

Scholarly Activities
Department of Physical Medicine and Rehabilitation
March – May 2013

Clinical

Deborah Gaebler:

Pediatric Rehabilitation Symposium 2013: A look at the latest updates in the field of Pediatric care for children with specialized needs.

Webinar: Technology Use in Peds Rehab, April 29

K Baker, B Tann, A Mutlu, D Gaebler-Spira: Improvements in Children with Cerebral Palsy Following Intrathecal Baclofen: Use of the Rehabilitation Institute of Chicago Care and Comfort Caregivers Questionnaire (RIC CareQ). *Journal of Child Neurology*, 2013

D Gaebler-Spira: Dystonia in Childhood: Clinical and Objective Measures and Functional Implications. *Journal of Child Neurology*, Vol 28, Issue 3, March 2013

Edward A. Hurvitz, M.D., Christina M. Marciniak, M.D., Alecia K. Daunter, M.D., Heidi J. Haapala, M.D., Stacy M. Stibb, D.O., Sarah F. McCormick, D.O., Karin M. Muraszko, M.D., and Deborah Gaebler-Spira, M.D. "Functional outcomes of childhood dorsal rhizotomy in adults and adolescents with cerebral palsy: Clinical article", *Journal of Neurosurgery: Pediatrics* Apr 2013 / Vol. 11 / No. 4, Pages 380-388

Stacy McCarty: Received a grant from Acorda Neurorehabilitation: Outcomes of Day Rehabilitation in Malignant Brain Tumor Patients; poster presentation, American Academy of Physiatrists

Christopher Reger presented at NUPOC on lower extremity prosthetic fitting in the medically complex patient, April 4, 2013

Thomas Schnitzer

Edwards WB, Schnitzer TJ, Troy KL., [Bone mineral loss at the proximal femur in acute spinal cord injury](#). *Osteoporos Int*. 2013 Mar 7. [Epub ahead of print]

Housman L, Arden N, Schnitzer TJ, Birbara C, Conrozier T, Skrepnik N, Wei N, Bockow B, Waddell D, Tahir H, Hammond A, Goupille P, Sanson BJ, Elkins C, Bailleul F. [Intra-articular hylastan versus steroid for knee osteoarthritis](#). *Knee Surg Sports Traumatol Arthrosc*. 2013 Feb 16. [Epub ahead of print]

Presented "Prevention of Bone Loss after Acute SCI: Effect of Zoledronic Acid" – 1st Place, paper, American Spinal Injury Association Annual Meeting, May 6, Chicago IL

Course Chair: Bone Changes after SCI: A Problem with a Solution. American Spinal Injury Association Annual Meeting, May 8, Chicago IL

Vineeta Swaroop

Hsu LP, Dias LS, Swaroop VT. Long-term retrospective study of patients with idiopathic clubfoot treated with posterior medial-lateral release. *J Bone Joint Surg Am* 2013;95(5):e271-8.

Course Director: American Academy of Orthopaedic Surgeons Part II 2014 Board Certification Preparatory Webinar (#3376) (March 5, 2013)

Swaroop VT. Myelomeningocele: Management in 2013-2020. Annual Meeting of the Pediatric Orthopaedic Society of North America, Toronto, ON (May 3, 2013)

Nursing

Diane M. Rowles, MS, ACNP, APN, CRRN Presented “SCI: Sexuality and Fertility for Men and Women” to Physical Medicine and Rehabilitation Resident Program, Schwab Rehabilitation Hospital, March 16

Allied Health

Zollman, F.S., Larson, E.B, Cyborski, C., Starr, C. and Kondiles, B. (March, 2013) The Rehabilitation Institute of Chicago Military Traumatic Brain Injury Screening Instrument: Determination of Sensitivity, Specificity and Predictive Value, Poster session presented at the Annual Meeting of the American Academy of Neurology, San Diego, CA.

Robert Hartke co-presented with Robert Trierweiler “Return to Work after Stroke”, RIC Academy Course, April 26

Caryn Feldman received a certificate in Meditation and Psychotherapy from the Institute of Meditation and Psychotherapy, Boston, MA

Center for Bionic Medicine

A. Young, L. Smith, E. Rouse and L. Hargrove, “Simultaneous Control of Multiple Degrees-of-Freedom Using Surface EMG Pattern Recognition”, *IEEE Transactions on Biomedical Engineering*, 60(5), 1250-1258, 2013.

