

## Irish Posture & Mobility Network (IPMN)



**Engineers Ireland Biomedical Engineering Division Seating & Mobility Interest Group** 

## 2015 Transnational Day of Shared Learning

Wednesday 28<sup>th</sup> January 2015 Dublin City University

Cost: €30 (including lunch!) More Information: www.ipmn.ie

cost. coo (metading functi.)		
	Programme (Draft, subject to change)	
09.20	Opening address	
09.30	Driving and community mobility	Dr Tadhg Stapleton, Assistant Professor in Occupational Therapy, Trinity College Dublin
09.50	Benefits of natural materials for protecting skin integrity	Barend ter Haar, BSc, DPhil
10.10	Positioning aid for radiography	John Murtagh, UCD
10.30	Paediatric bilateral lower limb amputee: a case study on socket material and prostheses design	Breda Clancy, Irish Association of Prosthetists and Orthotists
10.50	Spinal orthoses and their role in postural management	Caroline Willis, Orthotist, IDS LTD, Cappagh National Orthopaedic Hospital
11:10	Coffee	
11.40	Seating and prosthetics-How do they fit together?	Emer Lotty, Occupational Therapist, Enable Ireland Children's Services, Cork
12.00	Improving access to public amenities	Jim Thomson, Assistive Technology and Multimedia Specialist, Glasgow
12.20	Design of an economic head switches set-up for the control of powered wheelchairs	Aiden O 'Brien, Clinical Scientist, TORT Centre, Dundee
12.50	Audit of wheelchair stability	Owen Mills, Clinical Scientist, WestMARC
13:10	Paralympics Ireland; integrating athlete equipment development into performance success,	Joe Conway, Chief Medical Officer & Manager of Paralympics Medical and Science Services title to be confirmed)
13:30	Lunch	
14.50	Robbie: a domestic assistant robot	Prof. Kevin Kelly, School of Engineering, Trinity College Dublin
15.10	Voice of Disabled Friends – One year on	Shane Rothwell, Founder, Voice of Disabled Friends
15.30	l've got you under my SSKIN plan: pressure management in a community nursing unit	James Jackson, Occupational Therapist, St Mary's Hospital Phoenix Park
15.50	Establishing a seating service in the NRH	Dr Amanda Carty, Clinical Specialist Physiotherapist, National Rehabilitation Hospital, Dun Laoghaire
16:10	IPMN AGM	ALL invited to participate

## **Presenters & Presentations**

Dr Laurence Joseph ("Joe") Conway, Chief Medical Officer & Manager of Paralympics Medical and Science Services.

Joe completed his MICGP in 1995, and undertook an MSc in Sports Medicine at TCD after two years of general practice. He subsequently spent 2 years training in Sports and Exercise Medicine in Christchurch, NZ, before undertaking specialist training with the Australasian College of Sports Physicians for a further 3 years. He completed his ACSP exams in 2007. Joe has worked with a variety of professional and amateur athletes, and with Paralympics Ireland since 2007.

**Dr Amanda Carty,** Clinical Specialist Physiotherapist, National Rehabilitation Hospital, Rochestown Avenue, Dun Laoghaire, Co. Dublin.

Amanda has worked at the NRH since August 2000, throughout the areas of paediatric neuro-rehabilitation and spinal cord injury rehabilitation and has a special interest in seating and wheelchair provision in these areas. This presentation will present the development and implementation of a specialist IDT seating clinic with the goal of enhancing rehabilitation outcomes for all patients undergoing neurorehabilitation.

Breda Clancy, Managing Director, Atlantic Prosthetic Orthotic Services Ltd (APOS) Ltd, The Weir, Kilcolgan, Co. Galway.

Breda has over twenty years experience as a Prosthetist/Orthotist and was a founding member of APOS in 2002. This presentation will detail the case of a 9yr-old bilateral congential transtibial amputee, discussing the clinical considerations particularly in relation to socket liner material choice – silicone liners versus the more conventional Pelite liner choice. The benefits of provision of 'Stubbies' to the bilateral amputee population will also be highlighted.

James Jackson, Occupational Therapist, St Mary's Hospital Phoenix Park, Dublin.

