Scholarly Activities
Department of Physical Medicine and Rehabilitation
March-April-May 2019

REGULAR FACULTY

Daniel Blatz, MD

Invited Lectures
American Medical Society for Sports Medicine (AMSSM) Annual Conference
Houston, TX. April 2019. Participation in Sports with Underlying Neurologic Conditions

American Academy of Physical Medicine and Rehabilitation (AAPMR) Next Step Ultrasound Course

Books and Book Chapters

Colin Franz, MD

Manuscripts

Accepted Abstracts


Quezada, M.J., Cotton, K.Y., Franz, C.K. Phenotypic characterization of human iPSC-derived motor neurons that carry the common val66met single nucleotide polymorphism of brain...
derived neurotrophic factor gene using multielectrode array and an in vitro stretch injury system. Society for Neuroscience.


Invited Presentations
Northwestern Neurology Neuromuscular Division Rounds: “Advances in Peripheral Nerve Repair”
SRAlab/NU Peripheral Nerve Group Meeting: “The Role of BDNF in Peripheral Nerve Regeneration: Activity-Dependent Treatments and Val66Met”

Teaching
Lecturer, Schwab PM&R Residency Program Academic Half Day: “ALS and other Motor Neuron Diseases”

Lecturer, SRAlab/McGaw PM&R Residency Program Advanced Lecture Series: “Electrodiagnostics for Motor Neuron Diseases”

Instructor at “The 11th Annual Scott Primack MSK Ultrasound Course”: Neuromuscular Ultrasound Topics

Deborah Gaebler, MD

Pouppirt N, Gaebler-Spira D, deRegnier R. Implementation of Early Detection and Intervention for Cerebral Palsy and Transition to Rehabilitation Services in a Neonatal Follow-Up Program. Implementation of Early Detection and Intervention for Cerebral Palsy Conference - Nationwide Children’s Hospital - Columbus OH - April 11-13, 2019

Physical and Environmental Barriers to Mobility and Participation in Children with Medical Complexity - Pediatric Academic Societies (PAS) 2019 Meeting - Baltimore, Maryland - April 27- 30, 2019

Speaker – Cerebral Palsy/Early Detection – Rush University Medical Center – Chicago, IL – March 15, 2019
Jennifer Goldman, MD

Publications

Abstracts presented


Presentations
Invited speaker, “Lewy Body Dementias – Clinical trials and longitudinal antemortem characterization of LBD,” Alzheimer’s Disease and Related Dementias Summit, NIH – March 2019

Invited speaker, “Cognition and Parkinson’s Disease,” Mind, Mood, Motion Symposium, Parkinson’s Foundation, Illinois – March 2019

Invited speaker, Allied Team Training for Parkinson’s Disease Course, Parkinson’s Foundation, Iowa City, Iowa – March 2019


Course director, Nonmotor Manifestations of Parkinson’s Disease I and II, American Academy of Neurology, Philadelphia – May 2019

Invited speaker, “Cognitive impairment in Parkinson’s Disease,” Better Hearing and Speech course, Shirley Ryan AbilityLab – May 2019
Service Activities
Chair, Scientific Advisory Committee for the Lewy Body Dementia Association, 2019-

Daniel Goodman, MD

Levi Hargrove, PhD
Papers Published
Papers submitted
Earley EJ, Hargrove LJ. “Modeling Steady-State Error and Behavior for Motor Adaptation During Reaching” Submitted to EMBS, March 201
Patents awarded:
Conference Presentation

Allen Heinemann, PhD
Peer-Reviewed Publications


**Funded Proposals**

NIDCD: Defining Trajectories of Linguistic, Cognitive-Communicative and Quality of Life Outcomes in Aphasia R01 DC017174-01A1 with Leora Cherney (co-PIs), April 10, 2019-April 9, 2024. Total award $3,100,072.

AHRQ: Co-PI with Scott Dresden (Emergency Medicine), A Randomized Controlled Trial of Geriatric Emergency Department Innovations R01- HS026489. May 1, 2019-April 30, 2024. Total award $1,973,250.

**Proposal under Review**

NIDILRR, DRRP on KT to Promote Patient-Centered Care Through Use of Standardized Assessments (co-PI with Linda Ehrlich-Jones)

**Service Activities**

Member, Advisory Panel, NIDILRR Project on Opioid Use Disorder among People with Disabilities, AIR, 2019-2022.

Member, Psychosocial Review Panel, Craig H. Neilson Foundation, 2014 – present

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, 2016 - present

Member, Advisory Board, National Center for Medical Rehabilitation Research, 2016-2019.
Advisory Board, Craig H. Neilsen Award, Larry Vogel, PI. Shriner’s Hospital, Chicago, IL, 2018-2021
Member, NINDS Stroke v2.0 Outcomes and Endpoints Subgroup, 2018 – present

Presentations


Arun Jayaraman, PhD

Keynote Speaker

Invited Talk

Papers Published


Conference presentation
Jayaraman A. “Wearable Technologies to Enhance O&P Outcome Measurement”. Orthotic

**Grants Submitted**
NIH-R01 (PI) SIESTA (Sleep of Inpatients: Empower Staff to Act) for Acute Stroke Rehabilitation. Submitted 3/29/2019.