Albert MV. (2013) Panel member for Parkinson’s Day Fair, Rehabilitation Institute of Chicago, Presented mobile phone-based research at RIC. April 23, 2013.

Albert MV, Vilares V (2013) Overview of Research: Exercise, Physical Activity, and Smartphone technology. Rehabilitation Institute of Chicago Symposium “Theory, evidence and innovation: interdisciplinary care for Parkinson’s disease”. (invited presentation) April

Marciniak C,

8, 2013

R. Gregg, T. Lenzi, N. Fey, L. Hargrove, and J. Sensinger, "Experimental Effective Shape Control of a Powered Transfemoral Prosthesis," *IEEE Int. Conf. Rehabilitation Robotics*, Seattle, WA, 2013.
Feedback Pattern Generation," *Dynamic Walking Conference*, Pittsburgh, PA, June 2013. (abstract + presentation)

R. Gregg, E. Rouse, L. Hargrove, and J Sensinger

Conference Submissions

Fey, N.P., Simon, A.M. and Hargrove, L.J. (2013). Prosthetic knee and ankle strategy to provide swing initiation and push-off on level and inclined surfaces across variable walking speeds. *Annual meeting of the American Society of Biomechanics*. September 4-7. Omaha, NE. (Accepted).

Simon, A.M., Fey, N.P., Finucane, S.B., Lipschutz, R.D. and Hargrove, L.J. (2013). Strategies to reduce the configuration time for a powered knee and ankle prosthesis across multiple ambulation modes. *13th International Conference on Rehabilitation Robotics (ICORR)*. June 24-26, Seattle, WA. (Accepted).

Gregg, R.D., Fey, N.P., Lenzi, T, Hargrove, L.J. and Sensinger, J.W. (2013). Experimental effective shape control of a powered transfemoral prosthesis. *13th International Conference on Rehabilitation Robotics (ICORR)*. June 24-26, Seattle, WA. (Accepted).

Journal Publications in Print

Fey, N.P., Klute, G.K. and Neptune, R.R. (2013). ASB Journal of Biomechanics Award – Altering prosthetic foot stiffness influences foot and muscle function during below-knee amputee walking: a modeling and simulation analysis. *Journal of Biomechanics*. 46(4): 637-644.

Nicholas Fey: NIDRR – Mary Switzer Research Fellowship Grant Application

Center for Pain Studies

Steven Stanos:

Stanos S. Osteoarthritis Guidelines: A progressive role for topical NSAIDs. *J Am Osteopath Assoc*. 2013 Feb; 113 (2): 123-7.

Stanos S. Evolution of opioid risk management and review of the classwide REMS for extended-release/long-acting opioids. *Phys Sportsmed*. 2012 Nov; 40(4): 12-20. Doi: 10.3810/ psm.2012.11.1975. Review.

Stanos S. Continuing evolution of opioid use in primary care practice: implications of emerging technologies. *Curr Med Res Opin*. 2012 Sep; 28 (9): 1505-16. Epub 2012 Sep 2. Review.

Gilliam WP, Burns JW, Gagnon C, Stanos S, Matsuura J, Beckman N. Strategic self-presentation may enhance effects of interdisciplinary chronic pain treatment. *Health Psychol.* 2013 Feb; 32 (2): 156-63.

Gagnon C.M, Stanos S.P, Van der Ende G, Rader L.R, Harden R.N. Treatment Outcomes for Workers Compensation Patients in a US-Based Interdisciplinary Pain Management Program. *Pain Pract.* 2013 Apr; 13 (4): 282-8.

Book Chapters:

Feinberg SD, Gatchel RJ, Stanos S, Feinberg R, Johnson-Montieth V. Interdisciplinary functional restoration and pain programs. *In Comprehensive Treatment of Chronic Pain by Medical, Interventional, and Integrative Approaches.* Edited by Deer, Leong. American Academy of Pain Medicine. Springer Press, 2013.

Abstracts

Gagnon C, Stanos S, Atchison J. Patient's perception of change following an interdisciplinary pain management program. *J Pain* 2013;14(4) : supplement 1, #113.