James is an Occupational Therapist, with other third level education in product design, fine art, holistic health, computing (database design, programming, web design); and extensive training in specialised seating and ergonomics. James's presentation will outline the recent, very successful, HSE initiative, "pressure ulcers to zero" (a collaborative process between all parties involved in reduction of PU incidence); and will discuss an example of how the process and principles were implemented in a community nursing unit.

**Prof. Kevin Kelly,** Assistant Professor, School of Engineering, Trinity College Dublin, Director of 'Engineering with Management' degree programme, Principal Investigator in Manufacturing and Robotics research group.

Kevin teaches and researches in the area of user-centred design and robotics, and will present a unique project undertaken to meet a challenge posed by Cork teenager Joanne O'Riordan (who was born without arms or legs) to build her a robot to help her in her daily life. Kevin and a team of students (mainly undergraduate volunteers) accepted the challenge and designed and built a proof of concept robot in a period of several months.

Emer Lotty, Occupational Therapist, Enable Ireland Children's Services, Cork.

A case study on the role of seating and prosthetics in a paediatric bilateral amputee with arthrogryposis. This will look at the alterations and specific customisation required to seating during the pre and post operative phase of amputation.

Owen Mills, Clinical Scientist, WestMARC

John Murtagh, Medical Student (UCD), Engineering Graduate.

John is currently a graduate entry medical student in UCD with a background in Engineering and product Design. As part of a summer research project, a need for a paediatric immobilisation device for radiographic imaging was identified. John was the principal investigator in designing a solution and is currently in the process of prototyping and refining the device for trial in Crumlin Children's Hospital.

Aiden O'Brien, Clinical Scientist, TORT Centre, Dundee

Shane Rothwell, Founder, Voice of Disabled Friends.

Shane is a 33 year-old resident at St Mary's Hospital, Cuan Aoibheann. He is originally from Dromheath Avenue, Blanchardstown, Dublin-15, and has been a wheelchair user since childhood. I faces a challenge in speaking and communicating with other people and wants to share his experience in managing my day-to-day tasks in his powered wheelchair and his use of other technology to make his quality of life better.

**Dr Tadhg Stapleton,** Assistant Professor in Occupational Therapy, Trinity College Dublin.

Dr Stapleton is actively involved in developing pathways for assessing fitness to drive in collaboration with several clinical occupational therapy services. Ability to drive is often an essential factor in enabling community participation/integration for all people, and particularly so for those with disability. This presentation will focus on the importance of addressing driving and community mobility issues in the clinical setting and recognising the need to keep community integration on our agenda as healthcare workers.

Barend ter Haar, Secretary of ISO TC198 SC1 WG11, and MD of BES Rehab Ltd and of Healthcare Innovations Australia.

Barend is involved with the ISO Seating Standards, and has been involved in the authoring of the measurement, flammability, and pressure mapping standards. This presentation shows the evidence as to why natural materials (such as wool) win hands down over synthetics for protecting skin tissue integrity in the realms of pressure redistribution, reduction of shear strain, microclimate (heat and water vapour) control, and air redistribution, not to mention comfort in both seating and lying.

Caroline Willis, Orthotist, IDS LTD, Cappagh National Orthopaedic Hospital

The Cheneau Bracing Technique has been developed by Dr Manuel Rigo since 1990. Dr Rigo has developed a curve classification system which helps to determine an accurate description of each curve. Using this information, a specific brace design can be established. This concept involves more of an emphasis on 3D correction, rather than just COBB angle correction. The end result has the ability to vastly improve in-brace correction, which can help reduce long-term curve progression.

Jim Thomson, Assistive Technology and Multimedia Specialist, Glasgow.

Jim will profile the work undertaken by his MovieMakers Group at Paisley's Disability Resource Centre. Liaising with Renfrewshire Access Panel the group investigates reported access problems, videos difficulties encountered by mobility scooters, manual and power wheelchairs, then passes a DVD to the relevant body for resolution. To illustrate, Jim will focus on improvements made by Scottish Canals in the Clydeside village of Bowling, a policy SC now intend to roll out in sites throughout Scotland.