Tuesday, May 13th

Halls: Main Hall/ICORR Hall I / Sheraton Ballroom IV-V | ICORR Hall II - Mississippi | IFESS Hall - Chicago Ballroom X | ACRM Hall - Chicago Ballroom VII | ISVR Hall - Chicago Ballroom VIII | IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX | RESNA Hall - Arkansas | RESNA Hall - Colorado | RESNA Hall - Missouri

08:30 - 09:00
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V: Welcome Address

09:00 - 09:45
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V: Poster Fast Forward I

09:45 - 10:30
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Keynote Lecture 1 - *Sponsored by Robotimize*
Chairs: *Zen Koh, Jim Patton*
Maximizing Therapy Dose: Unlocking the Full Potential of Rehabilitation Robotics Along the Continuum of Care, ***Roger Gassert***

10:30 - 11:15
COFFEE BREAK / POSTER VIEWING / EXHIBITION

11:15 - 12:45

Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Women in Engineering Session
Chairs: *Helen Huang, Katherine Poggensee*
- Ground Perturbation Detection via Lower-Limb Kinematic States During Locomotion, ***Maria Tagliaferri***
- Development and Evaluation of a Device to Assess Finger Individuation in Neurorehabilitation, ***Anna Sophie Knill***
- Robot-based assessment of dual task activities: investigating the impact of balance tasks on cognitive performance in older adults, ***Elisa Misley***
- Neural Network Sparsity in Brain-Body-Machine Interfaces, ***Laura C Petrich***
- Enhancing Hand Dexterity Assessment Through Protocol Revision and Pilot Evaluation of the Virtual Eggs Test, ***Lucia Angelini***
- Comparative Analysis of Force Myography and Electromyography Signals in Isokinetic Ankle and Knee Joint Motion, ***Charlotte Marquardt***

ICORR Hall II - Mississippi:
TMRB Session 1
Chairs: *Shubham Singh, Claudio Castellini*
- FEEBY: A Flexible Framework for Fast Prototyping and Assessment of Vibrotactile Feedback for Hand Prostheses, ***Jose Gonzalez-Vargas***
- Soft transfemoral prosthetic socket with EMG sensing and augmenting feedback: a case study, ***Mariangela Filosa***
- Examination of Biofeedback to Support the Use of EMG-Based Upper-Extremity Exoskeletons, ***Xiangyu Peng***
- Transradial Amputee Reaching: Compensatory Motion Quantification Versus Unaffected Individuals Including Bracing, ***Yuri Gloumakov***

IFESS Hall - Chicago Ballroom X:
IFESS Session 1
Targeted stimulation approaches for rehabilitation
Chair: *Monica Perez, Kei Masani, Elliot Roth*
- Targeted Hebbian Stimulation for Functional Recovery after Spinal Cord Injury, ***Keynote: Monica Perez***
- Comparisons of the effectiveness of transcutaneous spinal cord stimulation waveforms: high frequency burst modulated vs conventional pulses, ***Jane Butler***
- Neurobehavioral Training to Induce Targeted Neuroplasticity for Enhancing Neurorehabilitation: Operant Conditioning of Stimulus triggered EMG Responses, ***Aiko Thompson***
- Activation of spinal networks to improve mobility after spinal cord injury, ***Vivian Mushahwar***

ACRM Hall - Chicago Ballroom VII:
ACRM Session 1
Bridging Research, Ethics, and Technology in Rehabilitation: Data-Driven Insights for Clinical Innovation
Moderator: Pamela Roberts
- Iterative Clinician Driven Framework for Research: Learning Health System with Scientists, Clinicians, Quality, and IT in Rehabilitation, ***Raeda Anderson***
- Discovering Opportunities for Using Health Information System Data to Inform Rehabilitation Research and Practice, ***Alison Cogan, Pamela Roberts***
- Ethical Aspects of Incorporating Technological Interventions in Neurorehabilitation, ***Sabahat Wasti***
- Advancing Predictive Tools for Rehabilitation Technology Adoption: Insights from the DART-RT Survey, ***Courtney Celian***

ISVR Hall - Chicago Ballroom VIII:
ISVR Session 1
VR for gait and balance: assessment and treatment
- Cueing-assisted gamified augmented-reality gait-and-balance rehabilitation at home for people with Parkin-son's disease: a pragmatic randomized controlled trial implemented in the clinical pathway, ***Melvyn Roerdink***
- Assessing Post-Stroke Fall Risk Through Interaction with Virtual Reality-Based Exercises: A Retrospective Machine Learning Study, ***Roberto Llorens***
- Feasibility of augmented reality HOLOBALANCE programme for balance training for stroke survivors., ***Kawthar Ajaj***
- Early Detection of Postural Instability in Individuals with Diabetic Peripheral Neuropathy Using a Novel Smartphone Application, ***Shirin Hussain***
- Dynamic virtual environments for gaze evaluation in vestibular rehabilitation of Persistent-Postural Perceptual Dizziness (3PD), ***Joyce Fung***
- Adaptations Over Time to Decrease the Risk of Falling in Virtual Threatening Environments, ***Nooshin Seddighix***
- Identifying fall-risk factors related to aging using a novel virtual-reality sensory integration in balance assessment, ***Geoffrey Wright***

IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX:
IISART-MiNT-MotusAcademy Combined Session
Neurotechnology for Stroke Recovery
Chairs: *Robert Riener, Fabian Just*
- Rewiring Recovery: Sensorimotor Interventions for Brain Injury and Beyond – Robotics, VR, & Human Connection – ***Rui Loureiro***
- Haptic Devices for Motor Learning, ***Laura Marchal-Crespo***
- Advancing Neurotechnology for Upper Limb Recovery: Bridging the Gap Between Research and Practice, ***Roger Gassert***
- Advancing Neurorehabilitation: The Role of Sensorimotor Control Systems in Restoring Function, ***Shingo Shimoda***
- Robotics in Clinical Practice: A Clinician's Perspective, ***Barry Richards***

RESNA Hall - Arkansas:
11:15 - 12:15
Care Robots Perspectives from Three Continents – Then and Now
Lim Myung Joon
12:30 - 13:00
Analyzing Disability Focus Trends in Emerging Assistive Technologies: Insights from NIDILRR-Funded Grants
Fuzexia Guo

RESNA Hall - Colorado:
11:15 - 12:15
Delivering Smart and Adaptive Tech Solutions to Empower Everyday Living for Individuals with Disabilities, ***Dan Ding***
12:30 - 13:00
Leveraging GenAI to enhance a Community-Based Telerehabilitation System, ***Qinyin Qiu***

RESNA Hall - Missouri:
11:15 - 12:15
Student Scientific Paper Platform
- Measuring Early Intervention Provider's Use of a Novel Switch-Accessible Play Kit, ***Mia Hoffman***
- Kicking it off: Do toddlers with disabilities activate leg muscles when driving with a joystick?, ***Madeleine McCreary***
- Classroom Accessibility Mobile Application: A Preliminary Investigation of Interrater Reliability for Accessibility of Classrooms on a Midwest Undergraduate Institution Campus, ***Sayeda Farzana Aktar***
- Assessing women Veterans' satisfaction with their current mobility assistive technology, ***Jessica Stanley***

12:30-13:00
Home Observation Pediatric Evaluation (HOPE): A Novel Assessment Tool using Home Videos for Remote Assessment of Children with Disabilities, ***Naomi Gefen***

13:00 - 14:00
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V: Women in Engineering Lunch

12:45 - 14:15
LUNCH / POSTER VIEWING / EXHIBITION

14:15 - 15:00
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Keynote Lecture 2 - *Sponsored by Novakonexus powered by KITE*
Chairs: *Laura Marriott, Pamela Roberts*
Precision Neurocognitive Rehabilitation: How Close Are We with Evidence-Based Neuroscience Technologies? ***Fofi Constantinidou***

15:00 - 15:45
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V: Poster Fast Forward II

15:45 - 16:30
COFFEE BREAK / POSTER VIEWING / EXHIBITION

16:30 - 18:00

Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Best Paper Finalists
Chairs: *Ana Luisa Trejos, Olivier Lambercy*
- A Deep Learning Framework with Domain Generalization and Few-Shot Learning for Locomotion Mode Classification Across Users, Sessions, and Prostheses, ***Ann Simon***
- Adaptive Motor Unit Decomposition During Walking: Towards Systematic Validation, ***Antonio Gogeascoechea***
- Machine Learning-Based Estimation of Upper Extremity Function in Stroke Rehabilitation Using Body-Worn Inertial Sensors, ***Shusuke Okita***
- Evaluation of a passive lumbar occupational exoskeleton with healthcare professionals: a field study, ***Sara Carmosino***
- A Body-Powered Wrist-Driven Supernumerary Robotic Finger, ***Alyssa Nicole Maguiña Diaz***
- User field testing for robot wheelchairs: A mixed-method approach, ***Jorge Candiotti***

ICORR Hall II - Mississippi:
JNER Session 1
Chairs: Rui Loureiro, Gerdienke Prange-Lasonder
- Unsupervised robot-assisted rehabilitation after stroke: feasibility, effect on therapy dose, and user experience, ***Giada Devittori***
- Towards AI-based Precision Rehabilitation via Contextual Model-based Reinforcement Learning, ***Dongze Ye***
- AGREE - an upper limb motorized exoskeleton for Restoring Arm Functions: a single-blinded randomized controlled trial, ***Marta Gandolla***
- Variants of active assist robotic therapy: Virtual assistance, proprioceptive training, and their effects on motivation after stroke, ***Andria J. Farrens***

