</b>
3:00	<b>Comprehensive Gait Analysis: Barriers to Access for Children and Adolescents</b> <u>Melissa Bent</u> , Susan Rethlefsen, Veronica Beltran, Tishya AL Wren
3:10	<b>Increased Medial Midfoot Contact Area at 10 Years Following Ponseti Casting: Did We See It Coming?</b> <u>Kelly Jeans</u> , Victoria Blackwood
3:20	<b>Foot Varus in Charcot-Marie-Tooth Disease</b> Stuart Ferguson, Patrick Do, <u>Jing Feng</u> , Jeremy Bauer
3:30	<b>The Foot Posture Index: Three Components versus Six</b> <u>Sylvia Öunpuu</u> , Jennifer Rodriguez-MacClintic, Susan Rethlefsen, Alison Hanson, Kristan Pierz, Tishya AL Wren
3:40	<b>Changes in Foot Posture Over the Course of Childhood in Ambulatory Youth with Cerebral Palsy</b> <u>Chris Church</u> , Nancy Lennon, Madison Lennon, John Henley, Thomas Shields, Tim Niiler, Daveda Taylor, Wade Shrader, Freeman Miller
3:50	<b>Pes Varus is Not Associated with Knee Valgus During Gait in Children with Charcot-Marie-Tooth Disease</b> Tishya AL Wren, <u>Susan Rethlefsen</u> , Noella Wren, Robert Kay
4:00	<b>Validation of a Multi-Segment Foot Force Distribution Algorithm</b> <u>Maxine L Olson</u> , Joseph J Krzak, Philip Voglewede, Christina MR Garman, Gerald F Harris, Karen Kruger
4:10	<b>Multivariate Functional Principal Component Analysis and K-Means Clustering to Identify Kinematic Foot Types During Gait</b> <u>Eric L Dugan</u> , Cara M Masterson, Jeff Shilt, Amy E Barbuto
4:20	<b>Correlation of Tibial Rotation Between EOS and Measures using Motion Analysis</b> Patrick Do, <u>Jing Feng</u> , Ellen Raney
4:30	<b>Reliability of Gait Analysis Interpretation in Cerebral Palsy: Inter-Institution Agreement</b>

	Eva Ciccodicola, <u>Susan Rethlefsen</u> , Alison Hanson, Robert Kay, Henry Chambers, Tishya AL Wren
4:40	<b>Intra and Inter Tester Reliability of Motion Capture of Typical Gait Across Multiple Centers</b> <u>Ross Chafetz</u> , Spencer Warshauer, Jackie Weiss, Jing Feng, Sean Waldron, Corinna Franklin

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<b>Wednesday, June 28</b>	
7:00 – 8:00	<b>Breakfast Session 2: Standards Committee meeting</b> Ross Chafetz
8:00 – 8:15	<b>Welcome/Day's Announcements</b>
8:15 – 9:00	<b>Keynote Address (45mins): Deciphering the Genome of Cerebral Palsy</b> Anita Bagley
9:00 – 10:30	<b>Session 6: Trunk &amp; Upper Extremity/Prosthetics &amp; Orthotics (60mins)</b>
9:00	<b>Real-World Evidence-Based Measurement of Upper Extremity Activity</b> <u>Sandesh Bhat</u> , Alexander Y Shin, Kenton R Kaufman
9:10	<b>Validation of In-Clinic Functional Upper Extremity Reach in Children with Cerebral Palsy with Microsoft Kinect</b> Garrett Rupp, <u>John Collins</u> , Avery Takata, Patrick Curran
9:20	<b>Effect of Real-Time Visual Feedback on the Collection of Upper Extremity Reachable Workspace in Healthy Adults</b> <u>R Tyler Richardson</u> , Benjamin Lerch, Kristen Guarneschelli, Grigorios Papachristos
9:30	<b>Assessment of the Relationship Between Reachable Workspace and Patient-Reported Outcomes</b> <u>R Tyler Richardson</u> , Stephanie Russo, Madison Lovette, Jim Richards, Ross Chafetz, Emily Nice, Dan Zlotolow, Scott Kozin
9:40	<b>Relationships Between Manual Wheelchair Handrim Kinetics and Shoulder Quantitative Ultrasound Parameters</b> <u>Caleb Cordes</u> , Josh Leonardis, Jonathan Samet, Alyssa Schnorenberg, Mark England, Shubhra Mukherjee, Lawrence Vogel, Ameer Seitz, Brooke Slavens
9:50	<b>Presence of Chaos in Arm Swing Dynamics During Walking</b> <u>Joshua Haworth</u> , Jared Dube, Elena Kokkoni
10:00	<b>Continuous Inter-Limb Gait Coordination and Stability in Veterans and Service Members with Transtibial Limb Loss: Influence of Prosthetic Ankle-Foot Devices</b> <u>Alexis Sidiropoulos</u> , Brad Hendershot, Jonathan Gladish, David Herlihy, Jason Maikos
10:10	<b>Advanced Wearable Fitness Tracker for Individuals with Transtibial Amputation: A Feasibility Study Using the Oura Ring</b> <u>John Chomack</u> , Alexis Sidiropoulos, Jason Maikos
10:30 – 11:15	<b>Break &amp; Networking (45mins)</b>
11:15 – 1:00	<b>Session 7: Sports &amp; Rehabilitation (105mins)</b>
11:15	<b>A Running Protocol to Reduce the Risk of Lower Extremity Musculoskeletal Injury in the Active-Duty Population</b> <u>Donald Goss</u> , Rhoda Anderson, Sara Mathews, Kelly Leugers, Maria Gonnella, Lauren Mulier, Nicholas Reilly

