



# Symposium ISPO Belgium

25 November 2023



Challenges and solutions in the multidisciplinary care of spasticity in neurological diseases

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# ISPO Symposium: The future of prosthetic fitting.

## ISPO Mission

To improve the quality of life for persons who may benefit from the rehabilitation practice of prosthetic, orthotic, mobility and assistive technology by:

- Promoting multidisciplinary practice
- Facilitating professional education to improve quality care
- Promoting research and evidence-based practice
- Facilitating innovative and appropriate technology
- Fostering international collaboration and consensus
- Facilitating knowledge exchange

## ISPO Vision

A world where all people have equal opportunity for full participation in society.



# Program

8h30	Registration & coffee
9h	Introduction & Welcome - Diane De Winter (Director BBOT)
9h10	Introduction about spasticity in neurological diseases - Dr. Dirk Claes
9h30	The importance of separately assessing spasticity and stiffness for improving treatment - Prof. Dr. Lynn Bar-On
9h50	Joint hyper-resistance: underlying mechanisms and consequences for balance - Jente Willaert
10h10	SWOT-analysis of ankle foot orthoses in children with cerebral palsy - Prof. Dr. Kaat Desloovere
10h30	Break (sponsor pitch)
10h50	Exopulse Mollii Suit - Jörgen Sandell
11h10	Dry needling - Bart Eeckhaut
11h30	The use of botuline toxine - Dr. Dirk Claes
11h50	Baclofen treatments for spasticity - Dr. Annick Viaene
12h10	Role of orthopaedic surgery in the treatment of children with cerebral palsy - Prof Dr. Anja Van Campenhout
12h30	Sporting opportunities with G-sport Vlaanderen - Steven Van Beylen
12h50	Walking Dinner

## Speakers



Dr. Dirk Claes

9h10-9h30 &  
11h30-11h50

Dr. Dirk Claes is a MD Specialist Physical medicine and Rehabilitation. He has been working in the rehabilitation hospital RevArte since 2009 after graduating from Antwerp University UA. He has been focusing on treating orthopedic, amputee and spinal cord injuries. Skilled in MSK ultrasound and interventions, gait analysis, biomechanics and electromyography. Het has postgraduate diploma in applied biomechanics from university of Strathclyde and sports medicine at Brussels university VUB.



## Prof. Dr. Lynn Bar-On

9h30- 9h50

Lynn Bar-On completed a PhD in Biomedical Sciences on the measurement of spasticity in children with cerebral palsy. Following her PhD, Lynn was awarded consecutive grants from the Dutch and Flemish governments with which she carried out six years of independent post-doctoral research at the department of Rehabilitation Medicine at the Amsterdam University Medical Centres. Lynn's main scientific research aims to uncover the intricate relations between alterations in the central nervous system and those in the musculoskeletal system that develop due to cerebral palsy.

At her current position as assistant professor at the department of Rehabilitation Sciences at Gent University, Lynn has expanded her scope, also studying the movement patterns of children with developmental coordination disorder as well as early transdiagnostic detection of neurodevelopmental disabilities.



## Jente Willaert

9h50-10h10

Jente Willaert is a PhD student in the Human Movement and Biomechanics Research group of the Department of Movement sciences at KU Leuven, under supervision of prof. De Groote. Her research goal is to gain insight in the underlying mechanisms of joint hyper-resistance and its influence on altered reactive balance control in children with cerebral palsy. We combine experimental measurements with computer simulations.



Prof. Dr. Kaat Desloovere

10h10-10h30

Kaat Desloovere is full professor at the KU Leuven and research manager of the Clinical Motion Analysis Laboratory of the University Hospitals of Leuven, in Belgium. She has been focusing her research on clinical motion analysis, mainly in children with cerebral palsy. Her research is built on solid integration of several medical, paramedical and engineering disciplines. The clear link to the clinical field is a unique aspect of her multidisciplinary research and creates a strong translational dimension. Her specific research ambition is to unravel the relation between clinical motion data (mainly gait) and underlying neuromuscular impairments. The current research is strongly focused on alterations in muscle structure and on analysis of muscle behavior using instrumented assessments (spasticity and strength assessment and gait analysis) in patients with neurological and neuromuscular diseases. She guides a multidisciplinary group of > 15 researchers (with technical as well as clinical backgrounds) and a clinical team of 5 to 8 co-workers at the Clinical Motion Analysis Laboratory. Several past and ongoing research projects resulted in a continuously growing scientific output.