IFESS Hall - Chicago Ballroom X:
IFESS Session 2
Neural Mechanisms of Neuromodulation
Chair: *Vivian Mushahwar, Erika Spaich*
- Neurorehabilitation in the 21st Century: Triple-Strategy Protocols, ***Keynote: Jonathan Wolpaw***
- Mapping the relationship between electrical stimulation of the surface of the spinal cord and activation of hindlimb muscles in the cat, ***CJ Heckman***
- Brain-Controlled Neuromodulation for Upper Limb Recovery After Spinal Cord Injury, ***Matija Milosevic***
- Orthotic and Acute Effects of Functional Electrical Stimulation Therapy on Standing Balance in Individuals with Spinal Cord Injury, ***Kei Masani***
- Impact of burst nerve stimulation on spinal excitability in the upper limb, ***Hamidollah Hassanlouei***

ACRM Hall - Chicago Ballroom VII:
ACRM Session 2
Technology in Rehabilitation Practice: Clinical Reasoning and Decision Making
Moderator: Deborah Backus
- Clinical Reasoning Around Use of Technology in Rehabilitation: From Theory to Practice, ***Andrew Packel, Helen Hobbs, Rosalie Wang, Dennis Veit***
- Artificial Intelligence (AI) Test Lab: A Rehabilitation Hospital Pilot, **Sally Taylor, Rebecca Bagdy**
- Overcoming Health Disparities by Integrating AI and Technology in Stroke Rehabilitation Throughout the Care Continuum, ***Qinyin Qui***

ISVR Hall - Chicago Ballroom VIII:
ISVR Session 2
User experience and game design in VR
- Evaluating user experience of augmented reality-integrated instrumented crutches for gait rehabilitation, ***Marco Ghidelli***
- Driving Powered VR Shoes: The Effects of Optical Flow Direction on User Experience during Walking in Virtual Reality, ***Katherine Poggensee***
- Analysis of User Experience and Biomechanics in Stereoscopic and Monoscopic Projection Exergames, ***Anselmo Frizera Neto***
- Interactive and Adaptive Mixed-Reality System for Enhancing Trunk Control Rehabilitation, ***Christoph Bauer***
- Codesign and validation of a serious game application to train users of powered mobility devices on traffic rules, ***Philippe Archambault***
- Gaitzilla: Investigating the Effects of Avatar Type and Proportions on Time Perception in VR, ***David Labbé***

IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX:
IISART-MiNT-MotusAcademy Combined Session 2
Translating Patient Needs into Design
- Why rehabilitation engineers need to listen to patients and their families, ***James Sulzer***
- Human-Centered Design in Rehabilitation: From Patient Feedback to Innovative Solutions, ***Zen Koh***
- Co-Design to Optimise Recovery, ***Laura Marriott, Marko Gluhak***

RESNA Hall - Arkansas:
16:30 - 17:30
Unpacking the concepts of AI and its role in AT with Key Stakeholders, ***Sivashankar Sivakanthan***
17:45 - 18:15
Using gamified virtual training to improve electromyographic control of wheelchairs
Maanya Pradeep

RESNA Hall - Colorado:
16:30 - 17:30
Switch It Up: From Adapted Toys to Therapeutic Gaming, ***Mia Hoffman***
17:45 - 18:15
Technology Needs for Users Aging with Disability: Subject Matter Expert Insights on Understudied Group, ***Elena Remillard***

RESNA Hall - Missouri:
16:30 - 17:30
Where We're At and Where We Need to Go: Supporting Access to Mental Health Services for AAC Users, ***Adrianna Noyes***
17:45 - 18:15
Applications of Virtual Reality in Assistive Technology, ***Pavan Senthil***

Wednesday, May 14

Halls: Main Hall/ICORR Hall I / Sheraton Ballroom IV-V | ICORR Hall II - Mississippi | IFESS Hall - Chicago Ballroom X | ACRM Hall - Chicago Ballroom VII | ISVR Hall - Chicago Ballroom VIII | IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX | RESNA Hall - Arkansas | RESNA Hall - Colorado | RESNA Hall - Missouri

08:30 - 09:15
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Keynote Lecture 3 - *Sponsored by Roboct Group*
Chairs: Robert Riener, Rita Stanley
Engineering for Equity: Transformative Innovations in Assistive and Rehab Technology, ***Sujatha Srinivasan***

09:15 - 09:30
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
RehabWeek Honorary Talk felicitated by ICORR
Zev Rymer

09:30 - 10:30
Poster Viewing & Judging Session & RESNA's Developers' Showcase

10:30 - 11:15
COFFEE BREAK / POSTER VIEWING / EXHIBITION / RESNA's DEVELOPERS' SHOWCASE

ACRM Hall - Chicago Ballroom VII:
Industry Sponsored Session
Restoring Human Autonomy Using Brain-Computer Interfaces
Jordan Amadio, Dustin Herrmann
NEURALINK

