

Curriculum Vitae



Name: Jakob Lorentzen PT, MSci (Health), PhD

DOB: 07-12-1972

Executive Summary

I am currently employed as Clinical Professor at University of Copenhagen, Department of Neuroscience and Department of Paediatrics at Rigshospitalet where I run and supervises projects aiming to transfer knowledge from basic science into clinical practice with special attention to Cerebral Palsy.

I was trained as a clinician for 22 years ago and have since combined clinical work with research activity focusing on neurosciences, neurorehabilitation and Cerebral Palsy. I have been involved in several intervention studies focusing on how to improve cognitive and motor deficits after brain lesion in children. The studies I have been running were conducted at the University of Copenhagen in close collaborations with the Elsass Foundation and clinical neurological departments at different hospitals inside and outside of the Country.

I have for the past 14 years been teaching at PhD, Master, Bachelor level on regular basis and been doing several scientific and popular science talks for professionals within neurorehabilitation and Neuroscience. I was involved as main organizer and I am the head of the education “Master of Neurorehabilitation” at Department of Neuroscience, University of Copenhagen. I was involved as organizer and teacher at the planned PhD-course at the Elsass Institute focusing on development of contractures in neurological patients in 2019.

I have authored or co-authored 45 papers in international peer-reviewed journals, numerous meeting-abstracts and book chapters for clinical staff and scientists in neurorehabilitation.

Educations and academic degrees

1995-1998 Professional bachelor in Physiotherapy (PT) University College Sealand (Næstved)

2000-2001 Preparation year for Master in Health Sciences (Cand.scient.san) at Aarhus University

2001-2003 Master in Health Sciences (Cand.scient.san) at Aarhus University

- 2006-2010 Phd at Department of Exercise and Sports Science / Department of Neuroscience and Pharmacology, Faculty of Science, University of Copenhagen
- 2018 Assessment as Associate Professor at Department of Neuroscience, University of Copenhagen.
- 2021 Appointed clinical professor at Department of Neuroscience, University of Copenhagen.

Positions

- 1998-2000 Full time position as physiotherapist at Central hospital in Næstved
- 2001 -2003 Full time/part time position as physiotherapist at Hammel Neurocenter, Department for traumatic brain injury in children.
- 2003-2005 Full time position as academic project responsible at "Den Gode Medicinske Afdeling" (DGMA). A National interdisciplinary quality development project for hospital care.
- 2005- 2011 Full time position as research physiotherapist at Department for Traumatic Brain Injury at Hvidovre Hospital.
- 2011- 2012 Full time position as research physiotherapist at Center for Rett syndrome, Kennedy Center.
- 2012-2019 Full time position as research supervisor at the Elsass Institute.
- 2017- 2019 Research Associate Professor at Institute of Neuroscience, University of Copenhagen
- 2019- 2021 Associate Professor and Head of the education "Master of Neurorehabilitation", Department of Neuroscience, University of Copenhagen.
- 2021 Aug. 1st- Clinical Professor and Head of the education 'Master of Neurorehabilitation' Department of Neuroscience and Department of Paediatrics at Rigshospitalet.

Publications

Author or co-author to 42 peer reviewed scientific publications, one invited scientific podcast presentation, 3 popular science publications, 4 book chapters and one published dissertation within the field of neurorehabilitation and neuroscience (see publication list).

Supervision

- Phd supervisor (start 1. April 2020) Institute of Neuroscience, University of Copenhagen
- Phd supervisor (start 1st of February 2019) Institute of Neuroscience, University of

Copenhagen

- Phd supervisor (start 1st of February 2019) Institute of Neuroscience, University of Copenhagen
- Phd. supervisor (2014–2018) Institute of Neuroscience, University of Copenhagen
- Phd. supervisor (2013-2016) Department of Nutrition Exercise and Sports, University of Copenhagen.
- Phd. supervisor (2012-2015) Institute of Neuroscience, University of Copenhagen (co-supervisor)
- Phd. supervisor (2011-2014) Department of Nutrition Exercise and Sports, University of Copenhagen.
- Supervisor (Master project), (2018 SDU, University of Southern Denmark)
- Supervisor (Master project) (2016 SDU, University of Southern Denmark)
- Supervisor (Master project) (2014 SDU, University of Southern Denmark)
- Supervisor or co-supervisor for aprox. 25 bachelor- and 5 master students.
- Supervisor for Physiotherapists at (UCSF) Universitetshospitalernes Center for Sundhedsfaglig Forskning
- Supervisor for Physiotherapists and Sports science students at Hvidovre Hospital (2005-2011).
- Supervisor for a group of physiotherapists at the” Evidensbaseret praksis” arranged by the Capital Region (2006).

