Clinical

Stacy McCarty presented a poster at the American Brain Tumor Patient and Caregiver conference July 28, 2012: “The Outcomes and Cost Effectiveness of Day Rehabilitation in Malignant Brain Tumor Patients.”

Gayle Spill:
Presentation at the American Society of Bioethics and Humanities annual conference 10/18-21: “Disability and Do-Not-Resuscitate: Teaching Difficult Conversations”

Presentation at the American Academy of Physical Medicine and Rehabilitation Annual Assembly 11/15-18: “Rehabilitation of the Critically Ill: In the ICU and Beyond”


Christine Gagnon was elected to President of the Midwest Pain Society, October 2012

Elliot Roth present on the “Tongue Drive System” at the following meetings:
Association of Spinal Cord Injury Professionals, Las Vegas NV, September 2012
American Congress of Rehabilitation Medicine, Vancouver BC, October 2012
American Academy of PM&R, Atlanta GA, November 2012

Elliot Roth published a book review of “War’s Waste” in JAMA
Nursing

Rosemarie King:
Publications:

Professional Activities:
Member, AHA CVN Stroke Nursing Committee
Reviewer, AHA-ASA, International Stroke Conference Nursing Symposium Abstract
Reviewer.
Member, AHA-ASA CVN Committee AHA-ASA Statement Writing Group, “Stroke Caregiver Evidence-Based Interventions”

Academic Activities:
Member dissertation committee, Physical Therapy doctoral student, Kathmandu, Nepal
External Reviewer, Nursing doctoral student, University of Malaysia

Mimi Zeigler:
Presented "Contemporary Principles of Wound Care in the Prosthetics and Orthotists Client: A Wound Care Specialist Perspective” for the Academy of Prosthetists and Orthotists Dermatology and Wound Care One-Day Certificate Program, 10/20;

Presented the annual Wound Treatment Modalities for the NMH Dermatology Residency Program on 11/17.


The following nurses taught in the CRRN Review Course at RIC Oct-24-26

Principles and Concepts of Rehabilitation Nursing
Jeanne Mervine, RN, MS, CRRN, NE-BC

Cardiac and Pulmonary Rehabilitation
Ann S. Bines, RN, MS, CCRN

Acute and Chronic Pain
Linda Toelke, RN, MS, CRRN, CARN

Psychosocial Healthcare Patterns & Nursing Interventions
Matt Sorenson, PhD, RN, CRRN
Stroke Rehabilitation
Florence Denby, MSN, APRN, BC, CRRN

Sexuality
Diane Rowles, MS, APRN, BC, CRRN

Maintenance of Skin Integrity & Prevention of Pressure Ulcers
Mimi Zeigler, RN, MS, CRRN, CWOCN

Neuroanatomy
Kathleen A. Stevens, PhD, RN, CRRN

Designing Bowel and Bladder Programs to Achieve Continence
Eileen French, RN, MS, CRRN

Creating a Plan of Care for a Patient with Spinal Cord Injury
Mary Kuncis, RN, BSN, CRRN

Discharge Planning & Health Maintenance
Kathleen A. Stevens, PhD, RN, CRRN

Test Taking Skills
Marcia Grear, MS, RN-BC

Swallowing and Nutritional Needs in Rehabilitation
Linda Danzy, RN, BSN, CRRN

Musculoskeletal and Orthopedic Disorders
Ellen Jo Suerth, RN, BSN, CRRN, ONC

Case Management in Rehabilitation
Julie Richter, RN, BSN, CRRN

Rehabilitation in and Chronic Illnesses
Kathy Stevens PhD, RN, CRRN

Creating a Plan of Care for a Patient with a Traumatic Brain Injury
Sylvia A. Duraski, MS, APRN, BC, CRRN-A, CBIT

Allied Health


Taylor, S. Patterns in Manual & Power Wheelchair Training: Findings from the SCIRehab
Taylor, S. Patterns in Seating Equipment Evaluation/Provision and Patient Satisfaction: Findings from the SCIRehab Project. Poster presented at the annual meeting of the Illinois Physical Therapy Association Annual Conference, Naperville, IL (October 2012)


Center for Aphasia Research

Grants awarded:


L. Cherney. (PI). National Institute on Disability and Rehabilitation Research (NIDRR). Enhancing Written Communication in Persons with Aphasia: A Clinical Trial. Field Initiated Award. 10/01/2012-9/30/2015

L. Gingrich (PI) American Speech Language and Hearing Foundation Clinical Research Grant Lingual Training in Parkinson’s Disease: Implications for Dysphagia Rehabilitation. 01/01/2013 – 12/31/2014

Publications:


Presentations:

Babbitt, E. M. & Cherney, L. R. Communicative Effectiveness Index (CETI): Perceptions from family members and persons with aphasia. Poster presentation at the International Aphasia Rehabilitation Conference, Melbourne, Australia (October, 2012).


Cherney, L. R. & Kaye, R. C. Augmenting Language Therapy for Aphasia: A Randomized Double-Blind Placebo-Controlled Trial of Levodopa in Combination with Speech-Language Therapy. Platform presentation at the International Aphasia Rehabilitation Conference, Melbourne, Australia (October, 2012).


Rose, M., **Cherney, L. R.**, & Worrall, L. What is an ICAP?: An international survey of intensive comprehensive aphasia programs. Poster presentation at the International Aphasia Rehabilitation Conference, Melbourne, Australia (October, 2012).


Wang, X., **Hurwitz, R.**, **Babbitt, E.**, **Rogers, L.**, **Harvey, R. L.**, Parrish, T., & **Cherney, L. R.** Effects of transcranial direct current stimulation on aphasia rehabilitation. Poster presentation at Human Brain Mapping, Beijing, China (June, 2012).

**Center for Bionic Medicine**


**Jon Sensinger:**
  
  NIDRR Field Initiated Grant: Design and Development of a Novel Body-powered Prehensor and Hand, 10/1/12-9/30/15

  Van Aartsen, R. and Sensinger, J (2012). Comparison of zero-order and first-order control in noisy prosthesis control systems, Biomedical Engineering Society Annual Meeting, Atlanta, GA.


**Robert Gregg** received a Career Award at the Scientific Interface from the Burroughghs Wellcome Fund to support his postdoctoral training with Dr. Jon Sensinger and eventual transition into a faculty position. This award will support Dr. Gregg’s research on the translation of robot control theories into high-performance lower-limb prostheses.

**Robert Lipschutz:** 2012 AOPA National Assembly on Saturday, September 8th - General Heading was: Current Work in Neuroprosthetics. Title was "Neural Control of Powered

Robert Lipschutz: AAOP One Day Seminar Certificate Program on Friday, October 19th - Contemporary Management of the Upper Limb Prosthetic Patient My specific title was "Management of the Pediatric Upper Limb Prosthetic Patient"

Sean P. Deeny:  
National Institute on Disability and Rehabilitation Research (NIDRR), Department of Education, Mary Switzer Award Merit Fellowship  


**Center for Rehabilitation Outcomes Research**

**Grants Funded:**
AWHeinemann: Collaboration on Mobility Training (COMIT), NIDRR/USDE, 10/1/12-9/30/17. (Michael Boninger PI).

**Grants Submitted:**
Ramsey-Goldman and Ehrlich-Jones - U34: Planning Activity and Nutrition Trial in Lupus to Energize & Renew  
Stevens (Ehrlich-Jones): Nurse Staffing and Patient Outcomes in the Rehabilitation Setting

**Grants in Preparation:**
Heinemann and Deutsch: PCORI: Developing Quality Metrics from Patient-Reported Outcomes for Medical Rehabilitation  

**Publications:**


Abstracts:


Presentations:

2. Heinemann AW. Evidence, Theory and Experience: Implementing Evidence into Rehabilitation Practice. Instructional course organizer for the annual meeting of the American Congress of Rehabilitation Medicine, October 10, 2012, Vancouver, BC.

3. Heinemann AW. Outcome Measurement Resources for Rehabilitation Clinicians. Symposium organizer for the annual meeting of the American Congress of Rehabilitation Medicine, October 11, 2012, Vancouver, BC.

4. Heinemann AW. Promoting Adoption of Outcomes Data Collection in Rehabilitation Practice. Symposium organizer for the annual meeting of the American Congress of Rehabilitation Medicine, October 11, 2012, Vancouver, BC.