Invited Lectures:

American Pain Society 32nd Annual Meeting
May 11, 2013, New Orleans, MO "Risk Evaluation and Mitigation Strategies (REMS) for Extended –Release and Long-Acting Opioids" (Argoff C, Stanos S)
American Pain Society 32nd Annual Meeting

Fundamental of Pain Management: An Interdisciplinary Primer
May 6-7, 2013, New Orleans, MO "Approaches to the person in pain: assessment "(Backonja M, Darnell B, Stanos S); "Coordinated care" (Kerns R, Stanos S)

Primed West
May 1, 2013, Anaheim, CA "Improving care of patients with chronic pain: individualized assessment and mechanism-based multimodal treatment" (McCarberg, Argoff, Stanos)

Missouri Association of Osteopathic Physicians & Surgeons
April 28, 2013, Lake on the Ozarks, MO "Can we prevent acute to chronic pain? Update on physiology and sensitization"; "Multi and inter-disciplinary management of chronic pain"

Research Abuse, Diversion and Addiction-Related Surveillance (RADARS) System Annual Scientific Meeting
April 18, 2013, Rockville, MD "Potential risks and benefits of abuse deterrent formulation products: pain management perspective"

American Academy of Pain Medicine Annual Scientific Meeting
April 10-14, 2013, Ft. Lauderdale, FL

- Essential of Pain Medicine: Cervical and lumbar physical exam
- Essentials of Pain Medicine: Hip and shoulder physical exam
- Safe Opioid Prescribing (SOP) – Stanos S, Webster L

Pain Society of Oregon 4th Annual Spine Symposium: Bridging the Future of Spine Care
March 9, 2013, Vancouver, WA "Pain boot camp: a biopsychosocial approach to improved patient outcomes for chronic pain management"

Maxine Kuroda:

Kuroda MM. Basics of medical statistics: Choosing proper statistical methods. Networking World Anesthesia Convention (NWAC). Bangkok, Thailand. April 23-27, 2013.

Saracoglu M, Graciosa JR, Kirsling A, Kuroda MM, Comstock K, Hirsch BP, Harden RN. Gender and placebo analgesic response in chronic knee osteoarthritis pain model. American Academy of Pain Medicine (AAPM), 29th annual meeting. Ft. Lauderdale, FL. April 11-14, 2013.

Mathur S, Saracoglu M, Kuroda MM, Graciosa J, Hirsch B, Kirsling A, Connolly S, Harden RN. Functional testing and pre- to post pain measure outcomes in chronic knee osteoarthritis pain with milnacipran: Interim analysis of a randomized double-blind, placebo-controlled trial. American Pain Society (APS), 32nd annual scientific meeting. New Orleans, LA. May 8-11, 2013.

Garrigues DG, Rivers WE, Harden RN, Graciosa JR, Kuroda MM. Signs and symptoms of myofascial pain syndrome: An international survey of pain management providers, comparing results from the 1999 and 2012 surveys. American Pain Society (APS), 32nd annual scientific meeting. New Orleans, LA. May 8-11, 2013.

Patel P, Graciosa JR, Kuroda MM, Harden RN. Post amputation pain and sympathetic asymmetry. American Pain Society (APS), 32nd annual scientific meeting. New Orleans, LA. May 8-11, 2013.

Center for Rehabilitation Outcomes Research

Grants Funded:

Heinemann: Patient-Centered Outcomes Research Institute, Developing Quality Metrics-Reported Outcomes for Medical Rehabilitation

Heinemann: VA, Patient-Centered Care for Persons with Spinal Cord Injuries and Disorders

Grants Submitted:

Ehrlich-Jones/Ramsey-Goldman (MPI): National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health (U34), Activity and Nutrition trial in Lupus to Energize and Renew

Heinemann: National Institute on Disability and Rehabilitation Research, Evaluating the Clinical Feasibility and Validity of the Neuro QOL Instruments

Heinemann: National Institute on Disability and Rehabilitation Research U01, A TBI Patient Registry to Examine Variations in Diagnosis, Treatment and Outcomes

Heinemann: Department of Veterans Affairs, Subcontract: Functional Needs Assessment in Persons with Spinal Cord Injuries and Disorders

Heinemann: Department of Veterans Affairs, Subcontract: Fall Risk and Prosthetic Influence on Gait Biomechanics in Upper Limb Amputees

Heinemann: Foundation for PM&R Nadler Research Grant, Developing outcomes data management and reporting capacity for musculoskeletal rehabilitation programs

Wong: Boston ROC Pilot Study Grant (Grant submission, March 15, 2013)

