Scholarly Activities
Department of Physical Medicine and Rehabilitation
Quarter December 2018 – February 2019

REGULAR FACULTY

Nenad Brkic: Keynote address “Fatigue After Traumatic Brain Injury”, Brain Injury Association of Illinois-Annual Educational Conference, October 2018

Andrea Alberto Domenighetti

Abstract/Poster: “Novel Repurposing of a Cytidine Analog to Treat Human Muscle Contractures”, Annual ORS Meeting, February 2019

Deborah Gaebler


DevSci Scientific Exchange on Infant Neuromotor Development – Invited Speaker – December 18th, 2018 – Shirley Ryan AbilityLab

Jennifer Goldman

Purcell NL, Goldman JG, Bernard B, O’Keefe JA. The effects of dual-task cognitive interference on balance in Huntington’s disease, Movement Disorders Clinical Practice, 2018, online/in press
Bledsoe IO, Stebbins GT, Merkitch D, Goldman JG. Diffusion tensor imaging of the corpus callosum and Parkinson’s disease cognitive impairment, *Neurology*, 91 (24): 32244-2255, PMID: 30429273

Levi Hargrove


Allen Heinemann

**Peer-Reviewed Publications**


Proposals under Review

NIDCD: Defining Trajectories of Linguistic, Cognitive-Communicative and Quality of Life Outcomes in Aphasia R01 DC017174-01A1 with Leora Cherney (co-PIs), awaiting Council decision

CDC: Injury Control Research Center

AHRQ: Co-PI with Scott Dresden (Emergency Medicine), A Randomized Controlled Trial of Geriatric Emergency Department Innovations R01- HS026489, undergoing administrative review.

Service Activities

Member, Consensus Committee on Functional Assessment for Adults with Disabilities, National Academies of Sciences, Engineering, and Medicine’s, 2017 – 2019

Member, Standing Committee of Medical and Vocational Experts for the Social Security Administration’s Disability Programs, 2019 - present

Member, Advisory Board, National Center for Medical Rehabilitation Research, 2016-2019.

Member, NINDS Stroke CDE v2.0 Working Group, 2018-present.

Advisory Board, Craig H. Neilsen Award, Larry Vogel, Pl. Shriner’s Hospital, Chicago, IL, 2018-2021

Member, NINDS Stroke v2.0 Outcomes and Endpoints Subgroup, 2018 – present

Arun Jayaraman

Papers Published


Conference presentation


Grants Submitted

Todd Kuiken
Papers Published

Grants Submitted

“Development and Initial Testing of a Pediatric Standing Wheelchair”
“Design, Development and Clinical Testing of a Manual Muscle Strength Quantification System and an Associated Teaching Program”
“Development of a Low-cost Lower Limb Prosthetic Socket”

Christina Marciniak
Publications: Articles

self-stretch program: a prospective randomized controlled trial in chronic hemiparesis.

Accepted for Publication: Neurorehabilitation and Neural Repair January 2019.


https://doi.org/10.1016/j.pmrj.2018.02.013

Abstracts:


Awards

Northwestern/Feinberg Medical School Award for: Excellence in Teaching - Area of Scholarly Concentration


Diane Dudas Sheehan

**Teaching:**

Completed fall session-small group tutor for Ethics in Action Class – M2 medical students, NU

Begins week of 2/25 - small group tutor for Ethics in Action Class – M1 medical students, NU

Continue repeating lecture- PM&R residents / students during Pediatric rotation at SRAL

“Neuromuscular Scoliosis Evaluation and Management” on 12/6/18

“Comprehensive Evaluation and Practical Treatment of Children with Wounds” on 12/27/18

**Publication**

RESEARCH FACULTY

Anne Deutsch

Peer-reviewed publications


Presentations Educational Sessions

**Deutsch A**, Functional Abilities and Goals and Active Diagnoses. Webinar presentation for the Centers for Medicare and Medicaid Services’ Skilled Nursing Facility Quality Reporting Program Training; Sept 12, 2018.

**Deutsch A**. Functional Abilities and Goals. Presentation at the Centers for Medicare and Medicaid Services’ Home Health Quality Reporting Program Training, Baltimore, MD; November 6, 2018.


Presentations: Conference


Linda Ehrlich-Jones

*Proposals in Development*

PCORI resubmission on EnhanceFitness vs. Walk with Ease: Finding the Best Fit for Older Adults with Chronic Knee Symptoms with Rowland Chang, MD, MPH.

