



# Transforming Clinical Research Through Technology and Infrastructure

## 9th Annual Clinical Research Symposium

Provided by: The Northwestern Advisory Council for Clinical Research  
McGaw Medical Center – Daniel Hale Williams Auditorium  
240 E. Huron, Chicago, Illinois  
Friday, June 8<sup>th</sup>, 2018

### Symposium Lecture Information

#### ***Wireless, Skin-Like Sensors for the Human Body***

##### **John Rogers, PhD**

Louis Simpson and Kimberly Querrey Professor of Materials Science and Engineering, Biomedical Engineering, and Neurological Surgery (and by courtesy, Electrical and Computer Engineering, Mechanical Science and Engineering, and Chemistry)  
Director, Center for Bio-Integrated Electronics  
Northwestern University

##### **Learning Objectives:**

1. Learn about the latest in body-integrated electronic systems
2. Gain familiarity with various clinically relevant modes of use for these technologies
3. Learn about the range of on-going clinical studies that utilize these platforms
4. Understand the challenges and opportunities in broad deployment and commercialization

#### ***Sound Processing in the Brain: What Have We Learned from Concussion in Athletes?***

##### **Nina Kraus, PhD**

Hugh Knowles Professor of Communication Sciences  
Professor of Neurobiology and of Otolaryngology  
Northwestern University

##### **Cynthia R. LaBella, MD**

Medical Director, Institute for Sports Medicine  
Ann & Robert H. Lurie Children's Hospital of Chicago  
Professor of Pediatrics  
Northwestern University

**Learning Objectives:**

1. Explain why auditory processing is vulnerable to head injury.
2. Describe how auditory processing difficulty manifests itself in concussed children.
3. Identify some examples of frequency-following response deficits seen after a concussion.

***Impact of Wearable Technology in Enhancing Human Ability*****Arun Jayaraman, PT, PhD**

Director, Max Nader Center for Rehabilitation Technologies & Outcomes Research

Director & Business Development Officer, Office of Translational Research

Shirley Ryan AbilityLabs

Associate Professor of Physical Medicine & Rehabilitation

Associate Professor of Physical Therapy & Human Movement Sciences

Northwestern University

**Learning Objectives:**

1. To discuss brief history on the perceived need for wearable technology for rehabilitation and people with disabilities
2. To discuss strategies for using wearable sensor technology to monitor patients in the continuum of care model.
3. To discuss strategies for using wearable robots for therapy and personal mobility for individuals with disability.

**Disclosures & Important Information**

- This educational activity is being presented without the provision of commercial support and without bias or conflict of interest from the planners and presenters.
- Registrants will be notified within 24 hours prior to the symposium if there is a cancellation.
- Successful completion of this educational activity requires full attendance (no partial credit will be given), as well as the completion of an evaluation form. Nurses seeking contact hours must also provide their license number at the time of registration.
- The Northwestern Advisory Council for Clinical Research has been approved by the California Board of Registered Nursing, Provider number CEP15198, for 3 contact hours.
- Please contact ACCR at [accr@northwestern.edu](mailto:accr@northwestern.edu) for more information.