11:15 - 12:45

Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
IFESS-ICORR Joint Session: Hybrid Stimulation
Chair: *Ashraf Gorgey, Mohamed Bouri*
- Spinal Stimulation After SCI: Circuit Dynamics and Functional Gains, ***Dimitry Sayenko***
- Neuromodulation and Robotics for Upper Limb Rehabilitation and Movement Assistance, ***Marcia O'Malley***
- Development of a Multi-Functional Hybrid Arm-Leg FES Tricycle with Biofeedback, ***Efe Anil Aksöz***
- An Intention-Driven Hybrid Electrical Stimulation Glove for Post-Stroke Hand Rehabilitation, ***Seungmin Ye***
- Validating predictive simulation-derived electrical stimulation cycling in a person with spinal cord injury, ***Alexandre Peres***
- Automated Selectivity-Driven Algorithm for transcutaneous Spinal Cord Stimulation, ***Mouhamed Zorkot***

ICORR Hall II - Mississippi:
Assistive Technologies, Biomechanics and Control
Chairs: Matthew Major, Denny Oetomo
- Effort generation capabilites mapping for personalized robotic assistance of the elbow, ***Maël Gallois***
- A Geometric Approach for the Comparison of Kinematic Synergy Postures, ***Federico Tessari***
- Guided training with visual feedback can improve control of direct electromyography prosthetic ankles and sit-to-stand performance: A case study, ***Joshua Tacca***
- Differentiable Biomechanics Unlocks Opportunities for Markerless Motion Capture, ***R. James Cotton***
- Gait Adaptations Under Functional Asymmetry: Exploring the Role of Step Width, Step Length, and CoM in Lateral Stability, ***Tomislav Bacek***
- Design of a Low-cost VR-Based Robotic Pedal System with Dynamic Resistance and Muscle Activity Feedback, ***Claudia Simon Rueda***

IFESS Hall - Chicago Ballroom X:
Open engineering problems in spinal cord injury research: perspectives from people with lived experience, clinicians, and researchers
Moderator: *José Zariffa*
- Integrating Novel Technologies with Clinical Assessments in SC, ***Monica Perez,***
- Considering the possible and probable impact of brain-computer interface devices for the SCI community, ***Douglas Weber,***
- From Status Quo to Breakthroughs: Addressing morbidity in SCI, ***Argyrios Stampas, Scott Imbrie***

ACRM Hall - Chicago Ballroom VII:
Leadership and Innovation (Part 1): Pitch Perfect Framework for Rehabilitation Communications
Moderator: Fofi Constantinidou
Perfect Pitch Framework for Rehabilitation Communications, ***Linda Plano***

ISVR Hall - Chicago Ballroom VIII:
Personnalization of VR
- Immersive vs. Non-Immersive Virtual Reality? Comparative Effectiveness in Upper limb Stroke Rehabilitation, ***Bruno Bonnechère***
- Enhancing Exercise Intensity, Motivation, and Enjoyment for Persons with Parkinson Disease in a Virtual Cycling Environment (VCYCLE Competition), ***Judith Deutsch***
- An Adaptive Difficulty Algorithm to Personalize Mixed Reality Pediatric Motor Rehabilitation, ***Tristan McCarty***
- Designing Augmented Reality (AR) Exergames for People with Osteoporosis: Results from a Clinical Trial on Motion Sickness, Discomfort and Engagement, ***Eléa Thuilier***

IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX:
Functional Electrical Stimulation in Neurorehabilitation
Chairs: *Erika Spaich, José López Sánchez*
- Electrical Stimulation for incomplete spinal cord injury Recovery, ***Ines Bersch***
- Integrating Robotics and FES for Motor Learning, ***Erika Spaich***
- Emerging Applications of FES in Neurorehabilitation, ***Colleen Connaughton, Fesia and Restorative Therapies***
- Use of Functional Electrical Stimulation Therapy to Treat Major Depressive Disorder, ***Milos Popovic***

RESNA Hall - Arkansas:
11:15 - 12:15
UPSCALING AND UPSKILLING REHABILITATION AND ASSISTIVE TECHNOLOGY SERVICES IN KENYA: A MODEL FOR LESS RESOURCED COUNTRIES, ***Wallace Karuguti***
12:30 - 13:00
Smart and Robotic Innovative Technology To Support People Aging with Disability, ***Laura Rice***

RESNA Hall - Colorado:
11:15 - 12:15
A Bridge to AAC , ***Tara Chay***
12:30 - 13:00
Transforming Transfers: Advancing Safety and Efficiency in Wheelchair Transfers, ***Shantanu Satpute***

RESNA Hall - Missouri:
11:15 - 12:15
Get in the Game: Hands-On Experience with Adaptive Video Gaming, ***Drew Redepenning***
12:30 - 13:00
Get in the Game: Hands-On Experience with Adaptive Video Gaming, ***Drew Redepenning***

13:00 - 14:00
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V: ICORR General Assembly