**Awards:**
**Heinemann AW.** HBB Innovation Award winner for the project titled “Outcomes Dashboard.”
Deutsch A. Distinguished Service Award, Association of Rehabilitation Nurses, October 4, 2012


Service Activities:

**Allen Heinemann**
Grant Reviewer, Patient Centered Outcome Research Institute competition
Ability Lab Core Group – Research Hospital Design

**Anne Deutsch**
International Stroke Conference/Nursing Symposium Conference – Abstract Reviews
DeVivo Award – Application Reviewer

**Linda Ehrlich-Jones**
Association of Rheumatology Health Professionals 2012 Annual Scientific Meeting Abstract Reviewer
Society of Behavioral Medicine 2013 Annual Meeting Abstract Reviewer
Retirement Research Foundation Grant Reviewer

**Northwestern University Prosthetics and Orthotics Center / Rehabilitation Engineering Research**

Publications:


Presentations:


**Stefania Fatone and Azucena Rodriguez** presented “Spinal motion during walking in persons with unilateral Transfemoral amputation with and without low back pain” (co-authored by Rebecca Stine and Steven Gard) as part of the American Academy of Orthotists and Prosthetists Webinar Series, August 22, 2012. Archived online at [http://www.oandp.org/olc/course_video.asp?frmCourseId=4E0ABC59-B731-4646-9756-16D5B3F9FD42](http://www.oandp.org/olc/course_video.asp?frmCourseId=4E0ABC59-B731-4646-9756-16D5B3F9FD42)

**Robert Lipschutz, BSME, CP, Assistant Professor**, was a presenter at the 2012 AOPA National Assembly on Saturday, September 8, 2012, and gave a presentation under the Current Work in Neuroprosthetics section on "Neural Control of Powered Prostheses"


**Robert Lipschutz, BSME, CP, Assistant Professor**, was a presenter at AAOP One Day Seminar Certificate Program on Friday, October 19th - Contemporary Management of the Upper Limb Prosthetic Patient. He gave a presentation on "Management of the Pediatric Upper Limb Prosthetic Patient"
Invited Speakers:

**Stefania Fatone** was a Keynote Speaker at the 3rd Annual Convention in Prosthetics and Orthotics, Manila, Philippines, July 6-8, 2012. She also was invited to speak at the Philippine Children’s Medical Center, Monday Doctors Conference, July 9, Quezon City, Philippines.

**Stefania Fatone** was honored as the Fall 2012 NIDRR Invited Lectureship in Outcomes Research, hosted by the RRTC on Improving Measurement of Medical Rehabilitation Outcomes, Center for Rehabilitation Outcomes Research, Chicago IL. As part of this lectureship Dr Fatone gave two presentations: Institute for Healthcare Studies (HIS) October 4, 2012 and the Rehabilitation Institute of Chicago Medical Grand Rounds on October 10, 2012.

**Matty Major** provided the Clinical Research Grand Rounds at the Rehabilitation Institute of Chicago on October 8th, 2012. The title of the presentation was “Validation of the Berg Balance Scale for Individuals with Lower Limb Amputation.”

Educational Tours:

**NUPOC** hosted a site visit for graduate students in the Rush Occupational Therapy Program on July 30, 2012. R. J. Garrick managed the tour of NUPOC education/research facilities, and educational presentations by Stefania Fatone, Desmond Masterton, and Craig Heckathorne.

**NUPOC** hosted a site visit for Kim Greitemann and Thosmas Glapa (Germany) on August 20, 2012. R. J. Garrick managed the tour of NUPOC education/research facilities, and presentations by Edward Grahn, Steven A. Gard, Oluseeni Komolafe, and Yeongchi Wu.

**NUUPOC** hosted a site visit for Monica Metzler (illinoisscience.org) on September 13, 2012. Stefania Fatone and R. J. Garrick conducted the educational tour of NUPOC education/research facilities.

**NUPOC** hosted a site visit for Ole Petersen and Ralph Jacob (Orthoteks, Balgrist, Switzerland) on October 4, 2012. R. J. Garrick conducted the educational tour of NUPOC education/research facilities and facilitated meetings w/ research/education staff, attendance at Center for Healthcare Studies Seminar Series, and audits of Scoliosis Orthotics Practicum and Transfemoral Prostheses Critique.

