## WORKSHOP of the RESEARCH INITIATIVE

# TECHNOLOGY & SOCIETY IN JAPAN AND BEYOND

Technical artefacts, technologies and infrastructures are shaping our everyday life in manifold ways. At the same time, their development, promotion and/or rejection is influenced by cultural patterns, ethical principles, social values as well as power relations. Thus, their study can be perceived as a promising starting-point for transdisciplinary and intercultural queries for research on intersections between Science, Technology and Society. In this workshop, we bring together scholars who share an interest in the analysis of co-construction processes of technology and society in Japan and beyond. What kind of visions exist in relation to autonomous driving in Japan? How can visions of technology-assisted care be co-created in Germany? What differences can be found in intercultural comparisons of AI ethics between the UK and Japan? What are success factors for co-creation approaches to transform social systems in Japanese municipalities? Moreover, which models or ideas of "participation" in development exist? Our research initiative aims at fostering a network of scholars of Japanese Studies and those from other disciplines with interest in methodologies and comparative research across different countries on topics such as medical technologies and care robotics, digital transformation and AI, mobility and autonomous driving, to mention a few. Furthermore, it strives to broaden linkages between the Japanese and the European research community of Science, Technology and Society and beyond.

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**Organisers:** Dr. Susanne Brucksch,
German Institute for Japanese Studies (DIJ), Tokyo, Japan

Dr. Cosima Wagner
Freie Universität Berlin, Germany

**Date:** June 25, 2021 (Fri)

**Venue:** Online Meeting (DIJ Tokyo)
Participation via login data are provided after prior registration via email: **brucksch[at]dijtokyo.org** (until June 24, 2021).

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WORKSHOP of the RESEARCH INITIATIVE:
**TECHNOLOGY & SOCIETY IN JAPAN AND BEYOND**

# PROGRAMME

16:00 Tokyo // 09:00 Berlin — **Greetings and Opening Remarks**
Susanne Brucksch, DIJ

16:10 Tokyo // 09:10 Berlin — **Session A: User, Visions and Technology Development**

- **Incentive Talk:** *Reflections on Participative Methods in Technology Development Research*
  Cosima Wagner, Freie Universität Berlin
- *Visions of Autonomous Driving in Japan*
  Yukari Yamasaki, Karlsruhe Institute of Technology
- *Visualizing Socio-Technological Lifeworlds with Design Fiction and Zine Making Methods*
  Richard Paluch, Tanja Ertl, Katarina Cerna & Claudia Müller, Information Systems, University of Siegen
- Discussants: Naonori Kodate, University College Dublin & Susanne Brucksch, DIJ
  Q&A

17:30 Tokyo // 10:30 Berlin — Short Break

17:45 Tokyo // 10:45 Berlin — **Session B: Ethics, Health and Technology in Context**

- **Incentive Talk:** *Should we embrace or reject public images of robots? Ideas from the project RoMi on designing a robot for health care institutions*
  Peter Remmert, Technical University Berlin
- *Introducing the PATH-AI Project: Mapping an Intercultural Path to Privacy, Agency and Trust in Human-AI Ecosystems*
  James Wright, Alan Turing Institute, UK
- *What kind of co-creation approach can transform social systems? A case study from a Japanese medium-sized city*
  Atsunobu Kimura, Nippon Telegraph and Telephone West Corporation, Japan
- Discussant: Patrick Grüneberg, Kanazawa University
  Q&A

19:15 Tokyo // 12:15 Berlin — **Session C: Open Exchange on Ongoing Project**
Cosima Wagner, Freie Universität Berlin

19:45 Tokyo // 12:45 Berlin — **End of Workshop**

# ABSTRACTS

***Incentive Talk*: Reflections on Participative Methods in Technology Development Research**
Cosima Wagner, Freie Universität Berlin

How to enable to what extent "co-creation" or "participative design" of technology - especially when it comes to "social robotics" for the care sector - are urgent points of discussion in many research projects. Even more so, as techno-optimistic assumptions about the usefulness or even acceptance of products like social robots have not been fulfilled. In my introductory reflections I would like to bring in some methodological thoughts and questions for discussion from a highly inspiring workshop on "Participative technology development and design" at the University of Hannover in February 2021 (in German: https://www.ish.uni-hannover.de/de/institut/arbeitsbereiche/soziologie-der-digitalisierung/digital-relations-workshopreihe-des-ab-soziologie-der-digitalisierung/ ).

