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Wolfert, Pieter; Neerincx, Anouk; Thunberg, Sofia; Vastenburg, Martijn; Neerincx, Mark

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Socially Competent Agents That Care

Pieter Wolfert
Radboud University
Nijmegen, The Netherlands
pieter.wolfert@ru.nl

Anouk Neerincx
Utrecht University
Utrecht, The Netherlands
a.neerincx@uu.nl

Sofia Thunberg
Chalmers University of Technology
Gothenburg, Sweden
sofia.thunberg@chalmers.se

Martijn Vastenburg
Radboud University
Nijmegen, The Netherlands
martijn.vastenburg@ru.nl

Mark Neerincx
Delft University of Technology
Delft, The Netherlands
m.a.neerincx@tudelft.nl

Abstract

This full-day workshop focuses on advancing research and development in socially-competent agents that care. Many agent platforms and kinds of embodiments of agents that have a primary focus on caring, one way or another, for the end users. In this workshop, we aim to look at value-based design, inclusiveness, empathetic design and long-term human-agent interaction for socially competent agents that care.

Keywords

social agents, care, human-robot interaction

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1 Overview

During the past 20 years, several initiatives have sought to design, develop, and deploy social agents for care in different environments. Embodied conversational agents have potential to e.g., improve physical activity, nutritional behavior, and accessibility to online health information [3]. Furthermore, they show potential to improve the mental well-being of the user, e.g., by lowering depression symptoms [3] and combating loneliness in older adults [1]. To achieve these outcomes, agents must be socially competent, e.g., by understanding and adapting to the needs of the user [2], and showing empathy [5].

In this full-day workshop we want to bring together researchers and industry members working on socially-competent agents that care. We aim to discuss value-based design, inclusiveness, empathetic design, personalisation and long-term human-agent interaction. These topics will be analyzed from a transdisciplinary approach, addressing *both* the scientific & technological state-of-the-art & foresight (such as Hybrid Intelligence and generative AI) *and* the societal needs & concerns for social agents (such as older adults' engagement in meaningful activities with agents). During the workshop, the different disciplinary perspectives, theories and methods will be discussed, related and worked out through keynotes, panel discussions and a brainstorm & design session.

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2 Goals and Objectives

We aim to bring together researchers and industry professionals, to exchange knowledge, ideas and findings relevant to socially-competent agents that care.

We want to promote discussions and strategies on how to design agents that promote inclusiveness. Additionally, we want to explore frameworks and setups for long-term human-agent interaction.

3 Workshop Structure

The workshop is planned to be organized for in-person attendees and structured around two invited speakers, a pitch and poster session, and brainstorm and design session.

We will have both Oksana Hagen and Rory Baxter as keynote speakers from academia, working on voice AI interfaces and social prescribing. From industry, we will have one keynote by a research scientist from Enchanted tools.

Currently, we have the following preliminary schedule:

9:00 Welcome
9:15 Keynote I - Academia
9:45 Keynote II - Industry
10:15 Coffee break
10:45 Panel discussion
12:00 Lunch
13:30 Poster Pitches
14:00 Brainstorm & Design Session
16:00 Pitch Presentation of Ideas
16:30 Closing Discussion

In the afternoon session, we will organise a Brainstorm & Design (B&D) session. Participants are invited to submit an extended abstract related to the workshop topic, which we will use to prepare groups for this B&D session. In poster pitches, the participants will present their extended abstracts, of which each group will choose one topic for their B&D session. In this session, the groups of participants will use several Design Thinking tools [4] (e.g., personas, empathy map, brainsketching, storyboards) to come up with novel, user-centered, ideas, which they will present in a pitch at the end of the session. After the workshop day, we plan to organise a social

event for the attendees to continue the discussion and facilitate for future collaborations.

4 Expected Outcomes

- Together we will build an enhanced understanding of value-based design in relation to social competent agents that care.
- We will gather strategies for inclusive and empathetic design, promoting accessibility and user acceptance.
- We will bring together (design) researchers working on these topics, to foster the community, exchange ideas and stimulate collaborations.
- We plan to further document the outcomes of the workshop session via a paper, for which we will invite workshop participants as collaborating authors.

5 Expected Audience and Call for Papers Plan

The co-organizers have strong experience with organizing workshops at premier conferences such as ICMI, IVA, RO-MAN and HRI.

We look forward to receiving researchers working on (but not limited to) human-agent interaction, human-computer interaction, robotics, applied machine learning, assisted healthcare and industrial design. We expect around 30 participants.

We invite participants to submit their work (in progress) to our workshop on socially-competent agents that care, where we aim to explore cutting-edge research and design practices in AI systems. Researchers are encouraged to submit original contributions focusing on topics such as value-based design, inclusiveness, empathetic design, personalization, and long-term human-agent interaction. Submissions can take the form of extended abstracts (2 pages). All submissions will undergo a single-blind peer-review process by experts in AI, robotics, HCI, ethics, and related fields. Accepted papers will be presented at the workshop during the poster pitches, and will be used for the brainstorm & design session. We will communicate submission guidelines and deadlines through the workshop website that will be published during the fall. We will advertise our workshop through mailing lists and social media, as well as reach out to colleagues across academia and industry.

6 Special Requirements

For the keynote session we require access to a projector. For the afternoon we would like to have poster boards. The room should be suitable for a brainstorm & design session where participants can be grouped at tables.

7 Organizers

Pieter Wolfert (Lecturer, Radboud University) works on social human-robot interaction and multimodal interaction. He aims to equip agents with social skills and behaviours, such that these agents can be of help in healthcare.

Anouk Neerincx (PhD Student, Utrecht University) works on social robots for child and family (physical and mental health) care. She has experience in qualitative and quantitative (real-world) user studies, as well as participatory design with end-users.

Sofia Thunberg (Postdoctoral Researcher, Chalmers University of Technology, Gothenburg) works in the field of critical robotics and conducted her PhD work on companion robots for older adults in care homes.

Martijn Vastenburg (Assistant Professor, Radboud University) works on design methodology and social robotic interaction, in particularly targeting social healthcare companions.

Mark Neerincx (Full Professor, TU Delft; Principal Scientist, TNO) focuses on designing intelligent systems that enhance human performance and well-being in various domains, including healthcare and search & rescue operations.

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