Jörgen Sandell

10h50-11h10

With degrees in physiotherapy, chiropractic, and nutrition science and a PhD in rehabilitation science, Jörgen has worked in the field since 1989 in multiple countries, specializing in central nervous system injuries. He has been continuously developing the Exopulse Mollii suit since its inception in 2009. Jörgen has, for the last few years, been focusing on clinical practice and research on enhancing nervous reaction to rehabilitation training due to electrical stimulation.

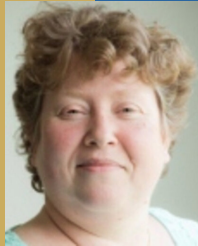




## Bart Eeckhaut

11h10-11h30

Bart Eeckhaut finished his Master in Rehabilitation Sciences and Physiotherapy in 2016 at the Ghent University. In 2021 he received an extra certificate as a Bachelor in Orthopedic Technology at the Thomas More Technical School. After seven years working in the field, he started on his PhD in 2023 at the University of Antwerp with the objective to convert his interest and experience into investigation. Bart Eeckhaut has a particular interest in the orthopedic perspective on neurological rehabilitation. Since 2018 he practices Myofascial Dry Needling and applies the DNHS on neurological patients since 2021.



## Dr. Annick Viaene

11h50-12h10

Since her appointment as a staff member at the Rehabilitation Center of Ghent University Hospital in 1999, Dr. Viaene has focused on the rehabilitation of patients diagnosed with paraplegia-tetraplegia as a result of spinal cord injury and neuromuscular disorders.

Dr. Viaene is a federation doctor for G-Sport Vlaanderen, where she encourages patients to exercise healthily in an accessible way. She also guides Paralympic athletes in the Belgian Paralympic Committee. She is an active member of the medical technical committee, the top sport committee and the ethical consultation committee of G-Sport Vlaanderen.



## Prof. Dr. Anja Van Campenhout

12h10-12h30

Anja Van Campenhout, MD, PhD, is pediatric orthopaedic surgeon at UZLeuven and associate professor at KULeuven, Belgium. She obtained her Medical Doctor degree and specialization in orthopedic surgery at the University of Antwerp, followed by a fellowship in pediatric orthopedics at the University Hospitals of Leuven, a scoliosis-fellowship at the Hospital for Special Surgery in New York and training in gait analysis and cerebral palsy treatment at the Gillette Children's Hospital (St. Paul, US). She also holds the degree of Rehabilitation Physician and acquired a Master in Healthcare Management. She is specialized in the care of children with neural and neuromuscular diseases and is head of UZLeuven Cerebral Palsy reference center.

She obtained her Doctoral Degree in Biomedical Sciences at the KULeuven in 2013. Her general research interest is in pediatric orthopedics and clinical decision making, based on objective measurements of motor function in children with CP, specifically for botulinum toxin-A (BoNT), selective dorsal rhizotomy, intrathecal Baclofen pump, orthotic management, and orthopedic surgery.



## Steven Van Beylen

12h30-12h50

G-sport Vlaanderen is the Flemish unisport federation for people with disabilities, psychological vulnerability and chronic conditions. The organization strives for inclusion and integration of G-athletes through campaigns and activities, at recreational, competitive and top sport level. G-sport Vlaanderen pushes boundaries, with the ultimate goal that people can exercise and exercise in a healthy, high-quality and enjoyable way according to their own needs, possibilities and ambitions.

Steven Vanbeylen has a sister with Down syndrome who from an early age was very involved in G-sports in her spare time. He obtained a Master in Physical Education and an additional European Master in Adapted Physical Activity. He worked as a PE teacher and became technical director top sport for G-sport Vlaanderen. Since July 1 2022 he is director of G-sport Vlaanderen.

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