**Visions of Autonomous Driving in Japan**
Yukari Yamasaki, Karlsruhe Institute of Technology

This presentation explores what visions mean in Japan and how future imaginaries of autonomous driving are developed especially in the government. Riding tide of the times ("Jidai no Chōryū ni Noru") is a clear expression of a worldview held by Japanese, in that they view that the outside world is moving in a certain big flow, which brings about a "new era." While all sort of information or expectations are collected by the government in order to read the current and future tide and develop visions accordingly, they seem to expect also the population, "imagined" users, to catch the tide.

**Visualizing Socio-Technological Lifeworlds with Design Fiction and Zine Making Methods**
Richard Paluch, Tanja Ertl, Katarina Cerna & Claudia Müller, University of Siegen

In light of the global demographic changes, technological solutions, such as robotic systems, become even more relevant. However, we face great challenges in bringing such innovative technologies together with everyday lifeworlds of older adults. The new approaches are to be applied in the design of robots in order to include the active participation of all stakeholders equally and for developing new forms of meaningful practices. Creative methods such as Design Fiction or Zine Making can be helpful in visualizing future practices as part of the design process. Our contribution presents results from two such creative activities with researchers from Germany and Japan. We focus on the methodological reflection regarding the two approaches of Design Fiction

and Zine Making and how they can be conducted online. The central question of our Design Fiction workshop was: "How can autonomy and safety for human-robot-interaction (HRI) be designed in the future care sector regarding aging societies?" and of the Zine Making workshop: "How to adequately address and treat vulnerabilization processes in HRI?" We found out that the two issues of autonomy and safety are strongly interconnected in the design and understanding of HRI. Against this background, vulnerabilization can be de-stigmatized through a balanced HRI that understands being vulnerable as a resource and not aiming for invulnerability. We consider how creative methods can be used to visualize and explore technology design. In this context we understand design not as a mere technical development of a product, but as an innovative solution for helping people by handling vulnerabilization adequately through appropriate technological development now and in the future.

***Incentive Talk*: Should we embrace or reject public images of robots? Ideas from the project RoMi on designing a robot for health care institutions**
Peter Remmers, Berlin Ethics Lab, Technical University Berlin

In ethical investigations of human-robot interaction (HRI), cultural images of robots stemming from science fiction narratives or technological mythology are often rejected. On the other hand, public contributions of HRI usually work with these images, for example in the form of imaginary stock pictures or with reference to ambitious future scenarios. I present a few ideas for dealing with this contrast that result from my work in the HRI-project RoMi (developing a robot for health care institutions).

**Introducing the PATH-AI Project: Mapping an Intercultural Path to Privacy, Agency and Trust in Human-AI Ecosystems**
James Wright, Alan Turing Institute, UK

This talk will introduce some of the work underway on the PATH-AI project, a multidisciplinary collaboration between the Alan Turing Institute, the University of Edinburgh, and the RIKEN research institute in Japan. The project aims to expand current discussions about AI ethics and governance by investigating how the concepts of privacy, agency and trust are understood and operationalised differently in Japan and the UK in relation to AI and other data intensive technologies.

**What kind of co-creation approach can transform social systems? A case study from a Japanese medium-sized city**
Atsunobu Kimura, Nippon Telegraph and Telephone West Corporation, Japan

This paper introduces a pragmatic co-creation approach, which aims at resolving essential social issues. To tackle such issues, it is pointed out that focusing on problems is necessary, which often remain in gaps produced by certain social systems. This

perspective uncovers possibilities and limitations of the conventional co-creation approach seeking to democratize service design processes. In contrast, the Omuta Future Co-creation Center (PONI PONI) tackles such kind of social issues and strives to find ways of implementing actions through practical trial-and-error processes in a Japanese medium-sized city. Its research findings suggest that a pragmatic co-creation approach, which immanently critiques social systems, opens novel ways and methods for approaching social issues.

