An.Dy
Project ID: 731540
Funded under:
H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

Advancing Anticipatory Behaviors in Dyadic Human-Robot Collaboration

From 2017-01-01 to 2020-12-31, ongoing project | An.Dy Website

Project details

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<th>Total cost:</th>
<th>Topic(s):</th>
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<td>EUR 3 950 025</td>
<td>ICT-25-2016-2017 - Advanced robot capabilities research and take-up</td>
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<th>EU contribution:</th>
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<td>EUR 3 950 025</td>
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<td>Italy</td>
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Objective

Recent technological progress in robot physical interaction permitted robots to actively and safely share with human a common workspace. Thanks to these technologies, Europe nowadays leads the robotic market in the niche of safety certified robots by endowing them with the ability to react to unintentional contacts. ANDY leverages these technologies and strengthens the European leadership by endowing robots with the ability to control physical collaboration through intentional interaction. These advances necessitate progresses along three main directions: measuring, modeling and helping humans engaged in intentional collaborative physical tasks. First, ANDY will innovate the way of measuring human whole-body motions developing the ANDYSUIT, a wearable force and motion tracking technology. Second, ANDY will develop the ANDYMODEL, a technology to learn cognitive models of human behavior in collaborative tasks. Third, ANDY will propose the ANDYCONTROL, an innovative technology for helping humans through predictive physical collaboration.

ANDY will accelerate take-up and deployment by validating its progresses in realistic scenarios. In the first validation scenario the robot is identified with an industrial collaborative robot (i.e. robot=cobot) which adapts its ergonomy to individual workers. In the second validation scenario the robot is identified with an assistive exoskeleton (i.e. robot=exoskeleton) optimizing human comfort and reducing physical stress. In the third validation scenario the robot is identified with a humanoid (i.e. robot=humanoid) offering assistance to a human while maintaining the balance of both.

Related information

| Report Summaries | Periodic Reporting for period 1 - An.Dy (Advancing Anticipatory Behaviors in Dyadic Human-Robot Collaboration) |
Coordinator
FONDAZIONE ISTITUTO ITALIANO DI TECNOLOGIA
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EU contribution: EUR 874 317,50
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Activity type: Research Organisations
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EU contribution: EUR 582 238,75
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Activity type: Research Organisations
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EU contribution: EUR 425 222,50
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Activity type: Research Organisations
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EU contribution: EUR 698 246,25
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Activity type: Research Organisations
Contact the organisation

XSENS TECHNOLOGIES B.V.
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Netherlands
EU contribution: EUR 316 250
See on map
Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
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IMK AUTOMOTIVE GMBH
AMSELGRUND 30
09128 CHEMNITZ
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**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

**EU contribution:** EUR 295 000

See on map

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MAX-NADER-STRASSE 15
37115 DUDERSTADT
Germany

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

**EU contribution:** EUR 441 500

See on map

AnyBody Technology A/S
Niels Jernes Vej 10
9220 Aalborg
Denmark

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)

**EU contribution:** EUR 317 250

See on map

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