

**Northwestern University
Prosthetics-Orthotics Center**

**The Neuromechanics of
Rehabilitation for
Lower Limb Loss
Symposium 2018**

**Monday, June 11, 2018
8:30 a.m. - 4:00 p.m.**

Baldwin Auditorium
Robert H. Lurie Medical Research Center
303 East Superior
Chicago, IL 60611

NUPOCTEL: 312.503.5700
www.nupoc.northwestern.edu

**THE NEUROMECHANICS OF REHABILITATION FOR
LOWER LIMB LOSS SYMPOSIUM 2018**

CONTINENTAL BREAKFAST

8:30 - 9:00 a.m.

PRESENTATIONS

9:00-9:10 a.m.

Matthew J. Major, PhD

Assistant Professor, Physical Medicine & Rehabilitation
Northwestern University, Chicago, IL

Welcome, symposium overview, aims, and introductions

9:10-9:35 a.m.

Elliott Rouse, PhD

Assistant Professor, Department of Mechanical Engineering

University of Michigan, Ann Arbor, MI

The Role of Mechanical Impedance in Human Neuro-motor Control and Wearable Robotic Systems

9:35-10:00 a.m.

Andrew Sawers, CPO, PhD

Assistant Professor, Department of Kinesiology
University of Illinois, Chicago, IL

Falls among Lower Limb Prosthesis Users: Refocusing through an Epidemiological Lens

MORNING REFRESHER

10:00 a.m. - 10:10 a.m.

10:10-10:35 a.m.

Matthew Major, PhD

Assistant Professor, Physical Medicine & Rehabilitation
Northwestern University, Chicago, IL

How a priori Knowledge of a Perturbation Impacts Pro-active and Reactive Locomotor Strategies of Below-Knee Prosthesis Users

10:35-11:00 a.m.

Noah Rosenblatt, PhD

Assistant Professor, Podiatric Surgery & Applied Biomechanics

Rosalind Franklin University, North Chicago, IL

The Effects of Fear of Falling on Balance and Gait: Lessons from Intact Adults and Implications for Prosthetic Design and Rehabilitation

11:00-11:25 a.m.

Nicholas Fey, PhD
Assistant Professor, Mechanical Engineering; Joint-Bio-
engineering

University of Texas-Dallas, Dallas, TX

*Techniques to Assess the Neuromechanical Response of
Individuals with Above-Knee Amputation during Steady
and Non-Steady-State Locomotor Tasks*

11:25 a.m.-12:10 p.m.

Hiroaki Hobara, PhD
Senior Researcher, National Institute of Advanced In-
dustrial Science and Technology

Tokyo & Tsukuba, Japan

*Active Amputees: Biomechanics of Running-Specific
Prostheses*

12:10-12:30 p.m.

Koki Kawano
International Program Representative, JSPS Office
Washington, D.C.

JSPS Information Session

LUNCHEON
BALDWIN AUDITORIUM FOYER
12:30 noon - 13:30 p.m.

13:30-14:30 p.m.

**Drs. Hobara, Rouse, Major, Fey,
Sawers and Rosenblatt**

Panel Discussion

14:30- 15:00 p.m.

Dr. Major and Dr. Garrick

Closing Remarks

AFTERNOON REFRESHER
15:00 - 16:00 p.m.

NETWORKING OPPORTUNITY
16:30-18:00 p.m.

Symposium registrants are invited to gather for an unhosted,
post-symposium mixer. Dinner and drinks are at your own ex-
pense. All are welcome!

D4 Irish Pub

345 E Ohio Street

Chicago, IL 60611

(312) 624-8385



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The views and opinions expressed in the symposium presentations, posters and discussions are those of the authors and do not necessarily reflect the position or policy of any of the supporting institutions.

Photographs were taken with the permission of the symposium participants.

Matthew J. Major, PhD
R. J. Garrick, PhD

Northwestern University Prosthetics-Orthotics Center (NUPOC)
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
TEL: 312-503-5700
FAX: 312-503-5760
nupoc.northwestern.edu/