**Conference Presentations**


**Todd Kuiken, MD, PhD**

**Papers Published**

**Patents Awarded**

**Christina Marciniak, MD**

**Abstract**

**Publication**
Laura Miller, CP, PhD

Grants Awarded:

DoD/CDMRP (PI) The Functional Importance of Powered Wrist Flexion for Transradial Prosthesis Users. 4/4/19
Orthotics and Prosthetics Education and Research Foundation (OPERF) 2019 Small Grant Award. (PI) A Pilot Investigation to Determine whether Pathogens are Present on Gel Liners Worn by Amputees. 4/4/19

Vivian Roy, MD


Diane Dudas Sheehan, ND, APRN, FNP-BC


4/11/19 APP-PC WSS Book club: Co- Presented TIPS on Publishing CHILDREN’S Books –LC APPs/staff

Spring 2019 Small group Leader for Ethics in Action Class – M1 medical students, NU
3/12/19 “Neuromuscular Scoliosis Evaluation and Management” PM&R residents at SRAL
4/16/19 Comprehensive Evaluation and Practical Treatment of Children with Wounds” PM&R residents during Pediatric rotation at the SRAL

Gayle Spill, MD

Ethical Legal Topic: Futility in Rehabilitation
Gayle R. Spill, MD, Teresa Vente, DO, MPH, Joel Frader, MD, MA, Sean Smith, MD, Joseph Giacino, PhD, Ross Zafonte, DO, Brenda Coppard, PhD, OTR/L, FAOTAC, Gail Jensen, PhD, PT, FAPTA,
Feature Editor: Debjani Mukherjee, PhD, PM&R, April 2019

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Anne Deutsch, PhD


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.


Presentations: Conference


Service Activities

Chair, Research Committee, Association of Rehabilitation Nurses
Chair, Research Committee, Association of Rehabilitation Nurses (continuing as Chair for CY 2019)

NU Teaching
Deutsch A. Ethical Issues with Large Database Research. Lecture for Ethical Issues in Health Services Research (HSR 460) course, Northwestern University Feinberg School of Medicine. Chicago, IL, February 6, 2019. Graduate course.

Linda Ehrlich-Jones, PhD

Publication:

Presentations:


Proposal Under Review
NIDILRR, DRRP on KT to Promote Patient-Centered Care Through Use of Standardized Assessments (co-PI with Allen Heinemann)

2. 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

Work with MD/MPH student from University of Vermont, Allison Greene

Jessica Pedersen, PhD

Peer-Reviewed Publications


Presentations Educational Sessions


Service Activities

Member, Board of Directors, Devices for the Disabled
Member, Advisory Board, Governors State University OT Program
Member, RESNA Assistive Technology for Air Travel Standards
Committee Member, Designs for America Advisory Committee
Member, Access Living DME Committee
**Publications:**


**Presentations:**

**Matthew Major, PhD**, was interviewed by Professor Alan Jette for the Physical Therapy Journal’s Podcast to discuss Dr. Major’s recent publication titled “Fall prevalence and contributors to the likelihood of falling in persons with upper limb loss.”


Cavanaugh, M., Duncan, J.C., Carnahan, K., Brinkmann, J., & Robinson, C. (2019). PA Students with Prosthetics and Orthotics (P&O) Faculty, Students and Model Demonstrators, Feinberg School of Medicine Northwestern University March 19.


Amkie Dichi E, Major, MJ. (2019). 2D motion analysis for bench testing measuring prosthetic hand motion. 15th Annual Lewis Landsberg Research Day, Northwestern University, April 4, Chicago, IL.


Awards:

Matthew Major, PhD, was awarded a Specialized Certificate in Biostatistics from the University of California, San Diego.

Meetings:

Matthew Major, PhD attended the 45th Academy Annual Meeting and Scientific Symposium held in Orlando, FL, March 6-9, 2019. Dr. Major served as the symposium chair, organizer, and coordinator for an organized session “Gaining a Foothold on our Understanding of Falls and Locomotor Stability in Lower Limb Prosthesis Users”.

Matthew Major, PhD, attended the ISPO Trent International Prosthetics Symposium (TIPS) 2019 held in Manchester, UK, on March 20-22, 2019. Dr. Major served on the Technical Program Committee and contributed to the organization and content for this conference. Dr. Major presented his research, co-authored with Stine and Gard "Falls and Balance Control of Persons with Upper Limb Loss."