Wong: NIDRR Switzer Fellowship (Grant submission, March 18, 2013)

Wong: Craig H Neilsen Postdoctoral Fellowship (Letter of Intent submission, April 15, 2013)

Manuscripts published:

1. Papadimitriou C, Deutsch A., Magasi S, Neumann H, Heinemann AW. Eliciting Patient and Caregiver Perspectives to Improve the Public Reporting of Rehabilitation Quality Measures: Results from an Exploratory Study. *Rehabilitation Nursing, Rehabilitation Nursing* 2013, 38, 24–31.
2. Butt Z, Lai J-S, Rao D, Heinemann AW, Bill Z, Cella D. (2013) Measurement of fatigue in cancer, stroke, and HIV using the Functional Assessment of Chronic Illness Therapy - fatigue (FACIT-F) scale. *Journal of Psychosomatic Research*. 74(1): 64-68.
3. Zanca JM, Dijkers M, Whiteneck G, Heinemann AW. Group Therapy Utilization in Inpatient Spinal Cord Injury Rehabilitation, *Arch Phys Med Rehabil*, in press.
4. Backus D, Gassaway J, Smout RJ, Hsieh C-H, Heinemann AW, DeJong G, Horn SD. The relationship between inpatient and post-discharge services and outcomes one-year post-injury in people with traumatic spinal cord injury, *Archives of Physical Medicine and Rehabilitation* 2013;94(4 Suppl 2):S165-74.
5. DeJong G, Tian W, Hsieh C-H, Junn C, Karam C, Ballard PH, Smout RJ, Horn SD, Zanca JM, Heinemann AW, Hammond FM, Backus D. Rehospitalization in the First Year of Traumatic Spinal Cord Injury After Discharge From Medical Rehabilitation. *Archives of Physical Medicine and Rehabilitation* 2013;94(4 Suppl 2):S87-97
6. Deutsch A. Invited Commentary: Does Post-Acute Care Site Matter? A Longitudinal Study Assessing Functional Recovery After a Stroke. *Archives of Physical Medicine and Rehabilitation*. 2013; 94:630-2
7. Graham JE, Deutsch A, O'Connell AA, Karmarkar AM, Granger CV, Ottenbacher KJ. Inpatient Rehabilitation Volume and Functional Outcomes in Stroke, Lower Extremity Fracture, and Lower Extremity Joint Replacement. *Medical Care*, 2013; 51:404-412.

Presentations:

1. Heinemann AW. Measuring Participation in Rehabilitation Service Recipients. Paper presented at the International Society of Prosthetics and Orthotics, Hyderabad, India, February 4, 2013.
2. Heinemann AW, Hammel J, Piatt J. Promoting adoption of outcomes monitoring. Symposium presented at the annual meeting of the National Association of Rehabilitation Research and Training Centers, Alexandria, VA, April 18, 2013.
3. Heinemann AW, Lai J-S, Carlozzi N, Hammel J, Garcia S, Gray D, Hahn E, Magasi S, Tulskey D, Kozlowski A, Jerousek S, Development and Evaluation of Environmental Factor Items for Persons with SCI, paper presented at the annual meeting of the American Spinal Injury Association, Chicago, IL, May 6, 2013.
4. Heinemann SW, Williams R, Bombardier C, Forchheimer M, Fan J, Neumann H. Improving the Measurement Properties of Depressive Symptom Instruments for Use after Spinal Cord Injury, paper presented at the annual meeting of the American Spinal Injury Association, Chicago, IL, May 7, 2013.

