Culture Aware Robots and Environmental Sensor Systems for Elderly Support

Fact Sheet

Project Information

CARESSES

Grant agreement ID: 737858

Funded under H2020-EU.3.1.4.

Project website

Overall budget € 2 084 248,75

Start date 1 January 2017

EU contribution € 2 084 248,75

End date 31 January 2020

Coordinated by UNIVERSITA DEGLI STUDI DI GENOVA

Italy

Objective

The groundbreaking objective of CARESSES is to build culturally competent care robots, able to autonomously re-configure their way of acting and speaking, when offering a service, to match the culture, customs and etiquette of the person they are assisting. By designing robots that are more sensitive to the user’s needs, CARESSES’ innovative solution will offer elderly clients a safe, reliable and intuitive system to foster their independence and autonomy, with a greater impact on quality of life, a reduced caregiver burden, and an improved efficiency and efficacy.

The need for cultural competence has been deeply investigated in the Nursing literature. However, it has been totally neglected in Robotics. CARESSES stems from the consideration that cultural competence is crucial for care robots as it is for human caregivers. From the user’s perspective, a culturally appropriate behavior is key to improve acceptability; from the commercial perspective, it will open new avenues for marketing robots across different countries.
CARESES will adopt the following approach. First, we will study how to represent cultural models, how to use these models in sensing, planning and acting, and how to acquire them. Second, we will consider three (physically identical) replicas of a commercial robot on the market and integrate cultural models into them, by making them culturally competent. Third, we will test the three robots, customized for three different cultures, in the EU (two cultural groups) and Japan (one cultural group), on a number of elderly volunteers and their informal caregivers. Evaluation will be conducted through quantitative and qualitative investigation.

To achieve its groundbreaking objective, CARESES will involve a multidisciplinary team of EU and Japanese researchers with a background in Transcultural Nursing, AI, Robotics, Testing and evaluations of health-care technology, a worldwide leading company in Robotics and a network of Nursing care homes.

Field of science
/social sciences/economics and business/business and management/commerce
/medical and health sciences/health sciences/nursing
/engineering and technology/electrical engineering, electronic engineering, information engineering/electronic engineering/robotics

Programme(s)

Topic(s)

Call for proposal
H2020-SC1-2016-CNECT-EUJ

Funding Scheme
RIA - Research and Innovation action

Coordinator
UNIVERSITA DEGLI STUDI DI GENOVA

Address
Via Balbi 5
16126 Genova

Activity type
Higher or Secondary Education Establishments

EU contribution
€ 548 875
## Participants (5)

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<thead>
<tr>
<th>Organisation</th>
<th>Country</th>
<th>EU contribution</th>
<th>Address</th>
<th>Activity type</th>
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<tr>
<td>OREBRO UNIVERSITY</td>
<td>Sweden</td>
<td>€ 502 326,25</td>
<td>Fakultetsgatan 1, 70182 Orebro</td>
<td>Higher or Secondary Education Establishments</td>
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<tr>
<td>MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION</td>
<td>United Kingdom</td>
<td>€ 326 680</td>
<td>The Burroughs, Hendon, NW4 4BT London</td>
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<td>UNIVERSITY OF BEDFORDSHIRE</td>
<td>United Kingdom</td>
<td>€ 247 742,50</td>
<td>University Square, LU1 3JU Luton</td>
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<td>SOFTBANK ROBOTICS EUROPE</td>
<td>France</td>
<td>€ 356 250</td>
<td>Rue Colonel Pierre Avia 43</td>
<td>Private for-profit entities</td>
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ADVINIA HEALTH CARE LIMITED
United Kingdom
EU contribution
€ 102 375

Address
314 Regents Park Road
N33JX London

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

Last update: 11 July 2020
Record number: 206852

Permalink: https://cordis.europa.eu/project/id/737858/

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