Stefania Fatone, PhD, BPO(Hons) and Jessica Yohay attended the Iowa Prosthetics, Orthotics and Pedorthics Association (IPOPA) Meeting held in Des Moines, Iowa on Saturday April 6, 2019. Dr. Fatone opened the all day program with her invited presentation, "The
Northwestern University Flexible Sub-Ishial Vacuum (NU-FlexSIV) Socket: Development, Research and Dissemination.

Stefania Fatone, PhD, BPO (Hons), a member of the ISPO World Congress Scientific Committee, met with committee members in London, UK, on April 12-13, 2019 to compile the scientific program for the 17th ISPO World Congress to be held in Kobe Japan on October 5-8, 2019. The committee selected from among 700 abstract submissions for symposia, instructional courses and free papers.

Laboratory Visits/Events:

Christopher Robinson, MS, MBA, CPO, and NUPOC contributed to the interdisciplinary learning day sponsored by the Physical Therapy and Human Movement Sciences for second-year Doctor of Physical Therapy students on April 11, 2019. Direct interaction with community volunteers who live with neuromuscular conditions helped familiarize students with the clinical skills required to work as part of an interdisciplinary healthcare team.

Stefania Fatone’s recently funded study was highlighted in the April issue of the O&P Almanac, “Principal Investigator: Improving Post stroke Mobility” https://www.aopanet.org/publications/op-almanac-magazine/

Stefania Fatone, PhD, BPO(Hons), and Ryan Caldwell, CP, taught the 2 day hands-on NU-FlexSIV Socket Course to 20 prosthetists at Kobe College of Medical Welfare in Sanda, Japan on May 23-26, 2019.

Recent Appointments:

Matthew Major, PhD, was Associate Editor for the 2019 IEEE Conference on Rehabilitation Robotics (ICORR), Toronto, Canada, June 24-28, 2019.

J. Chad Duncan, PhD, CRC, CPO is an Abstract Reviewer for the 17th World Congress of the International Society for Prosthetics and Orthotics (ISPO) October 5-8, 2019 at the Kobe Convention Center in Kobe, Hyogo, Japan.

Grant Awards:

Stefania Fatone, PhD, BPO (Hons) was recommended for funding by the DOD Orthotics and Prosthetics Outcomes Research Program for the projects “Comparative Effectiveness of Socket Casting Methods: Improving Form and Fit” on which she is PI and for the project “Consequences of socket design for hip muscle function among unilateral transfemoral amputees” on which she is a co-investigator (PI: Andrew Sawers, PhD, University of Illinois at Chicago).
Steven Gard, PhD is PI on a project that was recommended for funding by the DOD Orthotics and Prosthetics Outcomes Research Program entitled, “Optimal Selection of Prosthetic Knee and Foot Combination for Improving Walking and Standing Performance in Transfemoral Prosthesis Users.”

Matthew Major, PhD, is PI on a Northwestern University Women’s Health Research Institute Shaw Family Pioneer Award to fund a proposal titled “Characterizing the gait biomechanics of women with leg amputation for improving evidence-based rehabilitation practice”.

Matthew Major, PhD, is a Co-Investigator on a DoD DHA SBIR proposal recommended for funding in response to the RFA for an “Automated framework for the design of Passive prosthetic and Orthotic Interfaces.”

Grant Submissions:

Steven Gard, PhD, was PI on an application entitled, “Kids Exceed” that was submitted to the Disability and Rehabilitation Research Projects (DRRP) Program: Community Living and Participation (Development) of the National Institute on Disability, Independent Living and Rehabilitation Research (NIDILRR).

Matthew Major, PhD, is PI on a collaborative proposal submitted with MIT to the NIH (R21 Exploratory Research Grants) titled “Personalized Prosthesis Stiffness to maximize comfort and mobility using human-in-the-loop optimization.”

Matthew Major, PhD is PI and Steven Gard, PhD, is a Co-I on a proposal submitted to the VA RR&D (SPIRE) titled “Locomotor Response of Persons with Upper Limb Loss to Treadmill Perturbations.”

Grant LOI Submissions:

Steven Gard, PhD, submitted a letter of intent for a Research Career Scientist Award to the Department of Veterans Affairs, Rehabilitation Research & Development Service, on May 1, 2019.

Steven Gard, PhD, and Matty Major, PhD, submitted a letter of intent for a Merit Review proposal entitled, “Effect of Shoes on Prosthetic Foot Function During Standing and Walking” to the Department of Veterans Affairs, Rehabilitation Research & Development Service, on May 1, 2019.

Matthew Major, PhD, is PI and Stefania Fatone, PhD, is Co-I on an LOI submitted to the VA RR&D (Merit) titled “Hybrid Electrical-Mechanical pump for Vacuum Suspension of Prosthetic Sockets.”