*Service Activities*

American College of Rheumatology Collaborative Initiatives Work Group

American College of Rheumatology The Training Rheum Work Group

Jessica Pedersen

*Peer-Reviewed Publications*


*Proposals Submitted*

Submitted LOI- NIDILLR SWITZLER- Pediatric powered mobility
Submitted LOI- Neilsen CO&I Air Travel Education
Submit NIDILLR – SWITZER Therapeutic Intervention Using Dedicated Pediatric Powered Mobility Devices in Infants and Toddlers- $70,000
Sherri LaVela

Publications (published; in press, revised):


Weaver FM; Binns-Calvey A; Gonzalez B; Kostovich C; LaVela SL; Stroupe K; Kelly B; Ashley N; Miskevics S; Gerber B; Burkhart E; Schwartz A. Alerting doctors about patient life challenges: A randomized control trial of a pre-visit inventory of contextual factors. Medical Decision-Making Policy & Practice. Revised 12/11/18

Ann Simon


Mary Ellen Stoykov

Manuscripts

Thielbar, Triandafilou, Barry, Yuan, Nishimoto, Johnson, Stoykov, Tsoupikova, & Kamper. Home-based upper extremity stroke therapy using a multi-user virtual reality environment, submitted to Neural Rehabilitation and Neural Repair

Grants Submitted:
Stoykov ME & Goldman JG (Co-PIs) Guided strategy training as cognitive rehabilitation in Parkinson’s Disease. Submitted to Coleman Foundation, Shirley Ryan Abilitylab.

Professional Activities
American Occupational Therapy Foundation, Committee member, Awards and Honors Committee

NU PROSTHETICS AND ORTHOTICS CENTER

Publications:

Major MJ. Fall prevalence and contributors to the likelihood of falling in persons with upper limb loss. Physical Therapy, 2018 Dec 18 [ePub].

Presentations:
Matty Major, PhD, and Stefania Fatone, PhD, BPO presented the webinar “Predict the Medicare Functional Classification Level (K-level) using the Amputee Mobility Predictor in people with unilateral transfemoral and transtibial amputation” for the American Academy of Orthotists and Prosthetists, February 6, 2019.

Awards:
Jorian Ordway (MPO 2019) was selected to receive an OPERF Student Award for Academic Achievement. Ms. Ordway won the award in recognition of her outstanding academic achievement in the NUPOC MPO degree program in the class of 2019.

Kristin Barth, Maureen Connelly and Abbey Senczyszyn (MPO 2019) are recipients of the 2018 Tamarack Awards. Since 2014, the generosity of J. Martin Carlson, CPO, FAAOP, owner
and chief engineer of Tamarack Habilitation Technologies (Blaine, MN), enables NUPOC to confer a Tamarack Award on three NUPOC MPO students who demonstrate excellence in orthotics.

Meetings:

Steven A. Gard, PhD, was invited to attend the fourth O&P Leadership Conference hosted by the AOPA in Scottsdale, AZ on January 4 through 6. The conference speakers and attendees were recognized leaders in healthcare delivery and P&O. Attendance was by invitation only. The conference theme was "Reimbursement for Value in an Evidence-Based World."

Stefania Fatone, PhD, BPO (Hons), participated as a reviewer in the VA Merit Review Panel held on February 27, 2019, in Washington DC.

Stefania Fatone, PhD, BPO (Hons), participated as a reviewer of abstracts for the International Society for Prosthetics and Orthotics World Congress to be held on October 5-8, 2019, in Kobe, Japan.

Laboratory Visits/Events:

Stefania Fatone, PhD, BPO (Hons), and Ryan Caldwell, CP, taught the 2 day hands-on NU-FlexSLV Socket Course to:
- 20 prosthetists at Kobe College of Medical Welfare in Sanda, Japan on January 18-20, 2019.
- 16 prosthetists at Ossur Americas in Orlando, Florida on February 8-9, 2019.

Recent Appointments:

J. Chad Duncan, PhD, CRC, CPO, is the incoming Director at the Northwestern University Prosthetics-Orthotics Center (NUPOC), Department of Physical Medicine and Rehabilitation, Northwestern University Feinberg School of Medicine, and formally assumed his leadership role on January 1, 2019.

