Scientific/Educational Workshop

Workshop title
2020-2030: How will rehabilitation and technologies change for patients, clinicians and society?

Workshop responsible
Ann-Marie Hughes (IISART / University of Southampton)

Speakers
1) Assoc Prof. Ann-Marie Hughes (PT academic, University of Southampton, Southampton, UK),
2) Assoc Prof Seng Kwee Wee (PT clinician, Centre for Advanced Rehabilitation Therapeutics, Tan Tock Seng Hospital, Singapore; and PT academic, Singapore Institute of Technology)
3) Dr. Ursula Costa (PT, MSc Neurorehabilitation, PhD, Hocoma AG, Switzerland)
4) Prof. Nam Jong Paik (MD, PhD, Seoul National University College of Medicine, Seoul National University Bundang Hospital)

Workshop goals
Participants will:
- Have a guided lively interactive discussion on some of the key disruptive social, clinical and engineering changes which will impact on rehabilitation in the next decade
- Debate how differing approaches to assessment using technology will influence rehabilitation
- Discuss how device feedback to clinicians and patients across cultures could be more effective
- Have an opportunity talk with industry partners and try their latest technologies at each of the booths
- Take home tips applicable to your own setting.

Abstract
The next decade will see a dramatic shift in rehabilitation requiring new engineering technology approaches to social and clinical challenges as well as new types of professional training. Each of these technologies presents opportunities for assessment and feedback. The workshop will be divided into the following four sections with a hands-on industry booth visit. Key disruptive social, clinical and engineering changes: What will the social and clinical changes be? What are the factors driving healthcare technology? What are the new technology approaches? In what ways will training change? How will disciplines change? How will organisations change? Asssessment / Diagnostics: National and clinical practice guidelines on neurorehabilitation have frequently missed assessment or make marginal reference to it. What are the key factors around assessment currently? How will this change in the next decade? Is technology-aided assessment useful? Will clinicians become more receptive toward technology-aided assessment? What will be important to measure? How will it affect rehabilitation? Data management: Clinicians will soon use a variety of technologies to treat patients in their every day practice. Each of these devices will be able to produce data for the patient, clinician and clinic. How can this be data be designed to be meaningful ? What types and nature of data do we use now, and how will this change? What factors affect this? How will usage of this data be different? What are needed for future rehabilitation robot developments: This will be from a clinician's perspective about the changes which will need to be implemented to ensure that the technology meets clinical needs. To follow up on these discussions, you will then have an opportunity talk with industry partners and try their latest technologies at each of the booths and ask the representatives how they perceive technology changing in the future. In a final summary take home tips will be discussed. The focus will be on how today's discussion might influence your current work? There is a recognised need to successfully implement novel medical engineering technologies into clinics to overcome healthcare

challenges. This workshop should enable you reflect on how you might need to start changing your engineering or clinical practice now to prepare for 2020-2030.