12:45 - 14:15
LUNCH / POSTER VIEWING / EXHIBITION

14:15 - 15:00
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Keynote Lecture 4 - *Sponsored by Shirley Ryan AbilityLab*
Chairs: Richard L. Lieber, Fabian Just, Jose Lopez
Clinical application of rehabilitation technology and robotics, ***Alberto Esquenazi***

15:00 - 15:45
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Panel Discussion
Innovating Neurorehabilitation Education: Designing a Metaverse to bridge Academia, Clinical Practice and Industry
Moderator: *Zen KOH*
- *Engineering Perspective,* ***Rui Loureiro***
- *National Rehabilitation Education Platforms,* ***Chris Awai***
- *Bridging UAS and Clinical Education,* ***Martina Spiess***
- *Bringing Novel Technologies into Practice,* ***Megan O'Brien***
- *Developing a Clinical Educational Platform and a framework for clinical data collection to reflect functional outcomes,* ***Helen Hobbs***

15:45 - 16:30
COFFEE BREAK / POSTER VIEWING / EXHIBITION

16:30 - 18:00

Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Best Student Paper Finalists
Chairs: Ana Luisa Trejos, Vineet Vashista
- Optimizing Cross-Modal Matching for Multimodal Motor Rehabilitation, ***Anway Pimpalkar***
- Adaptive Negative Damping Control for User-Dependent Multi-Terrain Walking Assistance with a Hip Exoskeleton, ***Giulia Ramella***
- Differentiable Biomechanics for Markerless Motion Capture in Upper Limb Stroke Rehabilitation: A Comparison with Optical Motion Capture, ***Tim Unger***
- Characterizing expert exoskeleton-assisted gait: insights to accelerate exoskeleton mastery, ***Ava Lakmazaheri***
- A home-based suite of sensors for monitoring and improving upper extremity proprioception after stroke, ***Guillem Cornella-Barba***
- Biomechanical Effects of Varying Transcutaneous Spinal Cord Stimulation Amplitude during Walking in Individuals with Spinal Cord Injury: A Case Series, ***Annika Pfister***

ICORR Hall II - Mississippi:
TNSRE Session
Chairs: Simona Crea, Giuk Lee
- Assessing the Effect of Cervical Transcutaneous Spinal Stimulation with an Upper Limb Robotic Exoskeleton and Surface Electromyography, ***Erin Mahan***
- Kinematic Assessment of Upper Limb Movements using the ArmeoPower Robotic Exoskeleton, ***Anna Knill***
- Controlling Powered Prosthesis Kinematics over Continuous Inter-Leg Transitions Between Walking and Stair Ascent/Descent, ***Curt Laubscher***
- ProACT: An Augmented Reality Testbed for Intelligent Prosthetic Arms, ***Shivani Guptasarma***
- Implementation and Tuning of Momentum-Based Controller for Standing Balance in a Lower-limb Exoskeleton with Paraplegic User, ***Herman van der Kooij***
- Enhanced Functionality Using a Powered Upper Extremity Exoskeleton in Patients with Brachial Plexus Injuries, ***Sandesh Bhat***

IFESS Hall - Chicago Ballroom X:
IFESS Session 4
Emerging techniques and applications of neural stimulation: Cleveland FES Center "Center of Excellence"
Chair: *Matija Milosevic, Simona Ferrante*
- Cleveland Center for Functional Electrical Stimulation: past, present, and future, **Keynote: *Robert Kirsch***
- Reconnecting the Hand and Arm to the Brain (ReHAB): Bi-directional FES+BMI System for Sensorimotor Functional Restoration, ***Abidemi Bolu Ajiboye***
- The Cleveland Open Source Modular Implant Innovators Community (COSMIIC), ***Michael Fu***
- *Enhancing Neural Interfacing with the Peripheral Nervous* System: Stability, Selectivity and Information Content, ***Dominique Durand***
- Effects of high frequency sacral nerve stimulation on lower urinary tract func-tion in awake, healthy animals, ***Dennis Bourbeau***
- Epidural Photobiomodulation to Preserve Tissue and Function Following SCI, ***Michael Moffitt***

ACRM Hall - Chicago Ballroom VII:
Leadership and Innovation (Part 2): Multidisciplinary Approaches to Technology Development and Integration into Practice
Moderator: Pamela Roberts
- Integration of Technology into Practice from Clinical, Research, and Industry Perspectives, ***Pamela Roberts, Deborah Backus, Fofi Constantinidou, Lode Sabbe***
- A Framework for Co-Development of Rehabilitative Technology: Demonstrating a Multi-Disciplinary Approach, ***Amber Walter***