5. Bombardier C, Fann J, Richards JS, Heinemann AW, Wilson C, Warren AM, Brooks L, Tate D. Venlafaxine XR for Major Depressive Disorder after Spinal Cord Injury: Rationale, Results and Recommendations. Paper presented at the annual meeting of the American Spinal Injury Association, Chicago, IL, May 6, 2013.
6. Benefits of Substance Use Disorder Screening on Employment Outcomes in State-Federal Vocational Rehabilitation Programs, Allen Heinemann, Northwestern University and Dennis Moore, Wright University, Invited speak by the Center for Excellence on Disability Research national conference, Fulfilling the Promise: New Research on How Integrated and Coordinated Care Can Improve Outcomes for People with Disabilities, Arlington, VA, March 11, 2013.
7. How can we use measurement tools to capture patient-centered outcomes at the behavior, performance, and daily life levels? Panel speaker, McDonnell Planning Grant Meeting, Washington University. St. Louis, Missouri, April 8, 2013.
8. Patient-Reported Outcome Instrument Advances for Spinal Cord Injury Applications. Invited presentation at the ASIA State of Science Conference, Chicago, IL May 5, 2013.
9. Transforming Participation Research: How Occupational Therapy Scholars Can Contribute to the Scholarship. Paper presented with Joy Hammel and Carolyn Baum at the Occupational Therapy Summit of Scholars, University of Illinois at Chicago, May 10, 2013.
10. Heinemann, A.W. & Wong, A.W.K. Feasibility of obtaining patient-reported outcomes after rehabilitation discharge. Invited presentation at the Grand Rounds organized by the Rehabilitation Institute of Chicago and the Department of Physical Medicine and Rehabilitation of Northwestern University Feinberg School of Medicine, Chicago, IL, February 13, 2013.
11. Heinemann, A.W. & Wong, A.W.K. Feasibility of obtaining patient-reported outcomes after rehabilitation discharge. Invited presentation at the Thursday Seminar Series organized by the Center for Healthcare Studies and the Center for Patient-Centered Outcomes of Northwestern University Feinberg School of Medicine, Chicago, IL, February 14, 2013.
12. Strauser, D. R., Wagner, S., Zebrack, B., Chan, F., Cardoso, L., & Wong, A.W.K. (2013). Evaluating the efficacy of an occupational development program for young adult CNS survivors. Presented at the American Psychosocial Oncology Society (APOS) 10th Annual Conference, Huntington Beach, CA, February 14-16, 2013.
13. Deutsch A. Measurement in Rehabilitation Research and Policy. Presentation to the Northwestern University Physical Medicine and Rehabilitation medical residents. Rehabilitation Institute of Chicago, IL; May 6, 2013.
14. Deutsch A. Retrospective Studies. Presentation to the Northwestern University Physical Medicine and Rehabilitation medical residents. Rehabilitation Institute of Chicago, IL; May 17, 2013.
15. Deutsch A. Quality Measures for Inpatient Rehabilitation Facilities. American Medical Rehabilitation Providers Association Spring Meeting. March 20, 2013. Washington, DC.
16. Deutsch A. Quality Measures for Inpatient Rehabilitation Facilities. University of Texas Medical Branch. April 2, 2013. Galveston, TX.
17. Deutsch A. The Inpatient Rehabilitation Facility Quality Reporting Program. The First National Summit on safety and Quality for Rehabilitation Hospitals. May 20, 2013.
18. Ehrlich-Jones, L., Pellegrini, C., & Ramsey-Goldman, R. Alternate means of participation in a program to decrease fatigue in systemic lupus erythematosus. Sounding board presentation at the International Society for Research on Internet Interventions 6th Scientific Meeting, Chicago, IL May 16, 2013.

19. Ehrlich-Jones, L., Heinemann, A. W., Wilbur, J., Cox, C., & Chang, R. W. Development of a measure of clients' perceptions of motivational interviewing encounters to increase physical activity in persons with arthritis. Invited poster presentation at The 8th Annual NIH Pain Consortium Symposium on Advances in Pain Research, Bethesda, MD, May 29, 2013.

Technical Reports:

Deutsch A, Kline T, Kelleher C, Lines LM, Coots L, Garfinkel D, Mallinson T, Gage B. Analysis of Crosscutting Medicare Functional Status Quality Metrics Using the Continuity and Assessment Records and Evaluation (CARE) item Set. Final Report. November 2012. Available at:
http://aspe.hhs.gov/health/reports/2013/CrosscuttingMedicare/rpt_crossmedi.pdf

Service Activities:

Allen Heinemann

Co-Editor-in-Chief, Archives of Physical Medicine and Rehabilitation
Chair, Outcomes Measurement Networking Group, American Congress of Rehabilitation Medicine

Linda Ehrlich-Jones

Member, Board of Directors, Rheumatology Research Foundation

NU Prosthetics and Orthotics Center

Publications:

Dillon M and **Fatone S** (2013) Editorial Commentary: "Deliberations about the functional benefits and complications of partial foot amputation: do we pay heed to the purported benefits at the expense of minimizing complications?" Archives of Physical Medicine and Rehabilitation. PMID: 23583347.

