

## Early Stage Researcher / PhD Student (M/F)

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### About Us

Twente Medical Systems International B.V. (TMSi) is specialized in developing high-precision multi-channel amplifiers, data acquisition and communication solutions for a wide range of (electro-)physiological applications. We use unique amplifier technology, especially suited for use in "hostile" measurement environments, such as very noisy surroundings, demanding ambulatory applications with potential movement artifacts or in cases with very poor electrode impedances.

TMSi offers its products through OEM partners and sells them directly to the medical research community. Our products are CE certified for medical use and developed and manufactured under a stringent ISO 13485-2016 quality system.

TMSi is part of the recently approved MOTION project, a Marie Skłodowska-Curie ITN (Innovative Training Network) funded by the European Commission Horizon2020 program. The project consortium consists of academic and industrial partners from Sweden, the United Kingdom, Italy and the Netherlands who have joined forces to educate the next generation of European experts in cognitive neuroscience. Central theme of the project is to exploit novel wireless and wearable research technology to examine early social-cognitive development in children. MOTION strives to move experimental infancy research from restricted, artificial laboratory contexts to more natural situations, where children are actively engaged in natural interaction with their social and physical environment.

To fulfill our role in this project, we are looking for an **Early Stage Researcher (ESR) / PhD Student**.

### JOB DESCRIPTION

You will develop and validate optimal tools specifically geared towards behavioural measurements of young children, with an emphasis on signal analysis of various physiological signals (EEG, EMG and others) and software development. If desired, you can pursue a PhD degree in close cooperation with one of our academic partners in the Netherlands.

The successful candidate will be employed by TMSi and work from our office in Oldenzaal, the Netherlands. You will be surrounded by a team of enthusiastic people with strong skills in electrophysiological data acquisition and analysis. You will interact on a regular basis with the other project partners and cooperate with the other ESRs where required. As part of the ITN, you are further expected to spend some time with other project partners in this international collaboration.

## REQUIREMENTS

- Master's degree and a background in information technology, neuroscience, biomedical technology, technical medicine, electrical engineering, applied mathematics or similar, with experience and a strong affinity towards the medical field, in particular cognitive neuroscience
- Excellent software skills (Matlab, C)
- Excellent command of written and spoken English
- Proven analytical and problem-solving skills
- Creative and out-of-the box thinker
- Good communication skills
- Both a team worker and able to work independently

## IMPORTANT MOBILITY CONSTRAINTS

Successful applicants cannot have resided in the Netherlands for more than 12 months in the 3 years immediately preceding the engagement date. They must further be in the first four years of their research career and not have been awarded a PhD degree.

TMSi is an equal opportunity employer. The position is also not restricted to EU citizens. However, in the case of candidates from outside the EU, Dutch Immigration authorities will have to approve the relevant permits.

## ABOUT THE PROJECT

Recent international reports emphasize that the first three years of children's life have more impact on their future outcomes than any other period during life. In this project, we seek to advance our understanding of the early determinants of the social and cognitive development. In the past, experimental research on early development in infants was restricted to artificial laboratory settings. However, only by studying children who are actively engaging in natural interaction with their social and physical environment, we can acquire ecologically valid, robust information about their social and cognitive development. It is thus essential to move experimental infancy research towards more natural situations. In doing so, MOTION will train a new generation of highly-skilled experts in the field of early human development. New advances in wearable and wireless technologies now provide us with a unique opportunity to literally "unleash" the children we study - to free them from cables and constraints associated with the previous research methods. The primary scientific aim of the MOTION project is to leverage these new technological advances to study infants' and toddlers' body movements, gaze direction, and brain activity as they spontaneously and actively explore the world around

them. MOTION will develop, produce and commercialize new tools to study early development in close cooperation between industry and academic partners. Innovative research tools will be used to investigate infants in natural interaction with their social and physical environment and gain a deeper understanding of early development. In addition to disseminating the new tools and research findings among the scientific community, it is the explicit aim of MOTION to reach out to professionals and the public, educate them about early development and instigate an open dialogue between professionals working with young children and development researchers.

## CONDITIONS OF EMPLOYMENT

The salary, based on the Marie Curie Program regulations, is competitive and consists of a living and mobility allowance and a possible family allowance. In addition, you might be eligible to the 30%-tax-ruling in the Netherlands (entailing that 30% of your salary might be tax-free).

If desired, this position can be equivalent to a PhD-student position, with the possibility of a PhD degree in cooperation with one of our academic partners.

The successful candidate will be appointed for an initial period of one year, at the end of which an evaluation will take place. Following a successful outcome, the period will be extended for at least another two years.

## FUTHER INFORMATION, APPLICATIONS AND TIMELINE

Please apply by sending us your full resume including grade list and a short motivation letter to:

[info@tmsi.com](mailto:info@tmsi.com)

For further information about the project and the position, please contact

[Leo.Hoogendoorn@tmsi.com](mailto:Leo.Hoogendoorn@tmsi.com)

The deadline for submissions is April 15<sup>th</sup>, 2018. The starting date will be September 1, 2018.