

12 PhD Student Positions available for the European Union Horizon 2020 Innovative Training Network (ITN) KEEP CONTROL: Industrial Academic Initial Training Network towards specific diagnosis and treatment of age-related gait and balance deficits

KEEP CONTROL provides an international, interdisciplinary and intersectoral platform to train young scientists for three years each at the interface of clinical medicine, allied health and biomechanics, to study unresolved questions about gait and balance in aging and agerelated chronic neurological and frail conditions.

You will be employed as an Early Stage Researcher according to Marie Sklodowska Curie ITN regulations, which offer excellent employment conditions including a high base salary and many additional benefits such as allowances for travel, mobility and education. The duration of employment will be 36 month (Check the <u>Work Programme</u> here).

General eligibility criteria

- Researchers may be of any nationality.
- Researchers must not have resided or carried out their main activity (work, studies, etc.)
 in the country of the host for more than 12 months in the 3 years immediately prior to
 their recruitment.
- Applicants should have less than 4 years of postgraduate research experience

Applications

For more information and to upload your application (CV, letter of interest and contact information for potential references) visit www.keep-control.eu.

Deadline for application: June 30, 2017

Details about KEEP CONTROL partners and projects

University of Kiel

Development of IMU-based algorithms for the detection of preclinical movement changes in Parkinson's disease

The Christian-Albrechts-Universität (CAU) Kiel is the northern-most full University of Germany located at the Baltic sea with 8 facilities and 25000 students. The Faculty of Medicine is one of the four founding faculties. Research at the Faculty of Medicine is characterised by diverse academic networks and forward-looking interdisciplinary profile areas. The dedicated focus of the Faculty is on digital medicine. The Department is a tertiary referral center for all types of movement disorders and has a large outpatient facility.



One PhD Student position is available in the Neurogeriatrics research group at this Neurology Department. The group focuses on the development and validation of portable device-based algorithms for the evaluation of functional mobility in older adults and patients with Parkinson's disease. One particular interest is the detection and quantitative evaluation of very early (i.e. preclinical) movement changes in persons with Parkinson's disease. This evaluation is performed with newly developed movement algorithms based on portable devices. The group has access to data from 1100 older adults with and without increased risk for Parkinson's disease, with observation periods of up to 8 years (www.trend-studie.de). The available dataset includes 20 persons who converted to Parkinson's disease during the observation period.

The PhD candidate will be (i) developing functional mobility algorithms for IMU and related sensor data out of the mentioned dataset, (ii) applying existing algorithms as well as validating those novel approaches to clinical and demographic data.

Requirements

- A completed MSc degree in the field of biomedical engineering, biomechanics, neuroscience, movement science, sport science, computer science, electrical engineering or other related fields;
- Strong skills in biomechanics and/or neurophysiology
- Good command of the English Language and good English writing skills;
- Willing to learn a variety of complementary techniques ranging from sensor-based quantitative autonomic and fine motor testing, to new statistical approaches evaluating, e.g. long-term outcomes;
- Good communication skills and ability to work in a multidisciplinary and international team.

For additional information please contact: Prof. Walter Maetzler w.maetzler@neurologie.uni-kiel.de

Katholieke Universiteit Leuven

Shifting the gear on shifting weight: an analysis of freezing-related balance deficits in advanced PD

The Neuromotor Rehabilitation Research group is embedded in the Department of Rehabilitation Sciences of the Biomedical Sciences Group at the University of Leuven (KU Leuven). The research team is engaged in clinical trials and movement analysis projects related to neuromotor rehabilitation in relation to various conditions most notably to stroke and Parkinson's disease. Both behavioral analysis as well as neuroscientific methodologies are incorporated in our ongoing work. The research team can build upon a solid research infrastructure, including accessibility to scanning facilities, brain stimulation equipment, well-equipped movement analysis laboratories, an extensive international network,



recruitment of neurological patients in the University Hospitals Leuven, a stable group of highly talented PhD students and a supportive working environment.

