

The Rise of The Machine: A Critical Perspective on Life and Work in the Robot Age

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Promotional Paragraph

The rise of social robots cannot be stopped. However, we can try to understand their implications better to prevent potential harm to users and the society at large. In this track, we seek to identify what possible implications (positive and negative) social robots have on society in general (*macro-view*). Second, we aim to identify how robotics developers can optimize design procedures to foster a positive interaction between social robots and their end-users (*micro-view*). This dialog should help to identify relevant public policy considerations, as well as inform current debates on ethics concerning social robots to ensure user well-being.

Track Leaders

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The problem: Mankind is at the fringe of an artificially intelligent (AI) age (Huang and Rust 2018). Technology has started to transform virtually every aspect of our private and work lives. Especially exciting are the opportunities offered by so-called social robots. These interact with people in their daily routines at home, school, and workplace, and are there to assist in various ways (e.g. personal assistant like Google Assistant). They are expected to impact a variety of service settings, most importantly education, healthcare, elderly care, hospitality and retail (KPMG 2016). Yet, despite all big promises and crazy scenarios in popular press, robotics science is still a relatively young discipline and many robots are still at a prototype phase. Nonetheless, the field is advancing at a rapid pace, surging the need to identify a set of guiding principles for the development and design of social robotics to ensure a positive impact on society.

The new opportunities based on robotics' advancement do not only embark advantages for users and society in general. Many ethical and societal questions surrounding robot-delivered service at the individual, market and environmental level arise. For instance, Google recently introduced a smart assistant that can make phone-reservations for its end-users, without being identified by the human counterpart as a robot – a scenario that scared-off many people. We believe similar to the trend of social media, where many people initially focused primarily on its positive aspects, a more critical view of robots will arise quickly.

Track Goal: The rise of social robots cannot be stopped. However, we can try to understand their implications better to prevent potential harm to users and the society at large. This track brings together researchers and practitioners from different countries, industries, and specialties to exchange ideas and concepts about our life and work with robots and develop a more comprehensive understanding what living with robots means for our society. First, we seek to identify what possible implications (positive and negative) social robotics have on society in general (macro-view) – e.g., to what extent is societal well-being enhanced by social robots? Second, we aim to identify how robotics developers can optimize design procedures to foster a positive interaction between social robots and their end-users (micro-view) – with a particular emphasis on how robot appearance (e.g., human-like vs artificial), behavior (e.g., movement) and interactional skills (e.g., speech type, use of humor) impact user perceptions of well-being. This dialog should help to identify relevant public policy considerations, as well as inform current debates on ethics concerning social robots to ensure user well-being.

Our aim is to bring academics from different disciplines (e.g., service management, robotics, psychology, sociology) together to work on a holistic understanding of the impact of robots that are based on a broader theoretical basis than any single discipline can deliver. Moreover, we seek to start an exchange between academia and practice to inform each other's work with the most current knowledge. Finally, as we aim to bring together on an international network of contributors, we may capture differing cultural perspectives on robotics.

Pre-conference Activities

Theoretical Knowledgebase: Every academic of our interdisciplinary team needs to identify a set of key articles about robotics in their field that all track members should read. Track chairs will consolidate these individual contributions into a list of preconference readings for all to complete.

Additionally, every member will be invited to provide 1-2 research questions regarding the central topic to identify key areas of collaborative work. Moreover, a select group of contributors can start on the development of a literature synthesis of current robotics literature (e.g., International Journal of Social Robotics; Computers in Human Behavior; Journal of Robot-Human Interaction; Human-Robot Interaction; etc.) to have an in-depth view on the current state of the field, the future possibilities and to understand the robot-user relationship in detail.

Practical Knowledgebase: Every track member should collect robots case examples that exemplify the impact on private and work life of consumers. These examples should constitute a case study database that later informs the conceptual model and further academic research.

Additionally, every track member should identify industry experts for robots in their country or region to facilitate 1-2 in-depth interviews based on a semi-structured interview guideline elaborate by the track. These interviews inform the conceptual research and give a guideline for potential empirical research studies.

Collaboration Basis: To prepare the conference adequately, regular virtual meetings are needed and will be planned based on established timelines. To facilitate the collaboration other formats of shared platforms will be used. Especially shared boards on Pinterest, shared notebook on Evernote, project planning tools like Trello will be incorporated.

Tentative Conference Schedule

The goal of the conference is to develop a shared understanding of the impact of robots on their users (micro- view) and society at largely (macro-view), which should ultimately result in an integrative framework that serves at the basis for a conceptual paper. Additionally, a research agenda should be developed, that track members can use to set up empirical research projects. We hope that the collaboration between practitioners and academics, the numerous interviews in the pre-conference phase, and the case study collection supports this endeavor significantly.

Day 1 – Morning Session: Identify and find consensus about the key concepts and literature basis for a potential framework as well as the most exciting research questions. Similar to a case study class, the discussion should be possible right away if all track members have prepared their part of the pre-conference activities. The preparation of a robotics literature synthesis should also help to advance this discussion quickly.

Day 1 – Afternoon Session: Develop a preliminary map of the conceptual framework and a slide deck/poster for presentation at large. This presentation should be accompanied by characteristic robot cases based on the developed case study database.

Day 1 – Evening Session: Poster session, integrative learning across the different TCR tracks (we assume such a session is again planned).

Day 2 – Morning Session: Integrating feedback into the conceptual model. Working on an outline for a conceptual paper as a summary of the 9-month track work and the TCR conference and develop a short presentation for closing. Discussing empirical research opportunities and the build-up of a constant worldwide academic-practitioner network to support the work in this field.

Post-conference Activities

Competitive Paper Submission: We strive to write at least two papers based on the track work. A first conceptual paper to be submitted for consideration to the special issue at the Journal of Public Policy and Marketing, and a second empirical paper that tries to collect data in the area of the most promising research direction identified by the track members.

Robot case study database: Building up a website that serves as case study resources that highlights the impact of robots on our life and the society at large – which could be beneficial for other researchers in the field as well.

Building community: Building spin-off teams based on track members and new interested academics and practitioners to spark a network effect and grow the community in this work and research field. The teams will execute additional research projects within the research agenda by the TCR track. The community can be helpful in the future to find collaboration partners in academia and practice.

References

Huang, M.-H., & Rust, R. T. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 21(2), 155- 172.

KMPG (2016). Social Robots. KMPG white paper