Major, M.J., Stine, R.L. and Gard, S.A. "The effects of walking speed and prosthetic ankle adapters on upper extremity dynamics and stability-related parameters in bilateral Transtibial amputee gait." Accepted for publication, Gait & Posture.

Zissimopoulos, A., Gard, S.A., and Fatone, S. "The Effect of Ankle-Foot Orthoses on Self-Reported Balance Confidence in Persons with Chronic Post-Stroke Hemiplegia." Accepted for publication, Prosthetics & Orthotics International.

Komolafe O, Wood S, Caldwell R, Hansen A, Fatone S. "Methods for Characterization of Mechanical and Electrical Prosthetic Vacuum Pumps." Accepted for publication, Journal of Rehabilitation Research and Development.

Hoskins R, Sutton E, Kinor D, Schaeffer J, **Fatone S**. "Using Vacuum Assisted Suspension to Manage Limb Wounds in Persons with Transtibial Amputation: A Case Series." Accepted for publication, Prosthetics Orthotics International.

Fatone S. Invited Commentary on "The swing phase of walking with above-knee prostheses" by Dr. Eugene F. Murphy." Accepted for publication, Journal of Rehabilitation Research and Development.

Presentations:

Fatone S (2013) A new socket for persons with above knee amputations. Monthly Veterans Research Forum, Jesse Brown VA Medical Center, March 7, Chicago, Illinois.

Lynch D, **Fatone S**, Irwin M, Barua C, Young J (2013) Working with the Northwestern Office of Sponsored Research (OSR). NUCATS Seminar Series on Navigating the Research Enterprise. Northwestern University, April 1, Chicago, Illinois.

Komolafe, O., Fatone S, Wood S, Caldwell R, Chen W, Sun C, Hansen A. "Characterization of Mechanical and Electrical Vacuum Pumps for Use in Vacuum-Assisted Suspension." Presented at the 9th Annual Lewis Landsberg Research Day, held in Chicago, IL, April 4, 2013.

Zavaleta J.L., Major M.J., Gard, S.A. "Modular Prosthetic Ankle for Adapting to Slope Walking." Presented at the 9th Annual Lewis Landsberg Research Day, held in Chicago, IL, April 4, 2013.

Major M.J., Stine R., Hodgson M., Gard, S.A. "Upper Body Kinematics of Bilateral Transtibial Prosthesis Users During Gait." Presented at the 9th Annual Lewis Landsberg Research Day, held in Chicago, IL, April 4, 2013.

Robillard, B., Komolafe O, Caldwell R, Fatone S. "Design of a Process for Fabricating Prosthetic Sockets with Rapid Prototyping Technology." Presented at the 9th Annual Lewis Landsberg Research Day, held in Chicago, IL, April 4, 2013.

Gottipati P, Fatone S, Stine R, Ganju A (2013) Reduction in Shock Absorption Capacity of the Spine during Gait after Spinal Reconstruction Surgery (poster). Presented at the 9th Annual Lewis Landsberg Research Day, held in Chicago, IL, April 4, 2013.

Komolafe OA, Caldwell, R, Fatone S. (2013) An Analytic Approach to Assessing Transfemoral Socket Flexibility. Texas Association of Orthotists and Prosthetists Annual Meeting, April 19-20, Dallas, Texas.

Major M, Fatone S, Roth E. (2013) Validation of the Berg Balance Scale for Individuals with Lower Limb Amputation. Texas Association of Orthotists and Prosthetists Annual Meeting, April 19-20, Dallas, Texas.

Robillard B, Komolafe O, Caldwell R, Fatone S (2013) Design of a Process for Fabricating Prosthetic Sockets with Rapid Prototyping Technology (poster). InNUvations Applied Research Day, Northwestern University, May 2, Evanston, Illinois. Awarded 3rd prize.

Boutwell E, Gard S. (2013) Effect of Prosthetic Stiffness on Impact Forces during Walking and Sudden Limb Loading (poster). Gait and Clinical Movement Analysis Society Annual Meeting, May 14-17, Cincinnati, OH.

Zissimopoulos A, Fatone S, Stine R, Gard S (2013) Effects of a non-rigid AFO on foot placement accuracy during post-stroke locomotion (poster). Gait and Clinical Movement Analysis Society Annual Meeting, May 14-17, Cincinnati, Ohio.