**NUPOC** hosted a site visit for Lawrence Kuhn (FSM, Development) on October 8, 2012. R. J. Garrick and Steven A. Gard conducted the educational tour of NUPOC education/research facilities.

**NUPOC** hosted an educational tour for science students from Crystal Lake South High School (Crystal Lake, IL) on November 27, 2012. R. J. Garrick managed the tour of NUPOC education/research facilities, and presentations by Rebecca Stine, Oluseeni Komolafe, Matthew Major, and Craig Heckathorne.
Grants Awarded:

**Steven Gard** and **Matthew Major** are Co-PI's on a grant entitled, “Validation and Critical Evaluation of the AOPA Prosthetic Foot Project Report,” funded by the American Orthotic and Prosthetic Association (AOPA) for 11/1/2012 – 10/31/2013.

Grant Proposal Submissions:

**Stefania Fatone** was PI on an application titled “Measuring Moisture and Temperature at the Prosthetic Socket Interface” submitted to the DOD Peer Reviewed Orthopedic Research Program (PRORP) on September 25, 2012.

**Stefania Fatone** was PI on an application titled “Development of Sub-Ischial Prosthetic Sockets with Assisted-Vacuum Suspension for Highly Active Persons with Transfemoral Amputations – Supplemental Funding” submitted to TATRC FY12JWMRP on 27, 2012.


Letter of Intent Submissions:


**Gard, S.A.** "Evaluation of a Vacuum-Based Impression and Alignment Device (V-BIAD).” VA Letter of Intent resubmitted for the November 1, 2012 due date.


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**Sensory Motor Performance Program**

**Konrad Kording**
Advanced User Interfaces for Upper Limb FES  
Corbett E, Ethier C, Oby ER, Kording K, Perreault E J, Miller LE  
Book chapter in "Introduction to neural engineering for motor rehabilitation"  
eds. Farina, D, Jensen, W, Akay, M.

What silly postures tell us about the brain  
Sober SJ and Koerding KP  

Future impact: Predicting scientific success
D. E. Acuna, S. Allesina, K. P. Kording
Nature, Volume 489, Number 7415, 201-202 (Nature website, PDF, Online h-index calculator)

Temporal Integration of Olfactory Perceptual Evidence in Human Orbitofrontal Cortex
Nicholas E. Bowman, Konrad P. Kording, Jay A. Gottfried
Neuron, Volume 75, Issue 5, 916-927 (PDF)

Measuring Cation Dependent DNA Polymerase Fidelity Landscapes by Deep Sequencing Zamft B, Marblestone A, Kording K, Schmidt D, Martin-Alarcon D, TyoK, Boyden E, Church GM
PLoS ONE in press (PDF, Supplementary data)

Generalization of stochastic visuomotor rotations
Fernandes HL, Stevenson IH, Kording KP
PLoS ONE (Abstract, PDF)

Differential Representations of Prior and Likelihood Uncertainty in the Human Brain
Vilares I, Howard JD, Fernandes HL, Gottfried JA, Kording KP
Current Biology (Abstract, PDF, Dispatch)

Fall classification by machine learning using mobile phones
Albert MV, Kording KP, Herrmann M, Jayaraman A
PLoS ONE 7(5): e36556. (Abstract, PDF)

Towards Perceiving Robots as Humans – Three handshake models face the Turing-like Handshake Test
Avraham G, Nisky I, Fernandes HL, Acuna DE, Kording KP, Loeb GE, Karniel A
IEEE Transactions on Haptics (Abstract, PDF)

Decoding with limited neural data: a mixture of time-warped trajectory models for directional reaches
Corbett EA, Perreault EJ and Kording KP.
Journal of Neural Engineering, (PDF).

Citlali-Lopez Ortiz:

Structured dance class for Physical Rehabilitation in Children with Cerebral Palsy.
Department of Pediatrics, Upstate Medical University, Syracuse, NY, June 13, 2012.

Abstracts:


Appointed Faculty, Joffrey Ballet Academy, The Official School of the Joffrey Ballet, 2012-Present.