One PhD Student position is available in the neurological unit of the Neuromotor Rehabilitation Research group:

http://gbiomed.kuleuven.be/english/research/50000743/nrrg1/nrrg.htm

This team focuses on understanding the rehabilitation potential of adults with acute and chronic neurological disorders by studying underlying motor control deficits and dysfunctions of neurological systems. This involves translational study which contributes to in-depth insights in the mechanisms of neuroplasticity, relevant for innovation and refinement of rehabilitation interventions. The PhD candidate will be required to adapt a voluntary mediolateral control task of the center of mass in response to a visual tracking (Melba task) on the Caren balance platform. After piloting the protocol in healthy older people, the candidate will be testing the efficacy of technology-based motor learning program in patients with Parkinson's disease with and without postural instability and freezing of gait. We will also test the effects of learning on motor cortex excitability using Transcranial Magnetic Stimulation.

The PhD candidate will be (i) adjusting the training task for use in frail older adults, (ii) and conduct a clinical proof-of-principle training study, with pre-and post-training TMS protocols.

Requirements

- A completed MSc degree in the field of Movement or Rehabilitation Science, Biomedical Sciences, Biomechanics, Neuroscience, Experimental Psychology or other related fields;
- Strong skills in biomechanics and/or neurophysiology
- Excellent skill in data analysis (Matlab) and biomedical statistics
- Good command of the English Language and good English writing skills; Willing to learn Dutch to be able to communicate with patients
- Willing to learn the programming skills to adjust the postural tasks for learning.
- Good communication skills and ability to work with older adults and patients
- Motivation to collaborate in a multidisciplinary and international team.

For additional information please contact:

Prof. Alice Nieuwboer

alice.nieuwboer@kuleuven.be

University of Newcastle upon Tyne

Developing novel tools from wearable sensor data for neurodegenerative disease management using deep learning techniques.



Newcastle University is a member of the Russell Group of research-intensive institutions and undertakes multi-disciplinary research in many areas with high scientific, economic and social impact. Newcastle University is committed to 'Excellence with a purpose' and believes our teaching and research should make a difference to people's lives locally, nationally and internationally. In the Research Excellence Framework 2014 Newcastle was ranked 16th in the UK for research power and 26th for quality research, joint 1st for student support in the UK in the Times Higher Education Student Experience Survey 2016 and joint 7th overall. The core mission of the Institute of Neuroscience is to undertake the highest quality research that translates into patient benefit, real world application and commercial opportunity. We have a diverse research portfolio from the basic biology of neurons through to complex processes of perception and decision-making behaviour, we address how the mind, brain, and body work together. Committed to equality and diversity the Institute holds an Athena SWAN silver award.

As part of this European Training Network, applications are now invited for an Early Stage Researcher in Professor Rochester's Brain and Movement research group at the Institute of Neuroscience, Newcastle University, United Kingdom. The Brain and Movement (BAM) Research Group at Newcastle University have extensive experience in gait and its role as a discrete biomarker for diagnostic algorithms, progression modelling and risk prediction (cognitive decline and falls). As part of a translational programme to develop tools for widespread application in clinical and home environments, extensive expertise has been developed in validation and implementation of algorithms and signal processing techniques to derive clinically meaningful micro and macro gait outcomes from wearable sensor data in various cohorts (neurodegenerative diseases, ageing, etc.). Large data sets are available in well characterised patient cohorts (e.g. Parkinson's disease, dementia subtypes and Alzheimer's disease and age-matched healthy controls. They comprise data collected with wearable sensors in controlled (e.g. laboratory) and free-living conditions (7 day data) allowing detailed quantification of gait and postural control outcomes. A particular interest of the group is to extend methodological approaches using novel supervised and un-supervised deep-learning computational methodologies to enhance tools for management of for neurodegenerative disease using gait data collected from a wearable sensor system, with the ultimate goal of using wearable technology as an early diagnostic/management tool for neurodegenerative diseases. To this wend we collaborate with colleagues in Mathematics and Statistics and Computer Science to deliver on this multidisciplinary research agenda. The successful applicant will be employed at Newcastle University, and will also be enrolled onto a PhD.

Project outline

The PhD candidate will be (i) developing novel algorithms for extraction frequency-based features and other features representing intensity, periodicity and coordination of movement, (ii) evaluating of spatial-temporal features stemming from a conceptual model of gait already validated by the BAM group, (iii) determining tools for classification/progression (including medication responsiveness) using advanced deep learning techniques.

Requirements

- MSc in Biomedical Engineering, Computer Science or related field
- Good information technology and computing skills
- Good skills in signal processing and use of machine learning techniques
- Experience/ knowledge of Matlab or equivalent programming languages (e.g. Octave, Python, etc.)
- Good communication skills and ability to work in a multidisciplinary team

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Desirable



- Knowledge of gait analysis
- Experience of working with accelerometer data

For additional information please contact: Professor Lynn Rochester Lynn.rochester@ncl.ac.uk

Klinikum der Universität München

Frail older patients: How do sarcopenia, balance and gait deficits, and falls interact?

