

Incoming Fellowship projects at University College Cork/Tyndall National Institute

Three areas of research expertise in the University College Cork/Tyndall National Institute which may be of interest for an *Incoming* project proposal are listed below

1. The role of assistive technologies in assessment and diagnosis of people with Intellectual Disabilities and Autism

Electrophysiological monitoring through the use of EEG, Eye tracking and Evoked Response Potential (ERP) among others can offer insights into various aspects of the lives of pre- and non-verbal people. For example, projects could monitor a person's stress and anxiety levels and help prevent incidents of self-injurious behaviour, or early detection of autism in infants. These could also lead to the development of specific interventions addressing behaviour and communication needs.

2. The Role of Assistive Technology in Enabling Young Adults with ASD to Deal with Anxiety: A Community-Based Participatory Research Project

Transitioning to adulthood creates anxieties for all young people. For young people with ASD the challenges of progressing into educational and career routes, moving toward independent living, developing more adult social lives and negotiating relationships and sexualities are compounded by the anxiety that frequently accompanies ASD.

Assistive Technology in the form of a digital anxiety management tool, controlled by sensory response and triggering reply from a digital peer support network would have the potential to reduce anxiety and stressful situations. Such a tool could also serve as an anxiety tracking system, including a GPS-based locator facility, which would enable users to monitor and reflect on their anxiety patterns with a view to making appropriate interventions to avoid, reduce or develop resilience in relation to anxiety triggers. A prototype of this type of technology has been developed see <http://www.catalystproject.org.uk/projects/sprints/access-asd/>.

3. Using Assistive Technologies to facilitate communication skills in people with Intellectual Disabilities and Autism

The use of sign language as a communication tool for people with intellectual disability is common practice. However the disadvantage with this method of communication is that others must also know the signs so as to be able to communicate with the person. The use of an interactive glove has the potential to convert the signs used by the person into speech, so that they are not restricted in their communication.



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