<b>11:25</b>	<b>Efficacy of Telehealth Gait Retraining on Targeting Biomechanical Risk Factors for Musculoskeletal Injury in Military Personnel</b> Donald Goss, Amy Weart, Erin Miller, Henry Haltiwanger, Maria Gonnella, Paige McHenry, Kou Yang, Kevin Ford, <u>Nicholas Reilly</u> , Michael Crowell
<b>11:35</b>	<b>Load Carriage Does Not Alter Lower Extremity Coordination Variability During Self-Selected Marching Speed in ROTC Cadets</b> <u>Braden Romer</u> , Hocheng Lu
<b>11:45</b>	<b>Effects of Stabilization on Athletic Shoulder Test Peak Loading Metrics</b> <u>John Holtgrewe</u> , Joseph Wellwood, Ernie Rimer, Peter M Quesada
<b>11:55</b>	<b>The Effects of Increased Forward Trunk Lean During Stair Ascent on Hip Adduction and Internal Rotation in Asymptomatic Females</b> <u>Lee T Atkins</u> , Jacob Reid, Dustin Zink
<b>12:05</b>	<b>Utilizing Pedi-IKDC and Biomechanical Testing to Evaluate Patients Post-ACL Reconstruction</b> Eric Lin, <u>Mia J Katzel</u> , Adriana Liang, Tishya AL Wren
<b>12:15</b>	<b>Individualizing Return to Activity Criteria Post-ACLR</b> <u>Devin K Kelly</u> , Amelia S Bruce Leicht, Xavier D Thompson, Gabrielle M DelBiondo, Ashley Thompson, Haley Godwin, Joe M Hart
<b>12:25</b>	<b>Normative Data and The Effect of Graft Choice on Isokinetic Knee Muscle Strength in Pediatric Patients Following Anterior Cruciate Ligament Reconstruction: A Retrospective Study</b> Gianni De Petrillo, Jean-François Girouard, Thierry Pauyo, Marie-Lyne Nault, Mark Burman, Paul A Martineau, Guy Grimard, <u>Louis-Nicolas Veilleux</u>
<b>12:35</b>	<b>Factors Contributing to AFO Choice: Performance vs. Convenience for Individuals Post Stroke</b> <u>Walter B Weiss</u> , Valerie J Eberly, Niketa Kou, Jeffery W Rankin
<b>12:45</b>	<b>Comparison Of Inter-Segment Coordination Between Young Adult Males and Females During Obstacle-Crossing</b> <u>Ho-Cheng Lu</u> , Karthick Natesan, Aaron Likness, Yo-Rong Chen, Neeraj Kumar, Steven Sawyer, Roger James
<b>1:00 – 1:30</b>	<b>Awards &amp; Closing (30mins)</b>