The hospital of the *Ludwig-Maximilians-University (LMU)* Munich is a center of high-end medicine, medical innovation and research. Hospital and Medical Faculty programs support patient care and research projects in several countries around the world. With more than 2.000 beds, the University Hospital of Munich (LMU) is a highly advanced hospital with 45 clinics, institutes and departments covering all fields of medicine. With its two campuses in Grosshadern and in the city center, it is one of the largest hospitals in Europe. The Ludwig-Maximilians-University (LMU) Munich is the leading german University in the field "Clinical and health" according to the *Times Higher Education World University Ranking*. The Geriatric department is based at the *Medizinische Klinik und Poliklinik IV*, located in the city center.

One PhD Student position is available in the Geriatric department of the Medizinische Klinik und Poliklinik IV. The PhD student will perform a study on (neurogenic) sarcopenia in geriatric patients with a fracture due to a fall. The overall aim is to define different causes of sarcopenia, and to test their respective contribution to gait and balance deficits in a cohort of sarcopenic patients with a hip fracture.

Requirements

- Medical Doctor +/- specialisation in Geriatrics
- MSc degree with focus in biomedical engineering, molecular medicine or other related fields
- Strong skills in muscle histology, molecular medicine
- Enjoyment working with older people
- Very good German language skills (communication with patients), good command of the English Language and good English writing skills
- Good communication skills and ability to work in a multidisciplinary and international team

For additional information please contact: PD Dr. Michael Drey

michael.drey@med.uni-muenchen.de



How does peripheral neuropathy affect gait and balance in PD?

The University of Porto (UP) is located at the west coast of Europe by the Atlantic Ocean and is one of the most prestigious and largest higher Education and Research Institutions in Portugal, with over 30.000 Students, 13% of which are international students. The Institute of Biomedical Sciences Abel Salazar of the University of Porto (ICBAS) was established in 1975. Since then it has been a renowned teaching and research institution in the fields of medicine, applied biology, environment, veterinary sciences, food security and quality control. ICBAS currently occupies new facilities along with the Faculty of Pharmacy. The sharing process ICBAS and the Faculty of Pharmacy makes possible the existence of a health pole, in close collaboration with the Central Hospital of Porto (CHP), which includes Hospital de Santo António, Centro de Genética Médica and Centro Materno Infantil. The facilities consist in 41000m² of covered area with 11 amphitheaters and more than 25000m² of laboratories fully equipped with the latest technology in research area. The research carried out at the institute is highly interdisciplinary, due to the fact that the faculty houses ten different academic departments, in diverse fields such as anatomy, neuroscience, immunophysiology and pharmacology, microscopy, molecular biology and veterinary clinics. The Neurology Department at CHP is a tertiary referral center, has a large outpatient facility for all types of movement and neuromuscular disorders with a long-standing research tradition in Parkinson's Disease and Familial Amyloid Polyneuropathy.

One PhD Student position is available. Our research group focuses on the study of peripheral neuropathy and wants to explore the neuropathological (small fiber neuropathy), neurophysiological and biomechanical aspects of gate in our ongoing cohort of 300 well-characterised PD patients as well as in matched controls. Standardised clinical assessment (Neuropathy Impairment Score), Unified PD Rating Scale, neurophysiological conduction studies, quantitative sensory assessment comprising small, large and autonomic fiber function (Quantitative Sensory Testing), assessment of personal and environmental parameters, and an exhaustive wearable sensor-based gait and balance assessment. This will allow us to define the diagnosis and stratify study participants by severity of sensory, motor and dysautonomic modalities. Based on such a comprehensive approach we will be able to determine, whether the presence of peripheral neuropathy influences gait and balance, and elaborate a composite score to assess the risk of falls.

The available dataset together with the neuropathological and neurophysiological evaluations will allow to explore the nature and relevance of peripheral neuropathy in Parkinson's disease.

The PhD candidate will be (i) collaborating in the clinical, neurophysiological and neuropathological assessment of the patients; (ii) developing an integrative database and establish a composite score to assess the influence of neuropathy in the risk of falling.

