

RESEARCH FELLOW IN COMPUTER VISION AND HUMAN INTERACTION

Vacancy number: 2013-iCARE/W

Location: Wageningen, The Netherlands

Contact person: Dr. N.P. van der Aa

Noldus Information Technology is a leading developer of software and instrumentation for the study of human and animal behavior. We are specialists in behavioral observation, video analysis, computer vision, signal analysis, sensor fusion and pattern recognition. Our tools are used in psychology, neuroscience, human factors, consumer science and many other fields. Our clients include more than 6.700 universities, research institutes and companies in over 85 countries. We currently employ more than 120 people, spread over our headquarters in Wageningen, The Netherlands and branch offices across Europe, North America and China. Our company culture is based on passion for excellence and customer satisfaction, and we strongly believe that the success of our business is related to the dedication of our employees.

THE ICARE PROJECT

We have an opening for an early stage research fellow in the field of computer vision and machine learning, starting from June 2014. This position has been opened in the framework of "iCARE", a European research and training network (Marie Curie ITN) on "improving children's auditory rehabilitation". To optimize the spoken communication in children with hearing impairment, it is crucial to understand the interaction between the child and its caregiver. The objective of this position is to develop a new and robust system to determine the quality of such communication. Tasks involve the identification of parameters for supportive interaction between the child and the caregiver, to capture the required features in the scene unobtrusively and to develop a non-intrusive technological system to quantify this supportive communication. iCARE is an international and interdisciplinary consortium from academia, industry and socio-economic agencies and offers a choice of 11 PhD and 3 postdoc positions, starting June or July 2014. Each project is supervised by a multidisciplinary team of experts and will benefit from extensive training.

RESEARCH FELLOW POSITION

The research fellow to be employed at Noldus Information Technology for a period of 3 years will develop nonintrusive technology to detect the behavior parameters of the interaction between the child with hearing impairment and its caregiver. Camera technology (both 2D and 3D) will be used to capture the scene without being intrusive. To analyze the video streams, computer vision and machine learning algorithms will be developed. Facial expressions, gaze direction, body orientation and behavior classification will be crucial parts of the system. The fundamental task of the Research Fellow is to distinguish the most essential parameters to quantify the interaction and make a robust measuring system to capture those parameters. Besides the technical development, the research fellow is expected to validate the system by setting up experiments and work with hearing impaired children and their caregivers.

The research work will be carried out within Noldus InnovationWorks, the research laboratory of Noldus Information Technology in Wageningen. Scientific supervision will be provided by Dr. Astrid van Wieringen and Prof. Dr. Guido Lichtert, Department of Neurosciences, KU Leuven, where the research fellow will be enrolled as a Ph.D. student.

YOUR PROFILE

University degree (M.Sc. level) in computer science, electronic engineering, or applied mathematics or any equivalent degree.

Excellent 1st degree, good verbal and written communication skills in English. Affinity with the Dutch language is desired in the experiments.

Substantial knowledge of mathematics, statistics and informatics, as well as computer programming (e.g. Matlab and C++) and the Windows operating system.

Affinity with linguistics, educational science and psychological aspects of interaction with hearing impaired children is desirable, as well as appreciation for the multidisciplinary nature of the project.

You must be willing to move to The Netherlands for the duration of the project and willing to travel frequently to Leuven (Belgium).

You are a citizen of the European Union.

You are a creative and pro-active person who likes to work independently, with a strong drive and perseverance to accomplish a challenging mission.

MARIE CURIE ITN REGULATIONS

Marie Curie funding is intended to promote mobility of early career researchers within the research community. Candidates must: a) have received a degree (Bachelor or Master's) that qualifies them for PhD training, b) should not have undertaken more than 4 years of fulltime research subsequent to that degree, and c) should not have been resident within the 'country of interest' for more than 12 months within the 3 years prior to 1 June 2014. For a full description of the eligibility conditions see: <http://ec.europa.eu/research/mariecurieactions/>.

HOW TO APPLY FOR THIS POSITION

Candidates are invited to send their application, including a letter of motivation, curriculum vitae and the names of two references, as a Word or PDF file, to jobs@noldus.nl, Attn: Nathalie Verschuur. Technical questions about the position can be addressed to Dr. Nico van der Aa, computer vision researcher, n.vanderaa@noldus.nl.