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Poster Presentations

Tuesday, June 27	
9:30 – 10:30	Poster Session A (60mins)
1A	<b>Ankle Foot Orthosis and Knee Kinetics in Children with Cerebral Palsy at GMFCS I and II</b> <u>Colson Zucker</u> , Peter Cirrincione, Vishnu Chandran, Silvia Zanini, Jennifer Jezequel, Bridget Assip, Sherry Backus, David Scher, Paulo Selber
2A	<b>Contributing Factors of Flexed Knee Gait in Children with Spastic Hemiplegic Cerebral Palsy</b> Patrick Do, <u>Jing Feng</u> , Jeremy Bauer
3A	<b>Comparison of Energy Expenditure in Patients with Hereditary Spastic Paraparesis and Cerebral Palsy</b> <u>Lizabeth Bunkell</u> , Kelly Jeans, Lane Wimberly
4A	<b>Dynamic EMG To Identify Spasticity</b> <u>Sara Klein</u> , Kenton Kaufman
5A	<b>Pes Valgus and Tibial Torsion in Ambulatory Children with Cerebral Palsy</b> Eva Ciccodicola, <u>Susan Rethlefsen</u> , Oussama Abousamra, Tishya AL Wren
6A	<b>A Pilot Investigation of a Novel Powered Knee Orthosis to Improve Sagittal Knee Angles During Gait in Children with Crouch Gait</b> Farah Azim, Mona Behrouzian, Karen Davies, Diane Wickenheiser, Lise Leveille, Christine Alvarez, <u>Tim Bhatnagar</u>
7A	<b>Does Axle Position Relative to the Shoulder Impact Biomechanics in Pediatric and Young Adult Manual Wheelchair Users with SCI?</b> Ben Tietz, Amy Piekosz, <u>Adam Graf</u> , Nancy Scullion, Karen Kruger, Joseph Krzak, Miriam Hwang
8A	<b>The Relationship Between Walking Speed, Hamstring Length, and Hamstring Shortening Velocity in Unimpaired Adults</b> Luke J Sunderman, Ashley M Moulder, <u>Jason T Long</u>
9A	<b>The Neglected Forefoot</b> <u>Sue E Sohrweide</u> , Andrew G Georgiadis
10A	<b>Effect of Body Mass Index on Pedobarographic and Patient Reported Outcome Measures in Adolescent Flat Feet</b> <u>Victoria Blackwood</u> , Kelly Jeans, Will Capell, Anthony Riccio
11A	<b>Effect of Chemotherapy Induced Neuropathy on Plantar Tactile Sensitivity and Lower Leg EMG Activity Levels During Static and Dynamic Balance Activities in Females</b> Carla Rigo Lima, <u>Alfred Finch</u>
12A	<b>Assessing Changes in Deltoid Muscle Excitation of Patients after Reverse Total Shoulder Arthroplasty</b> <u>Divya J Sharma</u> , Christopher B Knowlton, Gregory P Nicholson, Grant E Garrigues, Antonia M Zaferiou, Jonathan A Gustafson
13A	<b>Preliminary Comparison of Vision vs Non-Vision-Based Cognitive Motor Dual-Tasking in People with Unilateral Lower Limb Amputation</b> <u>Isaac B Shaw</u> , Kaitlin A Henry, Paula Gangopadhyay, Aaron T Scott, Lisa A Zukowski, Paul W Kline



<b>14A</b>	<b>Compensation Patterns in Pediatric Amputee Gait</b> <u>Cody Barrett</u> , Kelly Jeans, Lane Wimberly
<b>15A</b>	<b>Effects of a Dynamic Adjustable Ankle Foot Orthosis on Gait and Outcome Performance in an Adult with Spina Bifida</b> Ryan Funderburk, LaDarius Woods, Scott Bretl, <u>Jared Rehm</u>
<b>16A</b>	<b>Upper Extremity Kinematics are Affected by Socket-Suspended Prostheses during Activities of Daily Living</b> <u>Julia A Dunn</u> , Bob Wong, Sarina K Sinclair, Heath B Henninger, Kent N Bachus, K Bo Foreman
<b>17A</b>	<b>Withdrawn</b>
<b>18A</b>	<b>Predicting White Matter Integrity with Physical Function Assessments in Healthy Adults throughout Life Span</b> <u>John Ashley</u> , Junyeon Won, Anouk Toserams, Takashi Tarumi, Tsubasa Tomoto, David Zhu, Rong Zhang
<b>19A</b>	<b>Effect of Imposed Internal Hip Rotation on Peak Knee Flexion in Normal Adult Walking</b> <u>Becca Cartwright</u> , Abby Sizemore, Krisanne Chapin
<b>20A</b>	<b>Initial Comparison of 3 Clinical Motion Capture Techniques</b> <u>John Collins</u> , Avery Takata, Rebecca Gow, Berat Gulecyuz, Patrick Curran, Swithin Razu