Gottipati P, Fatone S, Stine R, Ganju A (2013) Reduction in shock absorption capacity of the spine during gait after spinal reconstruction surgery (poster). [Gait and Clinical Movement Analysis Society Annual Meeting, May 14-17, Cincinnati, Ohio.](#)

Comment [SF1]: Erin also has a presentation at this conference.

Tucker K, Fatone S (2013) Development of a Three-Dimensional Simulation Tool to Investigate the Effects of Ankle Foot Orthotic Joint Misalignments. Midwest Chapter of the American Academy of Orthotists and Prosthetists May 30-June 1, Lake Geneva, Wisconsin.

Fatone S, Stine R, Tillges R (2013) Effect of Socket Characteristics on Coronal Plane Stability During Gait In Persons With Unilateral Transfemoral Amputation. Midwest Chapter of the American Academy of Orthotists and Prosthetists May 30-June 1, Lake Geneva, Wisconsin.

Komolafe O, Caldwell R, Fatone S (2013) An analytic approach to assessing Transfemoral socket flexibility. [Midwest Chapter of the American Academy of Orthotists and Prosthetists May 30-June 1, Lake Geneva, Wisconsin.](#)

Comment [SF2]: Matty also has a presentation at this conference that needs to be added.

Major M, Stine R, Gard S (2013) The effects of walking speed and prosthetic ankle adapters on upper extremity dynamics and stability-related parameters in bilateral Transtibial amputee gait. Midwest Chapter of the American Academy of Orthotists and Prosthetists May 30-June 1, Lake Geneva, Wisconsin.

Laboratory Visits:

Northwestern University's Prosthetics Orthotics Center (NUPOC) participated in Northwestern University's 19th annual Take Our Sons and Daughters to Work Day on April 25th. NUPOC hosted groups of children who learned about careers in rehabilitation engineering, prosthetics and orthotics.

Recent Appointments:

Kyle Swensen has joined the staff of Northwestern University's Prosthetics Orthotics Center as our 2013 NIDRR Scholar. He will be with the laboratory through July 2013 before joining NUPOC's inaugural MPO program.

Grant Submissions:

Hansen A, **Fatone S, Major M.** "Determining the Causes of Falling in Veterans with Lower Limb Amputations." RR&D Small Project in Rehabilitation Research (SPiRE) submitted to the Dept. of Veterans Affairs for March 10th deadline.

Gard, S. & Boutwell, E. "Effect of prosthesis stiffness on impact force during in vivo step loads and gait", RR&D Small Project in Rehabilitation Research (SPiRE) submitted to the Dept. of Veterans Affairs for March 10th deadline.

Gard, S. & Major, M. "Fall risk and prosthetic influence on gait biomechanics in upper limb amputees", RR&D Small Project in Rehabilitation Research (SPiRE) submitted to the Dept. of Veterans Affairs for March 10th deadline.

Letter of Intent Submissions:

Gard, S. & Casanova, H. "Evaluation of a Vacuum-Based Impression and Alignment Device (V-BIAD)." Submitted to the Department of Veterans Affairs for the May 15th deadline.

Gard, S. "Development and Evaluation of the GroundControl Shoe." Submitted to the Department of Veterans Affairs for the May 15th deadline.

Fatone, S. "Epidermal Sweat Sensors for use within the Harsh Prosthetic Socket Environment." Preapplication submitted to the DOD Peer Reviewed Orthopedic Research Program (PRORP) on April 4, 2013.

Sensory Motor Performance Program

Jordan Grafman was awarded the Coleman Chair in Rehabilitation Medicine, April 2013

G Dam, K Kording, K Wei "Credit Assignment during Movement Reinforcement Learning", PLoS one 8 (2), e55352, 2013

M Berniker, MK O'Brien, KP Kording, AA Ahmed "An Examination of the Generalizability of Motor Costs", PLoS one 8 (1), e53759, 2013

X Yan, Q Wang, Z Lu, IH Stevenson, K Kording, K Wei, "Generalization of Unconstrained Reaching with Hand-Weight Changes", Journal of Neurophysiology 109 (1), 137-146, 2013

IH Stevenson, BM London, ER Oby, NA Sachs, K Kording et al "Functional Connectivity and Tuning Curves in Populations of Simultaneously Recorded Neurons", PLoS computational biology 8 (11), e1002775, 2013

Yang, C.-Y., Guo, X., Ren, Y., Kang, S. H., and Zhang, L.-Q., 2013. Position-Dependent, Hyperexcitable Patellar Reflex Dynamics in Chronic Stroke. *Archives of Physical Medicine and Rehabilitation*. 94, 391-400.