Collaboration

- Department of Child neurology at Rigshospitalet, Denmark
- Department of Neonatology at Rigshospitalet
- Department of MRI at Rigshospitalet, Denmark
- Department of Developmental Neuroscience — IRCCS Fondazione Stella Maris-
Department of Clinical and Experimental Medicine — University of Pisa, Italy
- Queensland Cerebral Palsy and Rehabilitation Research Centre (QCPRRC), Australia
- Department of Neurology at Herlev Hospital, Denmark
- Hospital for Multiple Sclerosis, Haslev, Denmark
- Center for Sensory-Motor Control, Aalborg University
- Clinic for Spinal cord injuries, Rigshospitalet, Copenhagen
- Department of Neurological Surgery, The Miami Project to Cure Paralysis Lois Pope Life Center, Miami, USA.

Scientific contributions to conferences

Invited international scientific presentations

- Nielsen JB and Lorentzen J. Dystonia and spasticity from a research point of view. Invited speaker at Nordic Neuropaediatric Congress 2018 Copenhagen, Denmark 6th - 8th September 2018.
- Lorentzen J. Prevention of contractures in Cerebral palsy. Special Invited Lecture at EACD 2017 in Amsterdam.

Scientific presentations

- Lorentzen J, Born AP, Svane C, Forman C, Langvad X, Uldall P, Høi-Hansen CE. Increased insight into children with dyskinetic cerebral palsy by systematic movement disorder evaluation including EMG assessment. Presentation at AACPD 73rd Annual and IAACD 2nd Triannual Meeting (The American Academy for Cerebral Palsy and Developmental Medicine), Anaheim, USA 2019.
- Forman C, Svane C Lorentzen J. Characterization of long-lasting involuntary muscle overactivity in adults with Cerebral Palsy. Poster presentation at EACD 2018 in Tbilisi.
- Lorentzen J. Toe walking is accompanied by increased stretch reflexes and co-activation at foot-strike in both Cerebral Palsy and typically developing children. Oral presentation at EACD 2017 in Amsterdam.
- Lorentzen J. To be active through indoor-climbing: an exploratory feasibility study in a group of children with cerebral palsy and typically developing children Poster at EACD 2017 in Amsterdam.
- Lorentzen J. Increased push off during walking is associated with increased gait speed after 6 weeks of treadmill training with an incline in adults with cerebral palsy. Oral presentation at EACD 2016 in Stockholm.
- Lorentzen J. Treadmill training with an incline reduces ankle joint stiffness and improves active range of movement during gait in adults with cerebral palsy. Poster presentation at the AACPD conference in Austin, Texas 2015.
- Lorentzen J. Prevention of contractures. Oral presentation at the EACD conference in Copenhagen 2015.
- Lorentzen J. Neural tension technique is no different from random passive movements in reducing spasticity in patients with traumatic brain injury. Oral presentation at the WCNR conference in Melbourne, Australia 2012.
- Lorentzen J. Assessment of a portable device for the quantitative measurement of ankle joint stiffness in spastic individuals. Poster presentation at the WCNR conference in Melbourne, Australia 2012
- Lorentzen J, Grey MJ, Crone C, Mazevet D, Biering-Sørensen F, Nielsen JB.

'Distinguishing active and passive components of ankle plantarflexor stiffness in stroke, spinal cord injury and multiple sclerosis' SFN (Society for Neuroscience), Chicago Oct. 2010.

- Lorentzen J. 'Spasticity – assessment'. XXIII Sandbjerg Symposium, Neuroplasticity and Neurorehabilitation. Sandbjerg May 2009.
- Lorentzen J. 'Spasticitet'. Fagfestival (Physiotherapy congress). Odense, March 2009.
- Lorentzen J. 'Quantitative evaluation of spasticity' Quantification and Mechanisms of impaired Motor Control (Symposium) Northwestern University Chicago, June 2007.
- Lorentzen J. '*Why is research in spasticity so fascinating*' Dansk Selskab for Neurorehabiliterings temadag om spasticitet København, November 2007.
- Lorentzen J. 'Quantitative spasticity evaluation'. Symposium for fysioterapeuter I HS. Gentofte Hospital, March 2007.

Research stays abroad

- University of Alberta, Edmonton, Canada. Department of Physical Therapy, Centre for Neuroscience 10/5 2008 – 25/8 2008 and 19/5 2010 - 27/5 2010.

