

Personal Details

Name	Huub van Hedel
Position	Head Research Department Member of the Executive Board of the Rehabilitation Center
Academic Position	Honorary Professor Queen Margaret University, Edinburgh Prof, PhD, PT
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Graduate

- 1991-95 BSc physical therapy, Hogeschool Nijmegen, NL
- 1995-98 MSc biomedical health sciences, Catholic University of Nijmegen, NL
- 2001-04 PhD medical sciences, Radboud University of Nijmegen, NL
- 2009 Venia legendi (Privat Dozent): post-doctorate university teaching and research qualification awarded in the domain of neurorehabilitation, Medical Faculty of the University of Zurich, CH
- 2016 Titular Professor, title conferred by the University of Zurich on application of the Medical Faculty
- 2017 Certificate of Advanced Studies in leadership and management in social- and healthcare. FHS St. Gallen, CH.

Teaching Appointments

- CAS/MAS Pediatric Physiotherapy, Zurich University of Applied Sciences
- Department of Health – Physiotherapy, Bern University of Applied Sciences
- Department of Health Sciences and Technology, Swiss Federal Institute of Technology Zurich
- DAS Neuropsychology, UZH

Commendations, Awards and Prizes

- The Fürst Donnersmarck Stiftung commended the PhD Thesis of Corinna Gerber entitled "Upper limb assessment and training in neuropediatric patients: Towards game-based therapy at home", which was supervised by HJA van Hedel, for exceptional scientific achievements in the field of rehabilitation. Berlin, Germany, November 23th 2018.
- The Anna-Müller Grocholskiprize (1st prize) was given to Lea Tschirren for her presentation "The Eating and Drinking Ability Classification System: concurrent validity and reliability in children with cerebral palsy", authored by Tschirren L, Bauer S, Hanser C, Marsico P, Sellers D, van Hedel HJ. Annual symposium of the Swiss Academy of Childhood Disabilities, Aarau, Switzerland, November 15th, 2017.
- The Anna-Müller Grocholskiprize (1st prize) was given to Maria Ambühl for her presentation "Physical activity during pediatric rehabilitative therapies", authored by Ambühl M, van Hedel HJ, Labruyère R. Another 1st prize was given to Corinne Ammann for her presentation "Two measures of gait performance in children with neuromuscular disorders: Translation, construct validity and interrater reliability in an inpatient setting", authored by Amman C, Bastiaenen CHG and van Hedel HJ. The 2nd prize went to

Sandra Ricklin for her talk "A whiff of magic during robot-assisted gait training", authored by Ricklin S, Meyer-Heim A and van Hedel HJ. Annual symposium of the Swiss Academy of Childhood Disabilities, Bern, Switzerland, November 16th, 2016.