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Poster Presentations

<b>Wednesday, June 28</b>	
<b>10:30 – 11:15</b>	<b>Poster Session B (45mins)</b>
<b>1B</b>	<b>Gait Analysis Beyond the Lab: Sagittal Plane Kinematics and Muscle-Tendon Length Comparison of 2 Emerging Markerless Technologies</b> Swithin Razu, Rebecca Gow, <u>John Collins</u> , Avery Takata, Andrew J Ries, Andrew McCulloch, Sam Ward, Henry Chambers, Patrick Curran
<b>2B</b>	<b>Comparison of Gait Scores in Autosomal Dominant versus Autosomal Recessive Hereditary Spastic Paraplegia</b> <u>Lizabeth Bunkell</u> , Kelly Jeans, Cinthya Meza, Lane Wimberly, Michelle Christie
<b>3B</b>	<b>Validating Artificial Intelligence Based Markerless Motion Capture for Children with Difficulty Walking</b> <u>Amanda Rande</u> , Ion Robu, Gina Ursulak, Gregor Kuntze, Rubini Pathy, Elise Laende, Elizabeth Condliffe
<b>4B</b>	<b>Optimizing Femoral Version Measurements in Pediatrics: Inter- and Intra-Rater Reliability Support the Method of Lee and Posterior Condylar Axis to Measure Femoral Version</b> Erikson Nichols, <u>Colson Zucker</u> , Peter Cirrincione, Kiranpreet Nagra, Julia Retzky, Shevaun Doyle, Jessica Heyer, Emily Dodwell
<b>5B</b>	<b>Idiopathic Toe Walking: Retrospective Cohort Study Demonstrates Gastrocs/Soleus Recession Results in Greatest Improvement in ROM and Greatest Resolution of Toe Walking</b> <u>Kiranpreet Nagra</u> , Erikson Nichols, Peter Cirrincione, John Blanco, David Scher, Shevaun Doyle, Emily Dodwell
<b>6B</b>	<b>Investigating Gait Variability in Siblings with Autism Spectrum Disorder</b> <u>Lauren A Luginsland</u> , Kevin A Valenzuela, Melissa Bittner, Amanda Young, Justin A Haegele, Hunter J Bennett
<b>7B</b>	<b>Comparing Plantar Pressures Across Myelomeningocele Function Classifications</b> <u>Kirsten Tulchin-Francis</u> , Jessica Lewis, Mallory Rowan, Jan Klamar
<b>8B</b>	<b>Potential Risk of Injurious Falls in American Sign Language Users</b> <u>Emily Jones</u>
<b>9B</b>	<b>Asymmetric Crank Arm Length Affects Lower Extremity Joint Velocity During Stationary Cycling</b> <u>Sean A Brown</u> , Songning Zhang
<b>10B</b>	<b>Knee Crutch Impacts the Relationship Between Static &amp; Dynamic Balance</b> <u>Aron Jendre</u> , Christian Maron, Daniel Goble, Charles Marks, Joshua Haworth
<b>11B</b>	<b>Virtual Reality Training Physical Motion is Similar to Saw Bones Training</b> Samuel Rosas, Michael Seem, Emily Potts, Jason J Halvorson, <u>Kristen Nicholson</u>
<b>12B</b>	<b>Oscillating Load Strength Training with a Computer-Controlled Cable-Driven Weight Training Device</b> <u>Peter M Quesada</u> , Joseph Wellwood, Neel L Patel, John F Caruso
<b>13B</b>	<b>Differences in 3D Sports Biomechanics Between Healthy Pre-Teen and Teenage Athletes</b> <u>Mia J Katzel</u> , Sarah N Adams, Tishya AL Wren

<b>14B</b>	<b>The Impact of Habitual Idiopathic Toe-Walking on Jumping Performance and Mechanics in Adults</b> Kelly Dempsey, Srikant Vallabhajosula, Melissa H Scales
<b>15B</b>	<b>Does 100 Hz Auditory Noise Affects Sensory Organization Test Scores in Healthy Young Adults?</b> Jacob Chung, Daniel Cerfogli, Kylie Chavez, Sarah Andreshak, Alexis Barriga, Matt Arteaga, Enrique Abreu, Julia Choo, Delanie Barnes, <u>Rahul Soangra</u>
<b>16B</b>	<b>A Pilot Study Evaluating the Effect of a Low-Intensity Hip Flexor Training Program on Minimum Toe Clearance Variability in Older Adults</b> <u>Sylvester Carter</u> , Ciaran Dubeck
<b>17B</b>	<b>A Novel Use of Motion Capture to Quantify Kinematic Changes Following Myoactivation® Therapy</b> Farah Azim, Karen Davies, Diane Wickenheiser, Mona Behrouzian, Gail Jahren, Nicholas West, Lise Leveille, Gillian Lauder, <u>Tim Bhatnagar</u>
<b>18B</b>	<b>Gamification of Open Computer Vision Pose Tracking using ML/AI</b> Eric Bubar, Bryn Bonner