## SHORT BIOs (In alphabetical order)

**Dr Susanne Brucksch** is Principal Researcher at the German Institute for Japanese Studies (DIJ). Before, she was senior research fellow at Freie Universität Berlin, and visiting scholar at Waseda University in 2016, and at the Max Planck Institute (MPI) for Innovation and Competition in Munich in November 2019. At present, her research focuses on "*Technical Innovation and Research Collaboration in Japan: The Field of Biomedical Engineering"* and the book project with Dr Kaori Sasaki on "*Humans and Devices in Medical Context: Case Studies from Japan"*. (Forthcoming: https://www.dijtokyo.org/project/humans-and-devices-in-medical-contexts-case-studies-from-japan/)

**Katerina Cerna** is a Postdoc at the Information Systems Department, especially IT for the Ageing Society at the University of Siegen, Germany. She is interested in how participatory design can be used to facilitate learning to be well with her background in educational sciences and HCI. More information about the IT for Ageing Society <https://italg.wineme.uni-siegen.de/en/> or Katerina Cerna <https://italg.wineme.uni-siegen.de/en/team/dr-katerina-cerna/>

**Tanja Ertl** is a Research Associate and PhD Student at the Information Systems department, especially IT for the Ageing Society at the University of Siegen, Germany. Her research focuses on HCI4Margins with special focus on well-being, resilience and (mental) health, where she is looking for potentials, benefits, limitations and risks of ICT. More information about the IT for Ageing Society<https://italg.wineme.uni-siegen.de/en/> or Tanja Ertl <https://www.wineme.uni-siegen.de/team/ertl/>

**Patrick Grüneberg**, Associate Professor at the Institute of Liberal Arts and Sciences, Kanazawa University. Dr. phil. in Philosophy at Technical University Berlin (2012). Research in theory of subjectivity and consciousness, cognitive modeling of agency of movement, methods in AI and robotics, human-machine interaction for human empowerment.

**Dr Atsunobu Kimura** is Senior Researcher at NTT and a fellow of Kyoto university design innovation consortium. His research interests include user experience design, social design, living labs and social systems design. He is a leader of Omuta living lab project in Fukuoka, Japan and the Omuta Future Co-creation Center that started as general incorporated association in April, 2019.

**Naonori Kodate** is Associate Professor in Social Policy and Social Robotics at University College Dublin and also the founding Director of the UCD Centre for Japanese Studies. Kodate is currently the PI on the Toyota Foundation-funded project "Harmonisation towards the establishment of Person-centred, Robotics-aided Care System".

**Claudia Müller** has a professorship in Information Systems, especially IT for the Ageing Society at the University of Siegen, Germany. Her professorship focuses in teaching and research on information technology-based solutions to the challenges and problems of demographic change. Objectives are aimed at maintaining and increasing the social participation of older people, their mobility and independence, as well as the maintenance or improvement of domestic well-being and health in old age. More information about the IT for Ageing Society<https://italg.wineme.uni-siegen.de/en/> or Claudia Müller<https://italg.wineme.uni-siegen.de/en/team/assistant-prof-dr-claudia-muller/>

**Richard Paluch** is a PhD Student at the Information Systems Department, especially IT for the Ageing Society at the University of Siegen, Germany. His research focuses on the robotization of care. Possibilities and limits of robotic systems for nursing are analyzed and standards for reasoning and assessment are developed for people in need of care. More information about the IT for Ageing Society<https://italg.wineme.uni-siegen.de/en/> or Richard Paluch<https://italg.wineme.uni-siegen.de/en/team/richard-paluch/>

**Dr Peter Remmers** wrote his dissertation on epistemology of film perception (2018) and has been working since 2017 in several projects on the philosophy and ethics of human-robot interaction at the Berlin Ethics Lab of TU Berlin. Currently, he is working as a Research Assistant in the HRI project RoMi (romi-projekt.de).

**Dr Cosima Wagner** is Research Librarian at Freie Universität Berlin, University Library and - together with Dr Susanne Brucksch - Co-Host of the Technology Section in the Association for Social Sciences Research on Japan (VSJF). She is interested in applying participative methods in the field of knowledge infrastructure development (critical algorithm studies) as well as in STS and the "digital transformation" of the Japanese society.

**Dr James Wright** is a Research Associate at The Alan Turing Institute, where he works on PATH-AI: Mapping an Intercultural Path to Privacy, Agency, and Trust in Human-AI Ecosystems. James' PhD in anthropology and science and technology studies (STS) at the University of Hong Kong focused on the development and implementation of care robots in Japan. He has also worked as a researcher at the University of Sheffield and at the Fondation France-Japon at EHESS, where he looked at the use of digital technologies in adult social care in the UK, and at European care robot projects.

**Yukari Yamasaki**, MA, is a Research Fellow at the Institute for Technology Assessment and System Analysis (ITAS), Karlsruhe Institute of Technology. Her research interests include sociology of expectations, social acceptance and policy-making process in the context of emerging technologies. She finished her master's degree in environmental governance at the University of Freiburg.