- The Research Award of PhysioSwiss 2016 was given to Corinne Ammann for her paper "Measurement properties of gait-related outcomes in youths with neuromuscular diagnoses: A systematic review" by Ammann-Reiffer C, Bastiaenen CHG, de Bie RA, van Hedel HJ. Basel, Switzerland, June 17-18th 2016.
- The Anna-Müller Grocholskiprize was given to Anne-Laure Mouthon for her presentation "Sleep measurements in children and adolescents with acquired brain injuries: A new approach to investigate cortical plasticity in the brain", authored by Mouthon AL, van Hedel HJ, Meyer-Heim A and Huber R. Fabienne Grob and Petra Marsico tied for second place with their studies "How can robot-assisted gait training during rehabilitation be optimized?", authored by Grob F, Aurich T, Labruyère R and van Hedel HJ, and "The relevance of nerve mobility on function and activity in children with cerebral palsy", authored by Marsico P, Tal-Akabi A and van Hedel HJ. Annual symposium of the Swiss Academy of Childhood Disabilities, Aarau, Switzerland, November 18th, 2015.
- One of the three best poster awards was given to Rob Labruyère for his poster "Monitoring everyday life motor activity in children", authored by Labruyère R, Fritschi J and van Hedel HJ. 5th FZK/CRC Retreat, Au, Switzerland, October 29th, 2015.
- The third prize for the best poster was given to Judith Graser for the poster "Robot-assisted motor learning in children with cerebral palsy" by Graser J, Keller J, van Hedel HJ. Rehab Week 2015, Valencia, Spain, June 8-12th, 2015.
- A prize for the best poster was given to Volker Ressel for the poster "Diffusion Tensor Imaging as a predictor for rehabilitation outcome in children with acquired brain injury" by Ressel V, O'Gorman Tuura R, van Hedel HJ. International Symposium NeuroRehabilitation: Strategies for customized Treatments, Karthause-Ittingen, Switzerland, March 5-7th, 2015.
- The Research Prize 2014 of the Rehabilitation Center Rheinfelden was given to Corinne Ammann for the paper "Measurement properties of gait-related outcomes in youths with neuromuscular diagnoses: A systematic review" by Ammann-Reiffer C, Bastiaenen CHG, de Bie RA, van Hedel HJ. Rheinfelden, Switzerland, January 8th 2015.
- The first Anna-Müller Grocholskiprize for the best scientific research project was given to Rob Labruyère for his presentation "Gehirnaktivität bei Kindern in einem Rehabilitationsroboter – ein Vergleich zwischen aktiver, assistierter und passiver Fingerbewegung" by Labruyère R, Cramer M, Pfeifer M, van Hedel HJ. Symposium of the Schweizerische Vereinigung für pädiatrische Rehabilitation, Affoltern am Albis, Switzerland, November 11th, 2014.
- A prize for the best oral presentation was given to Anne-Laure Mouthon for her presentation "Longitudinal changes in the build-up of sleep slow wave activity in young patients recovering from acquired brain injury" by Mouthon A-L, van Hedel HJ, Meyer-Heim A, Huber R. 4th Retreat of the Children's Research Center, Au, Switzerland, October 23rd 2014.
- The Research Prize of the Rehabilitation Center Rheinfelden was given to Rob Labruyère for the paper "Requirements for and impact of a serious game for neuro-pediatric robot-assisted gait training" by Labruyère R, Gerber C, Birrer-Brütsch K, Meyer-Heim A, van Hedel HJ. Rheinfelden, Switzerland, January 9th 2014.
- A prize for the best poster was given to Anne-Laure Mouthon for her poster "Slow wave sleep in young stroke patients - investigating its relationship with behavioral performance" by Mouthon A-L, van Hedel HJ, Meyer-Heim A, Huber R. 3rd Retreat of the Children's Research Center, Au, Switzerland, October 31st 2013.
- A prize for the best Masterthesis was given to Petra Marsico for her Masterthesis "What about neurodynamics? Relationship between the Straight Leg Raise test, muscle strength and motor performance in children with cerebral palsy", which was supervised by A. Tal-Akabi and HJA van Hedel. Bern University of Applied Sciences, Health Science Department, Bern, Switzerland, October 31st 2013.
- The Fürst Donnersmarck Stiftung commended the PhD Thesis of Rob Labruyère entitled "New outcome measures for subjects with incomplete spinal cord injury: response time and adaptive walking", which was supervised by HJA van Hedel, for exceptional scientific achievements in the field of rehabilitation. Berlin, Germany, November 16th 2012.
- A prize for the best oral presentation was given to Rob Labruyère for his presentation of the paper

“Virtual reality influences active participation during robot-assisted gait training” by Labruyère R, Gerber C, Birrer-Brütsch K and van Hedel HJA. 2nd Retreat of the Children's Research Center, Au, Switzerland, October 25th 2012.

- The Eberhard Ketz Prize 2011 (CHF 5'000.-) was awarded to Karin Brütsch for the paper: Brütsch K, Koenig A, Zimmerli L, Mérellat-Koeneke S, Riener R, Jäncke L, van Hedel HJ, Meyer-Heim A. Virtual reality for enhancement of robot-assisted gait training in children with neurological gait disorders. *J Rehabil Med.* 2011; 43(6):493-9, November 4th 2011.
- The Norington Lecture 2011 of the Australasian Faculty of Rehabilitation Medicine was entitled “Assessing improvement in function following SCI”. The lecture was given at the combined meeting of the Australasian Faculty of Rehabilitation Medicine (AFRM) and the Australia and New Zealand Spinal Cord Society (ANZSCoS), September 14th 2011.
- The Susanne Klein-Vogelbach “Special Award” 2010 was received for the paper Ankle motor skill is intact in spinal cord injury unlike stroke: implications for rehabilitation and awarded with CHF 2000.-, December 15th, 2010. The special award is intended for work out of the field of physical therapy.
- The American Society of Neurorehabilitation and World Federation for Neurorehabilitation acknowledged Huub van Hedel, PhD, PT, as an outstanding member recognized for his exceptional scholarship in the field of neurorehabilitation. *Neurorehabilitation and Neural Repair.* 2010; 24(5) 403.
- The Fürst Donnersmarck Stiftung commended the “Habilitationsschrift”: Assessment of Ambulatory Function after Spinal Cord Injury for exceptional scientific achievements in the field of rehabilitation. Berlin, November 6th 2009

Scientific Interests

- Neurorehabilitative interventions, including upper and lower limb rehabilitation technologies and motor learning
- Psychometric evaluations of clinical assessments
- Neuroplasticity