- A completed MSc degree in the field of neuroscience, biology, biochemistry, movement science or other related fields;
- Strong skills in Histopathology and/or neurophysiology;



- Good skill in data analysis;
- Good social skills and experience in working with human participants;
- Good command of the English Language and good English writing skills;
- Willing to learn a variety of complementary techniques ranging from small fiber neuropathy characterization, sensor-based quantitative sensitive and autonomic neurophysiological testing to new statistical approaches;
- Good communication skills and ability to work in a multidisciplinary and international team.

For additional information please contact:

Prof. Luís F. Maia

e-mail: luis.filipe.maia@chporto.min-saude.pt

Stichting Vrije Universiteit Amsterdam

Older adults: Which factors drive effective training of standing balance?

'Vrije Universiteit Amsterdam' (www.vu.nl) is one of the leading institutions for higher education in Europe and aims to be inspiring, innovative, and committed to societal welfare. It has teaching facilities for 25,000 students. The Faculty of Behavioural and Movement Sciences (www.fgb.vu.nl) is unique in the wide field of behavioural and health sciences for combining the disciplines of psychology, education sciences and human movement sciences. The faculty contributes to a better understanding of the way in which behaviour and movement are caused and can be influenced so as to promote physical and mental health and improve performance. The department of human movement sciences has a strong research track record with respect to the biophysics of human movement and applies this expertise in the context of sports and health care.

The Department of Human Movement Sciences, VU University Amsterdam, is offering a three-year PhD studentship within the neuromechanics section. The PhD student will perform a study on long-term balance training in older adults, to assess the psychological, neurophysiological and biomechanical correlates of improved balance performance. In addition, we will study generalisation of training effects to daily-life motor tasks, such as walking. This project will contribute to optimisation of standing balance training, to achieve more effective fall prevention in elderly and potentially in patients with movement disorders. The project is funded by the European commission and it is carried out within the framework of the Initial Training Network "Keep Control". Add website if available

- A completed MSc degree in the field of movement science, biomedical engineering, or related fields;
- Strong skills in biomechanics and/or neurophysiology;
- Good social skills and experience in working with human participants;
- Good software programming skills (MatLab);
- Good command of the English Language and good English writing skills;



 Good communication skills and ability to work in a multidisciplinary and international team.

For additional information please contact:

prof.dr. Jaap van Dieën e-mail: <u>j.van.dieen@vu.nl</u>

University Center Groningen

Harmonisation of Keep Control assessment protocols, inclusion of the ICF model as a framework, meta-analysis

The University Medical Center Groningen (UMCG) is a teaching and research medical centre in the Northern part of the Netherlands, and has designated Healthy Ageing as one of the three spear-points for research. The Center of Human Movement Science is a part of the Faculty of Medical Sciences within the University Medical Center Groningen (UMCG). The Center's mission is: a) to conduct high-quality education and multidisciplinary research on how movement and regular motor activity act as restorative, preventative and performance enhancing agents for motor and cognitive function across the lifespan and to develop effective interventions for improving health and quality of life; b) to create opportunities for interdisciplinary research collaboration across multiple disciplines at the local, national, and international level.

A three-year PhD position is available in the Center for Human Movement Sciences, University of Groningen Medical Center (UMCG), Groningen, within the Movement and Healthy Ageing section. The research of the PhD student is focused around the question how underlying mechanisms of balance and gait decline related to personal factors, physical activities and social participation. The PhD student will work on harmonization of data collection and assessment methods across different studies of the 'Training network "Keep Control", using the ICF model of health and disability. Meta-analysis with data-mining and pattern recognition methods on data obtained at different research sites will be performed, to assess interactions between multiple data streams and information about a participant's objective and subjective measures.

The project is funded by the European commission and it is carried out within the framework of the Initial Training Network "Keep Control" visit www.keep-control.eu.

- A completed MSc degree in the field of human movement science, epidemiology, medical & health sciences, biomedical engineering, or related fields;
- Strong skills in (multivariate) data analysis;
- Knowledge of the International Classification of Functioning, Disability and Health (ICF);
- Good software programming skills (MatLab, Statistical packages);
- Good command of the English Language and good English writing skills;
- Good communication and social skills and ability to work in a multidisciplinary and international team.



For additional information please contact: Dr. Claudine Lamoth e-mail: c.j.c. Lamoth@umcg.nl

Lille Centre of Excellence of Neurodegenerative Disease

Does methylphenidate treatment in older adults affect attention and motor control during gait initiation under dual tasking situations?