ISVR Hall - Chicago Ballroom VIII:
Telerehabilitation using VR
- The acceptance of a telerehabilitation portal among healthcare professionals after large-scale implementation in a regional clinic, ***Stephanie Jansen-Kosterink***
- Transference of Learning from Virtual to Real-World Settings: A Study on Spatial Memory using an Ecologically-Valid Virtual Environment, ***Roberto Llorens***
- Virtual Reality and Exergaming Tele-rehabilitation: A personalized approach in Post-Heart Surgery Patients, ***Daniele Bessone***
- Quantitative Telehealth Platform for VR Yoga Therapy of Pediatric Chronic Pain, ***Alexander Kupin***
- Development of a Virtual Reality Clinic to Enhance At-Home Care for Children with Rare Diseases, ***Sandeep Subramanian***

IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX:
IISART-MiNT-MotusAcademy Combined Session
Virtual Reality in Neurorehabilitation
- Designing VR-Based Cognitive and Motor Therapy, ***Jenna Tosto-Mancuso***
- Using Immersive VR for Stroke Recovery, ***Marika Demers***
- Combining VR and FES for Intensive Therapy, ***Ivan Isakov, Laura Marriott***

RESNA Hall - Arkansas:
16:30 - 17:30
Bridging the Gap: Practical Strategies for Assistive Technology in K-12 Classrooms, ***Olga Volkov***
17:45 - 18:15
Using the HAAT Model to Assess Workshop Accessibility, ***Ned Stoller***

RESNA Hall - Colorado:
16:30 - 17:30
Mapping Pathways to Assistive Tech Tech Transfer Success: Supporting Innovation from Concept to Real Sustainable Solution, ***Julie Faieta***
17:45 - 18:15
Research in Mastery of AT: What Have We Learned So Far?, ***Richard Satterfield***

RESNA Hall - Missouri:
16:30 - 17:30
Scientific Paper Platform
- Feasibility and effectiveness of pre-operative rehabilitation training and education on occupational performance in people with lower limb amputation – a scoping review, ***Hongwu Wang***
- Design and usability of the PURE ballbot wheelchair, ***Elizabeth Hsiao-Wecksler***
- Empowering UIC entry-level occupational therapy students to confidently integrate everyday and assistive technology into practice, ***Julia Bates***

17:45 - 18:15
How to make a simple robot, ***Jonathan Duvall***

Evening
RehabWeek Night

Thursday, May 15

Halls: Main Hall/ICORR Hall I / Sheraton Ballroom IV-V | ICORR Hall II - Mississippi | IFESS Hall - Chicago Ballroom X | ACRM Hall - Chicago Ballroom VII | ISVR Hall - Chicago Ballroom VIII | IISART-MiNT-MotusAcademy Hall - Chicago Ballroom IX | RESNA Hall - Arkansas | RESNA Hall - Colorado | RESNA Hall - Missouri | SoNMIR Hall - Erie

08:30 - 09:15
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Keynote Lecture 5 - *Sponsored by Fourier Rehab*
Chairs: *Ken Yoshida, Sandeep Subramanian*
Enhancing Locomotor Rehabilitation with Mixed Reality After Acquired Brain Injury: Successes, Challenges, and Future Directions, ***Anouk Lamontagne***

09:15 - 09:50
Main Hall/ICORR Hall I / Sheraton Ballroom IV-V:
Panel Discussion
From Inpatient to Outpatient – Managing the Transition Needs for Assistive Technology
Moderator: Susan Redepenning
Panelists: Stephanie Bay
Lindsey Morris
Drew Redepenning

