



# The 2<sup>nd</sup> RENEW Workshop (Online)

**RENEW** Rehabilitation Engineering for  
NEurological disorders Worldwide

***KAIST Global Singularity Project***

**October 20th, 2020  
8:00 - 16:00  
(Korean Standard Time)**

Zoom link for the Online Virtual Conference will be  
provided upon registration through the following link.

<http://renew.kaist.ac.kr/the2ndrenewworkshop/>

Contact: [renewproject0@gmail.com](mailto:renewproject0@gmail.com)

## Time Table

08:00 - 08:10	Opening Remarks
Morning Session	
08:10 - 08:40	Wearable Technologies to Enhance Rehabilitation Outcomes <i>Arun Jayaraman, Director of Max-Naider Center for Bionic Medicine, Shirely-Ryan Ability Lab</i>
08:40 - 09:10	Rethinking the role of Robotics in Neurorehabilitation <i>Jose L. Pons, Scientific Chair of Legs + Walking Lab, Shirely-Ryan Ability Lab</i>
09:10 - 09:40	Using electromyography to train muscle activation patterns through serious games after stroke <i>Derek Kamper, Associate Professor, Joint Department of Biomedical Eng., North Carolina State University</i>
09:40 - 10:10	Somatosensory feedback during the control of assistive devices <i>Xiang Hu, Assistant Professor, Joint Department of Biomedical Eng., North Carolina State University</i>
10:10 - 10:40	Facilitating real-world exoskeleton research with wireless communication and data logging <i>Thomas Bulea, Staff Scientist, Functional Applied Biomechanics section, National Institutes of Health</i>

10:40 - 11:10	<p>Myoelectric Activation Patterns: for Assessing Motor Impairment and Guiding New Rehabilitation after Stroke</p> <p>Jinsook Roh, Assistant Professor, Department of Biomedical Eng., University of Houston</p>
11:10 - 11:40	<p>Impact of somatosensory deficits on voluntary motor control in stroke survivors</p> <p>Keonyoung Oh, Postdoctoral fellow, Arms &amp; Hands Lab, Shirley-Ryan Ability Lab</p>
11:40 - 13:30 Lunch	
Afternoon Session	
13:30 - 14:00	<p>Cognitive Neurorobotics Study and Its Possible Applications to Rehabilitation</p> <p>Jun Tani, Professor, Cognitive Neurorobotics Research Unit, OIST</p>
14:00 - 14:30	<p>Brain-machine interface for rehabilitation: preliminary but promising results</p> <p>Jaeseung Jeong, Professor, Department of Brain and Bio-engineering, KAIST</p>
14:30 - 15:00	<p>In vitro assessment of exogenous electrical stimulation as rehabilitation strategy</p> <p>Jennifer H. Shin, Professor, Department of Mechanical Engineering, KAIST</p>
15:00 - 15:30	<p>Work-in-progress in motion intention using sEMG</p> <p>Jung Kim, Professor, Department of Mechanical Engineering, KAIST</p>
15:30 - 16:00	<p>Precise hand movement assistance from HD EMG intention recognition</p> <p>Hyung-Soon Park, Professor, Department of Mechanical Engineering, KAIST</p>

## Global Collaborators



## Global Participants

- William Zev Rymer, Director of Research Planning, Shirley Ryan Ability Lab
- Diane Damiano, Chief, Functional Applied Biomechanics section, Clinical Center, National Institutes of Health

## Organizers

- Organizing Chair: Prof. Hyung-Soon Park, KAIST
- Session Chairs:
  - Prof. Byung-Mo Oh, SNUH
  - Prof. Sun G. Chung, SNUH
  - Prof. Nam-Jong Paik, SNUH
  - Dr. Won-Kyung Song, NRC