Teaching

- Teacher and course coordinator at Master of Neurorehabilitation from 2020
- Teacher at Master of Neuroscience at University of Copenhagen from 2020
- Teacher co-organizer at the combined symposium/PhD course 'Contractures' held at the Elsassfoundation in collaboration with University of Copenhagen 2019.
- Guest teacher at Master of Neurorehabilitation at Aix Marseille University from 2018.
- Teacher at the course "tilpasset idræt" (Master course) Exercise and biomechanics SDU (University of Southern Denmark) 2015, 2016, 2017-.
- Teacher and organizer of the course "Spasticitet" – HEC Academy at Helene Elsasscenter 2015.
- Teacher at the course "Tilpasset idræt og bevægelse" Department of Nutrition and sports, University of Copenhagen 2014, 2015, 2016, 2017, 2018.
- Teacher at the course "Neuroplasticitet", (Master level) Department of Nutrition and sports, University of Copenhagen 2013-2015.
- Organizing and teaching of PhD-courses at the Elsass Institute in the period from 2012 -
- Teacher at the course 'Motorisk udvikling fra vugge til voksen' from 2008-2012, Department of Nutrition and sports, University of Copenhagen
- Teacher at University College Metropolit (Copenhagen) at the Neurological module (Physiotherapy education) since 2013- (lectures in spasticity and neuroplasticity)
- Teacher at University College UCC (Hillerød) at the Neurological module (Physiotherapy

- education) since 2013- (lectures in spasticity and neuroplasticity)
- Teacher at the course” Temadagene om tonus og bevægelse, børn” at Hvidovre Hospital d. 27-28/9-10 organized by the Danish Physiotherapy organization.
 - Routinely teacher and speaker at seminars and courses about neurorehabilitation, spasticity and hypertonia at the Danish Physiotherapy Organization since 2006.
 - Routinely teacher and speaker at seminars and courses about neurorehabilitation, spasticity and hypertonia at the Department of Traumatic Brain Injury Organization since Hvidovre/Glostrup hospital (2006-2011).

Courses

- Course in 'Administrative law for study leaders' (Forvaltningsret for Studielevere) University of Copenhagen 2019
- Course 'Responsible Conduct of Research for Academic Staff' University of Copenhagen 2019
- MRI scanning course at Department of Radiology at Rigshospitalet (Sikkerhedskursus) May 2018.
- Course in Bayley Cognitive testing for infants. Early child development unit, Department of Psychology 2013
- Course Bayley III held by prof. B. Hutchon, Stella Maris (Pisa, Italy)
- Infant Motor Profile (IMP) course at University Medical Center Groningen 2013
- Exam and certification of Basic Training Course on Prechtl's Method on Qualitative Assessment of General Movements at Fondazione Stella Maris, Pisa Italy 2013.
- GlobalDenmark's presentation course for the Department of Science Education, Fall 2010.
- Course 'Neuroplasticity Based Intervention', The Elsass Center and University of Copenhagen, summer 2009.
- 12 seminars of 2 hours held by Professor Jens Bo Nielsen, Professor Hans Hultborn and Professor John Rothwell, University of Copenhagen in 2008. (Lesson 1: The senses and their organisation; Lesson 2: The spinal motoneurone and muscle complex; Lesson 3: The spinal neuronal circuitries; Lesson 4: The motor cortex; Lesson 5: The cerebellum; Lesson 6: The basal ganglia; Lesson:7 The premotor areas; Lesson 9: vision; Lesson 10: Gait; Lesson 11: Posture; Lesson 12: Spasticity).
- Course in 'Motor Development and Disorders', The Elsass Center and University of Copenhagen, Fall 2008.
- Scientific writing, University of Copenhagen, Fall 2008.
- Clinical Neuroscience Methods, Graduate School of Neuroscience, University of Copenhagen, Spring 2007.
- Neuroplasticity, Department of Nutrition and sports, University of Copenhagen, Fall 2006.
- Motoriske funktioner, Department of Nutrition and sports, University of Copenhagen, Fall 2006.

Organisational work

- Chairman of the PhD assessment committee of Mie Maar Andersen 2020
- Member of organizing committee of PhD course 2019 at the University of Copenhagen /Elsass institute.
- Member of Advisory board for research, documentation and development (EFEU) at Vejle fjord rehabilitation 2019 - .
- Member of appointed work group by National Board of Health and Welfare (Socialstyrelsen) regarding '*Forløbsbeskrivelse for børn og unge med komplekse følger af cerebral parese*' 2018. <https://socialstyrelsen.dk/tvaergaende-omrader/national-koordination/forlobsbeskrivelse/born-og-unge-med-komplekse-folger-af-cerebral-parese>.
- Member of the organizing committee and chairman at the EACD 2015 in Copenhagen
- Head of the Scientific committee at the Conference for Physiotherapist 2015 and member of the committee 2013.
- Responsible organizer of the national symposium: "Spasticity – new knowledge from basic-to clinical research" 11/9-2011 at Hvidovre hospital

Referee

- Acta Paediatrica
- Developmental Medicine & Child Neurology
- European Journal of Sport Science

Memberships

- Member of European academy of childhood disability (EACD)
- Member of Danish Society of Neuroscience
- Member of Danish Physiotherapists