09:50 - 10:25	**Panel Discussion** **Controversy in Rehabilitation Robotics: Thought-Provoking Discussion on Hard Issues** **Organizers:** ***Laura Marchal-Crespo, Michael Naish*** ***Panelists: Courtney Cellan*** ***Roger Gassert*** ***Denny Oetomo*** ***Laura Petrich*** ***David Reinkensmeyer***									
10:30 - 11:15	**COFFEE BREAK / POSTER VIEWING / EXHIBITION**									
11:15 - 12:45	**Exoskeletons and Wearable Devices** **Chairs: Aaron Young, Kimberly Ingraham** Does gait assistance modulate reflex excitability in those with spasticity? A preliminary study, ***Ricardo Sia*** Strategic User Identification Increases the Impact of Wearable Airbags in High-Fall Risk Populations with Neurological Disease, ***Sajjad Damehgar*** Actuator- and Control-less Ankle Exoskeleton for Push-off Assistance During Treadmill Walking: A Proof-of-Concept Study, ***Zlatko Marjecki*** Closed-Loop Control of Large Assistive Torques to Unknown External Loads Via a Back Support Exoskeleton, ***Massimo Sartori*** Tailoring ankle-foot orthoses stiffness to end-users needs: which performance variables matter? ***Sejin Yi Yoo*** Mechatronic Design of a 2-DoF Wearable Robot for Wrist Stiffness Assessment, ***Giorgia Giovannetti***	**TIMBI Session 2** **Chairs: Cristina Bayon, Leonardo Cappello** Preliminary Evaluation of a Soft Wearable Robot for Shoulder Movement Assistance, ***Marta Gandolla*** Functional resistance training during walking: do biomechanical and neural effects differ based on targeted joints? ***Z. Peter Washabaugh*** Advancements and Challenges in the Development of Robotic Lower Limb Prostheses: a Systematic Review, ***Simona Crea*** A Data-Driven Fuzzy Logic Method for Psychophysiological Assessment: An Application to Exoskeleton-Assisted Walking, ***Nevio Luigi Tagliamonte***	**Neuro technologies and commercialization** **Chairs:** ***Philip Troyk, Ken Yoshida*** Bioelectronics – Some Recent Research and Commercialization Activities, **Keynote:** ***John Rogers*** Effects of multi-site cortical stimulation, ***Nicho Hatsopoulos*** Long Pulse Width Electrical Stimulation (LPWS) Exercise and Denervation after Spinal Cord Injury-Part 2, ***Ashraf Gorgey, Ines Barsch-Porada*** Development, Acute Placement and Muscle Recruitment of a Novel Interfascicular Electrode for Peripheral Nerve Stimulation, ***Margaux Randolph, Vlad Maroz*** The Intracortical Visual Prosthesis Project (ICVP): Clinical Trial Status and Results, ***Philip Troyk***	**Innovative Remote Care: Technology-Driven Rehabilitation Solutions** ***Moderator: Rachel Weigert*** Supporting Rural Community Dwelling Older Adults with a Smart Home Sensor System, ***Rachel Weigert*** Remote Physical Examination Using Extended Reality, ***Omeed Ashtiani*** Evidence-based Implementation of Remote Therapeutic Monitoring, ***Lynne Gauthier***	**VR for sensorimotor rehabilitation** Temporal accuracy in movement reproduction: the role of proprioceptive augmented virtual reality, ***Marco Rove*** Holoreach – Therapists and patients perceptions of a mixed reality system designed to improve trunk control and upper extremity function, ***Christoph Bauer*** Do we perform upper-limb rehabilitation reaching tasks differently in augmented vs. virtual reality? ***Shachar Maidenbaum*** Dosage of an adjunctive rehabilitation intervention using an instrumented exerciser coupled with a 2D virtual environment, ***Houyar Djahanbakhsh Asli*** Modifying Task Difficulty with Augmented Sensory Feedback for Motor Training in Virtual Reality, ***Yu Shi*** Augmented Reality Platform for Hand and Upper Limb Rehabilitation, ***Alexander Kugler*** Post-stroke upper limb rehabilitation using virtual reality: Use of factors related to motor learning, ***Sandeep Subramanian***	**Educational Platforms for Neurorehabilitation Professionals** ***Chair: Rony Richard*** The MOOC project (Massive open online course) in Rehab Technology, ***Natalie Takasumi*** Bridging Basic Neuroscience and Clinical Practice: Translating Tactile Integration Research into Rehabilitation Protocols, ***Yu-Cheng Pei*** Invaluable Experience: Learning Lessons in Education Delivery, ***Laura Marriott***	**11:15 - 12:15** Look! No Hands: A Hands On Guide to the Latest in Handsfree Accessibility Option, ***James Gardner*** **12:30 - 13:00** Federal Policy Update, ***Julie Piriano***	**11:15 - 12:15** Revolutionizing Rehabilitation: Tracking Patient Progress Across VR Programs with motiTmetr, ***Seong-Hee Westlake*** **12:30 - 13:00** Implementation of fire Readiness Education Program among Wheelchair and Scooter Users, ***Zhwei Weiwei Li***	**11:15 - 12:15** **Scientific Paper Platform** Opportunities and Challenges in Telehealth Implementation in Sub-Saharan Africa: A Secondary Data Analysis on Digital Infrastructures, ***Thierry Lienou*** USE OF PARTICIPATORY ACTION RESEARCH FOR TECHNOLOGY TRANSFER AND KNOWLEDGE TRANSLATION OF MOBILE APPS FOR PUBLIC BUILDING ACCESSIBILITY, ***Rochelle Mendonca*** A rehabilitative engineering application using a shock absorbing crutch tip, ***Anthony Spotorico*** Biomechanical Evaluation of Caregiver Safety During Assisted Transfers Pre and Post Education, ***Rutuja Kalkarni*** **12:30 - 13:00** AT Worldwide: GAATO Update, ***Andrea Van Hook***	**SciNMR Session I** **Chairs: Jules Dewald, Robert Sainburg** Opening Remarks, ***Julie Dewald, Robert Sainburg*** Clinical Translation of Machine Learning-Based Prosthetic Limb Controllers, ***Levi Hargrove*** Supercomputer-Based Techniques to Reverse Engineer the Firing Patterns of Motor Units in Normal and Pathological Conditions, ***C.J. Heckman*** Brainstem-Originating Neuromodulatory Inputs to Spinal Motoneurons May Facilitate Motor Impairments in Chronic Stroke, ***J. Drew Beauchamp*** Stretch Reflex Hyperexcitability Persists During Volitional Reaching in Chronic Hemiparetic Stroke, ***Thomas Floisier***