Media References:


**Rajiv Ranganathan:**


**Zev Rymer:**

Plenary Talk: “Rehabilitation Research: A vision for the Future,” at the 3rd US-Turkey Advanced Institute in Antalya, Turkey, July 11

Chair, Oral Session on Robotics at ISEK 2012 in Brisbane, Australia, July 21

Session Chair for Motoneuron Disease; and July 26. Presented “The quandary of motoneuron behavior in stroke: higher excitability, but lower sustained firing rates” at the Motoneuron Meeting: Motoneurons and Beyond in Sydney, Australia, July 24

Participated in the APTA Regenerative Medicine Retreat near Rochester, NY, August 6-9

Participated in the NINDS Stroke Planning Workgroup in Bethesda, MD, August 29-31

“Active robotic training improves locomotor function in a stroke survivor” in the J Neuroeng Rehabil (Authors: Krishnan C, Ranganathan R, Kantak SS, Dhaher YY, Rymer WZ)

Attended the Ekso Academy reception and presentation in Las Vegas, NV, September 4
Presented “Motor” Session at “Unveiling the NIH Toolbox” Public Conference in Bethesda, MD, September 11
Participated in SSNR2012 HYPER Summer School in Monasterio de Piedra, Spain, September 16-21
Workshop Leader and Presenter at “Application of New Technologies in Rehabilitation,” RIC Academy, October 4-5
Attended Neuroscience 2012 in New Orleans, LA, October 14-17
Co-Chair and Moderator for Session on “Technology for Contemporary Rehabilitation Engineering” at the OPTT-RERC State of the Science Conference (SOSC) in Marina del Rey, CA, October 25
“Computing motor unit number index of the first dorsal interosseous muscle with two different contraction tasks” in Med Eng Phys (Authors: Zhou P, Li X, Rymer, WZ)
Presented “Integration of the Motion Analysis Center (MAC) with advanced mechanics, neural control, and prosthetics research programs the RIC” at the Motion Analysis Center event, RIC, November 9


**Other Faculty**

**Bill Armstrong** was an invited participant in the Future Directions in Wheelchair Service Provision Workshop held in Washington, DC on August 23 -24, 2012. This workshop was sponsored by the World Health Organization (WHO) and the US Agency for International Development (USAID). The purpose of the workshop was to establish a five-year plan in the following areas:

- Training
- Service
- Products
- Research / Evidenced Based Practice
- Network / Community of Practice

Three working groups were established during the workshop: Global Coordination, Appropriate Service Provision, and Evidenced Based Practice. Bill will be serving on the Global Coordination Group and the Appropriate Service Provision Group.
Jordan Grafman:


Vineeta Swaroop:

- Swaroop VT. Co-Director, American Academy of Orthopaedic Surgeons One Day Part II 2012 Board Certification Review Course (#3258) in Rosemont, IL (June 22, 2012)
- Swaroop VT. Co-Director, American Academy of Orthopaedic Surgeons One Day Part II 2012 Board Certification Review Course (#3259) in Rosemont, IL (June 23, 2012)
- Swaroop VT. Growth Plate Injuries: How to Stay Out of Trouble 2012 14th Annual Chicago Trauma Symposium in Chicago, IL (August 2, 2012)
- Swaroop VT. Pediatric Supracondylar Humerus Fractures: Are They a Surgical Emergency? 2012 14th Annual Chicago Trauma Symposium in Chicago, IL (August 2, 2012)
- Swaroop VT. Co-Director, American Academy of Orthopaedic Surgeons One Day Part II 2012 Board Certification Review Course (#3258) in Rosemont, IL (June 22, 2012)
- Swaroop VT. Co-Director, American Academy of Orthopaedic Surgeons One Day Part II 2012 Board Certification Review Course (#3259) in Rosemont, IL (June 23, 2012)
- Swaroop VT. Growth Plate Injuries: How to Stay Out of Trouble 2012 14th Annual Chicago Trauma Symposium in Chicago, IL (August 2, 2012)
- Swaroop VT. Pediatric Supracondylar Humerus Fractures: Are They a Surgical
Emergency? 2012 14th Annual Chicago Trauma Symposium in Chicago, IL (August 2, 2012)