Schwartz, D. G., Kang, S. H., Lynch, T. S., Edwards, S., Nuber, G., Zhang, L.-Q., Saltzman, M., 2013. The anterior deltoid's importance in reverse shoulder arthroplasty: a cadaveric biomechanical study. *J Shoulder Elbow Surg* 22:357-64.

Patton JL, Wei YJ, Bajaj P, Scheidt RA (2013) Visuomotor Learning Enhanced by Augmenting Instantaneous Trajectory Error Feedback during Reaching. PLoS ONE 8(1): e46466. doi:10.1371/journal.pone.0046466

Huang, FC, Patton, JL (2012) " Augmented dynamics and motor exploration as training for stroke," IEEE Transactions on Biomedical Engineering, April 3 vol 99.

Citlali Lopez-Ortiz:

Back To Basics-Stretching. Citlali López-Ortiz, Co-Chaired with Sue Mukherjee and Deborah Gaebler-Spira. International Conference on Cerebral Palsy and developmental Medicine and 7th Annual Meeting of Indian Academy of Cerebral Palsy, Lucknow, India, March 9, 2013

Melody and Rehabilitation Robotics for Children With Cerebral Palsy. Citlali López-Ortiz, International Conference on Cerebral Palsy and developmental Medicine and 7th Annual Meeting of Indian Academy of Cerebral Palsy, Lucknow, India, March 9, 2013.

Use of Virtual Reality Home Based Therapy System for Children with Upper Limb Problems in Cerebral Palsy. Citlali López-Ortiz, Co-Chaired with Sue Mukherjee and Deborah Gaebler-Spira. International Conference on Cerebral Palsy and developmental Medicine and 7th Annual Meeting of Indian Academy of Cerebral Palsy, Lucknow, India, March 9, 2013.

Dance Interventions in Parkinson's Disease and their Clinical Impact. Citlali López-Ortiz, 1st Indian Federation of Neurorehabilitation Conference, Lucknow, India, March 8, 2013.

Integrating Robotics Into Clinical Care-Expanding Horizons And Breaking Down Barriers To Implementation. Citlali López-Ortiz Co-Chaired with Sue Mukherjee and Deborah Gaebler-Spira. International Conference on Cerebral Palsy and developmental Medicine and 7th Annual Meeting of Indian Academy of Cerebral Palsy, Lucknow, India, March 8, 2013

Structured Dance Training for Physical Rehabilitation of Children with Cerebral Palsy. Citlali López-Ortiz, International Conference on Cerebral Palsy and developmental Medicine and 7th Annual Meeting of Indian Academy of Cerebral Palsy, Lucknow, India, March 8, 2013

W. Zev Rymer:

March 17-19. Neilsen Foundation 2013 Scientific Review Board Study Section in St. Louis, MO

March 24-25. OPTT-RERC Advisory Board Meeting in Los Angeles, CA

March 28-29. APTA Summit meeting in Alexandria, VA

April 16-20. Neural Control of Movement (NCM) 2013 in San Juan, PR

April 18. AHA 2013 Spring Peer Review: BRAIN Committee Meeting

April 26. Lecture on "How the virtual reality and robotics in neurorehabilitation can improve health and wellness" at the University of Wisconsin - Milwaukee, hosted by Dr. Gil Lucio Almeida

May 2. Lecture on "Robotics for rehabilitation of neurological impairment: promises unfulfilled" at the Kentucky Spinal Cord Injury Research Center in Louisville, KY

May 16. Keynote talk at the 2nd International Conference of Rehabilitation Medical Engineering (CRME) in Shanghai, China

Other Faculty

Kristi Kirschner:

Fins JJ, Hammond C, Tarsney PS, Panero A, Martinez J, Kirschner KL. "Surrogate decision making in the case of a pregnant woman newly disabled with brain injury." PM&R 2013;5(1):57-65.

Morton D, Le JT, Shahbandar L, Hammond C, Murphy EA, Kirschner KL. Pregnancy outcomes of women with physical disabilities: A matched cohort study. PM&R 2013; 5(2): 90-98.

Kirschner KL. The Outlier. Hastings Cent Rep. 2013 43;1:8-9.

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