Grants

- November 2018 - van Hedel HJ, Meyer-Heim A. Biomarkers for recovery and Personalized upper and lower limb therapy. J&K Wonderland Foundation (CHF 500'000.-)
- June 2018 - van Hedel HJ. “Brain activity during robot-supported therapies: fNIRS studies in children and adolescents with neuromotor diagnoses.” Anna-Müller Grocholski Foundation (CHF 103'500.-)
- June 2018 - Marsico P, van Hedel HJ. “Somatosensory function and body awareness of the lower extremity in children with neuromotor impairments: influence on motor functions, activities and participation.” Anna-Müller Grocholski Foundation (CHF 111'180.-)
- March 2018 - van Hedel HJ. Investigating trainability of selective voluntary motor control using exergame interventions in children with brain lesions. 32003B_179471. Swiss National Science Foundation (CHF 563'270.-)
- November 2017 - van Hedel HJ, Meyer-Heim A. Real and virtual gait lab environments for assessment and training of gait function. J&K Wonderland Foundation (CHF 150'000.-)
- November 2017 - Meyer-Heim A, van Hedel HJ.. Development and feasibility testing of an assisting hand-exoskeleton for children with upper limb impairments. J&K Wonderland Foundation (CHF 150'000.-)
- April 2016 - van Hedel HJ. Scientific supervision of the application of rehabilitation robots, especially for the upper extremity in children and adolescents. Fondation Gaydoul (CHF 120'000.-)
- December 2015 - van Hedel HJ. “Sleep measurements in children with acquired brain lesions: a new approach to investigate neural reorganization”, Anna-Müller Grocholski Foundation (CHF 55'600.-)
- December 2015 - Ressel V, van Hedel HJ. “Neural correlates of rehabilitative therapies in children with acquired brain injuries”, Anna-Müller Grocholski Foundation (CHF 95'000.-)
- August 2015 - Van Hedel HJ, Meyer-Heim A. Subproject 3 within the KFSP Neuro-Rehab Proposal (CHF 321'000,-)

- June 2015 - Meyer-Heim A, van Hedel HJ. The Mäxi-Cube Therapy-section (a new building for therapy and research, gait analysis and patient care). Mäxi-Foundation (CHF 5'000'000.-)
- September 2014 - van Hedel HJ. Playful assessment of selective voluntary motor control in children with congenital or acquired brain lesions. Swiss National Science Foundation (CHF 219'000.-)
- June 2014 - Van Hedel HJ, Meyer-Heim A. Sustainability of position of the head of the Pediatric Rehab Research Group. Mäxi-Stiftung (CHF 1'000'000.-)
- January 2014 - Hunt K, Lungarella M, van Hedel H. A novel interactive training robot for children with neuro-muscular impairments. Commission for Technology and Innovation (CHF 23'000.-)
- November 2013 - Meyer-Heim A, van Hedel H. "Innovation Subvention" to the Cantonal Department of Health (CHF 1'020'000.-)
- October 2012 - van Hedel HJ, Meyer-Heim A. Subproject 3 within the KFSP Neuro-Rehab Proposal (CHF 587'000.-)
- January 2012 - van Hedel HJ, Meyer-Heim A. Fondation Gaydoul (CHF 600'000.-)
- June 2010 - van Hedel HJ. EMDO Foundation (CHF 30'000.-)
- June 2010 - van Hedel HJ. Koetser Foundation (CHF 20'000.-)
- July 2009 - van Hedel HJ, Schubert M, Curt A (PI). International Foundation for Research in Paraplegia (CHF 398'000.-)
- Mai 2008 - van Hedel HJ (PI), Curt A, Dietz V. International Spinal Research Trust (CHF 145'255.-)
- July 2008 - Dietz V, Schubert M, van Hedel HJ. International Foundation for Research in Paraplegia (CHF 120'000.-)

Editorial Board Member

- Neurorehabilitation and Neural Repair

Reviewer

- Neuropediatrics, J Neurotrauma, Arch Phys Med Rehabil, BMC Pediatrics, BMC Musculoskeletal Disorders, Disability and Rehabilitation, Developmental Medicine and Child Neurology, Journal of Neuroengineering and Rehabilitation, Journal of Spinal Cord Medicine, Neurorehabilitation and Neural Repair, Physical Therapy, Research in Developmental Disabilities, Spinal Cord, Gait and Posture, and for various foundations.

Chair

- Advanced Robotic Therapy Integrated Centers (ARTIC) Network, June 2015-now

Memberships

- World Federation of Neurorehabilitation: Steering group member of the Special Interest Group “Clinical application of advanced technologies”
- Neuroscience Center Zurich (ZNZ): Group leader
- Children’s Research Center (CRC), University Children’s Hospital Zurich
- Schweizerische Gesellschaft für NeuroRehabilitation (Swiss Society for NeuroRehabilitation)
- International Spinal Cord Society (ISCoS)
- European Academy of Childhood Disability
- Zurich Center for Integrative Human Physiology (ZIHP)

Publications

- see [National Library of Medicine](#)