Stefania Fatone, PhD, BPO (Hons) was one of a team of four people appointed co-Editors-in-Chief of Prosthetics and Orthotics International beginning on January 1, 2019.

Grant Awards:

Matthew J. Major, PhD, and his research project, "Characterizing the Gait Biomechanics of Women with Leg Amputation for Improving Evidence-Based Rehabilitation Practice" have been selected for funding by the 2019 Shaw Family Pioneer Awards.

Grant Submissions:

Stefania Fatone, PhD, BPO (Hons) was a co-investigator on an NIH R01 submission titled “The influence of 3D printed prostheses on neural activation patterns of the primary motor cortex in children with unilateral congenital upper-limb reductions” (PI Jorge Zuniga, University of Nebraska) submitted on February 5 2019.
Steven Gard, PhD, was PI on an application entitled, “Development and Evaluation of a Shock Absorbing Prosthetic Ankle Mechanism” that was submitted to the Field Initiated Projects Program (Development) of the National Institute on Disability, Independent Living and Rehabilitation Research (NIDILRR) on February 5, 2019.

Steven Gard, PhD, was PI on an application entitled, “Optimal Selection of Prosthetic Knee and Foot Combination for Improving Walking and Standing Performance in Transfemoral Prosthesis Users” that was submitted to the Department of Veterans Affairs, Rehabilitation Research & Development Service, on December 10, 2018.

Steven Gard, PhD, was PI on an application entitled, “Evaluation of a Hydraulic Prosthetic Foot/Ankle Component to Increase Swing Phase Toe Clearance in Persons with Transfemoral Amputation” that was submitted to the Department of Veterans Affairs, Rehabilitation Research & Development Service, on December 10, 2018.

Matty Major, PhD, was PI on a VA Merit Review submission titled “Hybrid Electrical-Mechanical Pump for Vacuum Suspension of Prosthetic Sockets” (co-investigators Stefania Fatone, PhD, BPO (Hons) and Ryan Caldwell, CP) submitted on December 15 2019.

Matty Major, PhD, and Martin Bucker, CPO, are Co-Investigators on a proposal titled “Personalized prosthesis stiffness to maximize comfort and mobility using human-in-the-loop optimization” submitted on January 15th to The Orthotic and Prosthetic Education and Research Foundation (OPERF) Small Grant Program.

Matty Major, PhD, and Chad Duncan, PhD, CRC, CPO, are Co-Investigators on a proposal titled “Validating the fear of falling avoidance behavior questionnaire in users of lower limb prostheses” submitted on January 15th to The Orthotic and Prosthetic Education and Research Foundation (OPERF) Small Grant Program.

Matty Major, PhD, and Martin Bucker, CPO, are Co-Investigators on a proposal titled “Personalized prosthesis stiffness to maximize comfort and mobility using human-in-the-loop optimization” submitted on February 16th to the NIH R21 Exploratory/ Developmental Bioengineering Research Grant.

Matty Major, PhD, is a Co-Investigator on a proposal titled “Validation of a Computational Model for Controlling Center-of-Pressure in Bipedal Locomotion” submitted on February 16th to the NIH R21 Exploratory/ Developmental Bioengineering Research Grant.

Matty Major, PhD, is a Co-Investigator on a DoD Phase I SBIR proposal titled submitted on February 6th in response to the solicitation “Automated Framework for the Design of Passive Prosthetic & Orthotic Interfaces”.

Grant LOI Submissions:

Matty Major, PhD, Rebecca Stine, MS, Paul Hammond, MS, Keith Gordon, PhD, and Steven Gard, PhD, submitted a letter of intent for a Small Project in Rehabilitation Research (SPiRE)
proposal entitled, “Locomotor Response of Persons with Upper Limb Loss to Treadmill Perturbations” to the Department of Veterans Affairs, Rehabilitation Research & Development Service, on February 1, 2019.

Rebecca Stine, MS, Steven Gard, PhD, and Matty Major, PhD, submitted a letter of intent for a Small Project in Rehabilitation Research (SPIRE) proposal entitled, “Are Women at Increased Risk of Developing Secondary Physical Conditions Associated with Lower-Limb Amputation and Long-Term Prosthesis Use?” to the Department of Veterans Affairs, Rehabilitation Research & Development Service, on February 1, 2019.

OTHER FACULTY