CALL FOR PAPERS

Special Collection on Design and Development in Rehabilitation Robotics for Home and Community-based Settings

Journal of
Rehabilitation and Assistive Technologies Engineering

RATE

Editor-in-Chief:
Garth Johnson
Newcastle University, UK

Guest Editors:
Professor Michelle Johnson
Rehabilitation Robotics Lab,
University of Pennsylvania, USA

Shehroz Khan
Toronto Rehabilitation Institute,
UHN, Canada

Manuscript deadline
is **January 31, 2020**

Disability and aging trends indicate that around 30 percent of older persons will develop some type of disability in the areas of mobility and independence. However, the current health infrastructure in many countries is not prepared for these increasing numbers. Advances in rehabilitation robotics promise to help augment care and assist rehabilitation practitioners to care for this growing population but gaining access to these therapy and assistive robots is often difficult. The relatively high cost of these technologies may limit healthcare to urban and large hospitals and rehabilitation centers, making them less likely to be used in nursing homes, remote, rural, community-based healthcare facilities, or public rehabilitation clinics. There is, therefore, a technical challenge to develop highly usable and economically viable assistive robotics.

Increases in innovation of consumer technologies have opened up a wide range of possibilities and options for assistive and robotic technologies for people with motor impairment(s) who may have additional and complex needs. When designing for such a niche user group, it is therefore imperative to adequately understand user needs, to appreciate the implications of their specific capabilities, and to design appropriately to meet those needs.

This Special Collection invites work from projects which leverage design and innovation in the development of assistive and robotic technologies. Areas of interest include, but are not limited to the following:

New assistive and robotic devices/techniques
- New and emerging technologies for motor impairments and complex needs
- Virtual/augmented reality to enhance the sensory experience
- Wearables, apps, connected and smart technologies
- Physical and socially assistive robots
- Review of the state of the art and recommendations for future technologies

New design and development approaches
- Understanding user needs (clinical, assistive, leisure, education, communication)
- Methods of eliciting requirements and understanding additional and complex needs.
- Methods of improving the development cycle for these devices.
- Methods of design and development for home and community-based setting
- User centered design (particularly engaging users with multiple impairments and additional and complex needs)
- Usability/feasibility/proof of concept studies
- Guidelines and/or recommendations for working with users with (multiple) impairments

Methods of assessment of assistive and robot technologies
- Clinical studies of efficacy
- End-user evaluations (particularly engaging users with multiple impairments and additional and complex needs)

Manuscripts submitted to this Special Collection will be peer-reviewed before publication.

Submit your manuscript today at:
mc.manuscriptcentral.com/jrate

journals.sagepub.com/home/jrt

SAGE openaccess