

HUMAN MACHINE INTERACTION



THE HUMAN MACHINE INTERACTION RESEARCH GROUP AT AALBORG UNIVERSITY DEPARTMENT OF ARCHITECTURE, DESIGN AND MEDIA TECHNOLOGY TECHNICAL FACULTY OF IT AND DESIGN

The group investigates human-centered challenges in interaction with modern interface technologies such as robotics or virtual reality with a special focus on health and learning applications.

RESEARCH

KEY RESEARCH AREAS

The research group focuses on challenges regarding cognitive and physical abilities, social rules and practices, as well as environmental parameters that impact/determine human-machine interactions.

The group also does applied research with regional and national stakeholders in the areas of health, robotics and smart learning.

WHAT WE DO

The research group aims at investigating interactions with more and more complex machines based on human standards and behaviors.

This includes questions about the role of emotions in interaction, cultural heuristics of behavior, as well as the question of how routines change when we introduce technology e.g. in health care settings, in schools, etc.

Results may be used for

Rehabilitation and assisted living; optimization of work processes with humans in the loop; smart learning ecosystems; new interaction approaches for assistive robots.

EDUCATION

STUDY RELATED ACTIVITIES

The members of the Human-Machine Interaction research group teach a number of different topics, including:

- › Programming
- › Design and Analysis of Experiments
- › Interaction design
- › HRI
- › Art and technology

COLLABORATION

WHO BENEFITS FROM OUR RESEARCH

The research is particularly interesting for the health and care sector; schools, museums and other learning institutions, robotics industry.

EXTERNAL PARTNERS

Hammel Neurocenter, Frederikshavn Kommune, Tutee ApS, Association for Smart Learning Ecosystems, DMRI, Honda Research Institute, Neurocenter Østerskoven, City of Aalborg, etc.

PUBLICATIONS

IMPORTANT PUBLICATIONS

- › [Augmented Reality Technology for Displaying Close-Proximity Sub-Surface Positions](#)
- › [Developing a New Brand of Culturally-Aware Personal Robots Based on Local Cultural Practices in the Danish Health Care System](#)
- › [Knowing you, Seeing me: Investigating User Preferences in Drone-Human Acknowledgement](#)
- › [Why Is She Naked? An iterative refinement of the digitisation of ICH with the OvaHimba tribe in Namibia](#)
- › [Self-rehabilitation of acquired brain injury patients including neglect and attention deficit disorder with a tablet game in a clinical setting](#)



AALBORG UNIVERSITY
DENMARK

KEY PROJECTS

DECOCHROM

A project that elevates printed graphics products to the age of interactivity, and empowers the creative industries with the tools and innovative advanced material sets to design and build aesthetically pleasing practical human interfaces to smart consumer goods and environments.

BUILD YOUR OWN ROBOT FOR INDEPENDENT LIVING

An exploratory project with the overall goal of developing a concept of social robots as do-it-yourself aids that can be broadly used by different groups of people with cognitive and physical impairments.

AUGMENTED CELLULAR MEAT PRODUCTION

A project on safe and efficient human robot collaboration in industrial contexts, aided by AR technologies as a prerequisite to establishing and maintaining trust between operator and robot.

VIDEO PRESENTATION



CONTACT

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