Lille University is one of the largest in Europe. At the heart of Lille, a young, vibrant city, European Capital of Culture in 2004, Lille University offers its students a top-quality education within the new European norms of Licence (Bachelor), Master and Doctorate, providing maximum opportunity of future success in the workplace.

Our University draws its international dimension from the richness and variety of its courses. It relies on a 4 century history whose quest for excellence goes on.

Linked to the great national research organisations, the University brings together world famous researchers, dedicated to a better understanding of the neurosciences, using trans disciplinary approaches: epidemiology, genetics, biology, clinical research, neuropsychology, neurophysiology, imaging, and pharmacology.

The Department of movement analysis is offering a three-year PhD studentship. The PhD student will perform a study to evaluate the effect of methylphenidate in community-dwelling older adults on dual-task interference during gait initiation. In more detail, we will test the effect of methylphenidate alone, cognitive training alone, both treatments and placebo, to reduce dual-task interference during gait initiation. Indeed, Gait initiation combines motor and cognitive components of movement preparation, and is therefore particularly affected by age-associated deficits in motor control. The project is funded by the European commission and it is carried out within the framework of the Initial Training Network "Keep Control". The PhD candidate will be (i) collaborating in the clinical, neurophysiological and assessment of the patients; (ii) collaborating in development of neurophysiological markers (using biomechanical, EEG signals) of attention .

Requirements

- A completed MSc degree in the field of movement science, rehabilitation science, health science, biomedical engineering, or related fields;
- Good skills in biomechanics and/or neurophysiology;
- Good social skills and experience in working with human participants;
- Good software programming skills (MatLab);
- Good command of the English Language and good English writing skills;
- Good communication skills and ability to work in a multidisciplinary and international team.

For additional information please contact: Arnaud Delval (arnaud.delval@chru-lille.fr)



Older adults at risk for falling: can a perturbation-based gait training programme prevent future falls?

Motekforce Link combines more than fifteen years of experience in high-quality rehabilitation technologies and real-time feedback, using virtual reality techniques. Motekforce Link is part of DIH Technologies, an international player and aspiring market leader in the field of Rehab & Sports Medicine and Intelligent Medication & Supply businesses, with passionate teams in San Diego, Seoul, Hong Kong, Beijing, Zurich and Amsterdam. The Motekforce Link mission is to contribute to the quality of life for every person by defining and setting standards for human movement performance, using our network of partners, our technology, and our drive to make a difference.

Motekforce Link is looking for a highly motivated and skilled PhD student to study the effects of a perturbation-based gait training programme on falls in older adults. External perturbations like trips and slips are a major cause of falls in older adults. Trips and slips can be simulated on a treadmill by quickly accelerating or decelerating the treadmill belt. The main focus of the 3-year PhD studentship will be on a randomized controlled trial investigating whether practice in responding to simulated trips and slips prevents future falls in older adults. In addition, we will study how difficult older adults find the simulated trips and slips, and validating the design of the perturbation-based gait programme. The project is funded by the European commission and it is carried out within the framework of the Initial Training Network "Keep Control": http://www.keep-control.eu/.

Requirements

- A completed MSc degree in the field of human movement science, epidemiology, rehabilitation science, health science, biomedical engineering, or related fields.
- Strong skills in biomechanics
- Good social skills and experience in working with human participants;
- Good verbal and written command of the English language; willing to learn Dutch to be able to communicate with patients
- Good communication skills and ability to work in a multidisciplinary and international team
- Good software programming skills (MATLAB and/or Python) and experience working with statistical software

For additional information please contact:

dr. Frans Steenbrink

e-mail: <u>frans.steenbrink@motekforcelink.com</u>

Gait Up SA, Lausanne

Older adults: Are gait and balance parameters assessed in the lab comparable with those collected in the domestic environment?



Gait Up (CH) is a spin-off of Ecole Polytechnique Fédérale de Lausanne (EPFL) in Lausanne, Switzerland, which design high quality solutions for movement analysis based on MEMS inertial sensors. Its main fields of expertise are gait, daily activity, running, skiing, and swimming. Gait Up commercializes complete products or license algorithm to big brands in digital health and wearables. Company's know-how includes wearable electronic design, biomechanical data collection and protocols, algorithm design and validation, as well as interpretation of results. Our products are used in sports and health to evaluate in a fast and accurate way disability or performance.

