DE-ENIGMA project kicks off aiming to create human-robot interactions for children on the autism spectrum

The DE-ENIGMA project, funded by Horizon 2020 (the European Union’s Framework Programme for Research and Innovation), aims to create and evaluate the effectiveness of a robot-based technology, developed to support autistic children in their learning. This technology will realise robust, context-sensitive (that is, user- and culture-specific), multimodal (including facial, bodily, vocal and verbal cues) and naturalistic human-robot interaction (HRI) to enhance the social imagination skills of children on the autism spectrum.

The project, with a budget of almost 4 million euros, is running until August 2019. It includes the design of effective and user-adaptable robot behaviours for autistic children, leading to more personalised and effective therapies than previously available.

DE-ENIGMA Consortium
The project coordinator, University of Twente (UT) from the Netherlands, works closely with all the other partners: Imperial College of Science Technology and Medicine (ICL) from the United Kingdom, University of Passau (UP) from Germany, Institute Of Mathematics Simion Stoilow of The Romanian Academy (IMAR) from Romania, University College London (UCL) from the United Kingdom, the Serbian Society of Autism (SSA) from Serbia, Autism-Europe AISBL (AE) from Belgium and IDMIND - Engenharia De Sistemas LDA (IDM) from Portugal.

Autism and robots
Recent developments in human-robot interaction technology have led to attempts to
integral part of the psychoeducational therapy for autistic children. The main reason for this is that humanoid robots are perceived by these children as being more predictable, less complicated, less threatening, and more comfortable to communicate with than humans, with all their complex subtleties and nuances.

About autism

Autism is a neurodevelopmental condition, characterized by social communication and social interaction difficulties as well as restricted and repetitive behaviour and interests. There are over 5 million people on the autism spectrum in Europe – around 1 in every 100 people, affecting the lives of over 20 million people each day.

About Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.