12:45 - 14:15	**LUNCH / POSTER VIEWING / EXHIBITION**									
14:15 - 15:00	**Keynote Lecture II** - Sponsored by Human in Motion Robotics ***Chairs: Levi Hargrove, James Patton*** Auctions, preferences, and wearable robotics: the development of meaningful exoskeletons and robotic prostheses, ***Elliott Rouse***									
15:00 - 16:30	**Clinical Implementation and Prosthetics / Control** **Chairs: Heather Williams, Robert Gregg** Adapting Biomimetic Kinematics for Controlling a Powered Knee, Passive-Ankle Prosthesis Across Inclines, ***Carl Andrew Swisher*** A Novel Robotic Technique for Evaluating Thumb Proprioception Predicts Hand Function after Stroke, ***Luis Garcia-Fernandez*** Comparative Analysis of Temporal-Difference Learning Methods to Learn General Value Functions of Lower-Limb Signals, ***Sonny Jones*** MyoAssist 0.1: MyoSuite for Dexterity and Agility in Bionic Humans, ***Calder Robbins*** Unsupervised robot-assisted therapy at home after stroke: a pilot feasibility study, ***Giada Devittori*** Green Means Go(Bot): Using an Assistive Robot to Encourage Independent Walking Practice by a Child with Motor Disabilities, ***Ameer Helmi***	**IEEE Session 2** **Chairs: Ming Wu, Jose Pons** Wearable biofeedback device to assess gait features and improve gait pattern in people with Parkinson's disease: a case series, ***Simona Crea*** Experimental evaluation of the impact of sEMG interfaces in enhancing embodiment of virtual myoelectric prostheses, ***Cristina Piazza*** Overground robotic exoskeleton vs conventional therapy in inpatient stroke rehabilitation: results from a pragmatic, multicentre implementation programme, ***Jia-Min Yeo*** From Healthy to Stroke-affected Brain: Evaluating EEG Responses and Generalization Potential in Exoskeleton guided BCI-Rehabilitation, ***Hai Li***	**Controversies & New Frontiers** **in Electrical Stimulation** ***Chairs: Ashley Dalrymple, Milos Popovic*** Brain-controlled Functional Electrical Stimulation for Hand Use in Spinal Cord Injury: Opportunities & Challenges, ***Keynote: Lee Miller*** Controversies and New Frontiers Panel ***Discussants: Ashley Dalrymple*** ***Vivian Mushahwar*** ***Ken Yoshida*** ***Douglas Weber*** ***Jonathan Schofield***	**FES, Assistive Robots and Neuromodulation** ***Moderator: John Morris*** Handsfree Intuitive Interface to an Assistive Robot for Supporting Individuals with Motor Impairments, ***Harshal Mahajan*** Role of FES Technology in Activity Based Therapy and Neuromodulation: Back to Basics, ***Laurie Mcgarrigle*** Optimizing Post-Stroke Functional Movement Through Neuromodulation: Evidence and Translational Challenges, ***Sangeetha Madhavan***	**VR for cognitive and psychological rehabilitation** Optimising Memory through Virtual Reality: A Pilot Study Focused on Associative and Relational Memory, ***Prince Ampofo*** Virtual Reality in Mental Health Support for Students – A Solution or an Overhyped Promise? ***Sebastian Rutkowski*** Cognitive Flexibility Training and Exposure Therapy in Virtual Environment for Patients with Obsessive Compulsive Disorder, ***Karolina Zuzelskaa*** Effects on attention and inhibitory control of an incremental gait training on a treadmill plus augmented virtual reality in patients with Parkinson's disease: preliminary results from the VIRTTREAD-PD randomized controlled trial, ***Francesca Cecchi, Cristina Polito***	**WFNR Session** Robotic Rehabilitation for Post-Stroke Recovery: Current Trends and Future Challenges, ***Nam Jong Paik*** Transcranial direct current stimulation for post-stroke motor recovery – Hype or Hope, ***Wayne Feng*** Digital emulation of a rehab hospital: An educational tool, ***Shaji Ahmed***	Collin McLaurin Distinguished Lecture Mobility Equity: Uncovering Systemic Inequities Towards Persons with Mobility Disabilities, ***Joan L. Minkel*** **(Location: RESNA Hall – Mayfair)**	**SciNMR Session II** **Chairs: Jules Dewald, Robert Sainburg** Task-Dependent Brainstem Activity Revealed by fMRI During Robotic Perturbations, ***Rebecca Nikonowicz*** The Complementary Dominance Hypothesis: A Model for Remediating the "Dosed" Trend in Stroke Survivors, ***Nick Kitchen*** Clinically Accessible, AI-Powered Movement Analysis and Precision Rehabilitation, ***R. James Cotton*** Understanding Movement Neuro-Mechanical Interplay for Neurorehabilitation Technologies, ***Massimo Sartori***
16:30 - 17:00	**Closing**									