Being a young startup with important growth, Gait Up is a multi-national team which already delivers customers in 16 countries worldwide. We are looking for a new PhD student to take part into a research on gait and balance assessment in the real-world, and work in the development of new methods and algorithm. The project is done in the frame of multi-center European consortium, with planned cooperation and travels in clinical university partners and other academic and industrial partners.

Requirements:

- MSc degree in information technology, signal processing, or biomedical engineering
- Interest for movement analysis and its clinical applications
- Development skills in MATLAB and Python
- Knowledge of signal processing and experience with inertial sensors
- Flexibility, autonomy, and motivation to work in a startup environment
- Start after March 2017

For additional information please contact directly: Dr. Benoit Mariani benoit.mariani@gaitup.com

Hasomed GmbH, Magdeburg

Older adults who fall: Can a wireless acoustic feedback system prevent falls?

HASOMED GmbH is an owner-managed company focusing on neurological rehabilitation and is a spin-off from the Department of Science of the Medical Faculty of the University Magdeburg. Our particular interest is an intense dialogue with hospitals, practices, and patients using our product. This philosophy has made us to one of the leading companies worldwide in the field of neurological rehabilitation. All products of HASOMED GmbH have been developed in close interdisciplinary cooperation with medical partners, especially with rehabilitation clinics and neuroscientists. The company's capacity regarding the development of hardware, software and electronics led to products well established in the market for neurological rehabilitation. All products are distributed by HASOMED GmbH.

A three-year PhD position is available at HASOMED GmbH in Magdeburg, Germany. Research topic will be acoustic movement feedback. The PhD student will participate in a development of a mobile feedback system based on inertial sensor data. It is required to improve existing algorithms as well as finding new ways for signal processing. The candidate



will validate his approach and test it for adaptability, feasibility, acceptability and efficacy of a wireless acoustic feedback system that aims at influencing gait and balance deficits of older fallers in daily life. The work is embedded in an Initial Training Network named "Keep Control" and is funded by the European commission.

Requirements

- A completed MSc degree in the field of biomedical engineering, biomechanics, computer science, electrical engineering or other related fields,
- · Good skill in signal processing and data analysis,
- · Good programming skills,
- Good command of the English Language and good English writing skills,
- Willing to learn complementary skills required for medical device engineering,
- Good communication skills and ability to work in an interdisciplinary team.

For additional information please contact: Marc Hofmann marc.hofmann@hasomed.de

University of Kiel and Patients Know Best

Implementation of Internet platform, evaluation of feasibility and users' motivation

This PhD fellowship is provided by the Kiel University in Germany and Patients Know Best in London, UK. The Christian-Albrechts-Universität (CAU) Kiel is the northern-most full University of Germany located at the Baltic sea with 8 facilities and 25000 students. The Faculty of Medicine is one of the four founding faculties. Research at the Faculty of Medicine is characterized by diverse academic networks and forward-looking interdisciplinary profile areas. The dedicated focus of the Faculty is on digital medicine. The Department is a tertiary referral center for all types of movement disorders and has a large outpatient facility.

Patients Know Best created the world's first patient controlled medical record to be able to share healthcare information between patients, professionals and organisations across organisational and geographical boundaries. It is used in seven countries across 100 sites, covering a range of populations and conditions and enables coordination of healthcare and research.

A three-year PhD position is available in these two centers but the main location will be Kiel. The PhD project will implement the digital participant-controlled *PatientsKnowBest* medical record system at all local sites of the KEEP CONTROL network, to enable the harmonized collection of all data produced within and across the network. The focus of the PhD program will be to test feasibility, acceptability and motivational aspects of the system by both, study participants and researchers within the network, and to design new motivational features for study participants to the system, such as a medication interaction. The fellow will closely work together with the Groningen fellow to organize the overall data generated in the network during the project.



- A completed MSc degree in the field of biomedical engineering, biomechanics, neuroscience, movement science, sport science, computer science, electrical engineering or other related fields;
- Strong skill in signal processing, data analysis (with, e.g., Matlab) and biomedical statistics, as well as in database organization and neurophysiology
- Strong project management skills
- Familiarity with web-based healthcare technology and healthcare informatics preferable
- Very good communication and social skills and ability to work in a multidisciplinary and international team;
- Good command of the English Language and good English writing skills.

For additional information, please contact: Prof. Walter Maetzler w.maetzler@neurologie.uni-kiel.de