

iSchool Conference Panel Proposal

Title: Humanising technology in a post-COVID world: information as an asset for all in Society 5.0

Type: Panel discussion with interactive audience participation (breakaway rooms, brainstorming, mind mapping and free discussion)

Organiser(s):

Prof Alta van der Merwe, Deputy Dean: Teaching and Learning, Faculty of Engineering, Built Environment and Information Technology, University of Pretoria, South Africa (panel facilitator)

Prof Ina Fourie, Head of Department, Information Science, University of Pretoria, South Africa (panellist)

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Abstract: Society 5.0 sparks a dramatic societal shift – a vision of the future that hinges on digitalisation, human-centred artificial intelligence and trusted sharing of data. Through significant advances in technology, enabling the generation, processing and representation of data, we have access to information as and when needed; to the extent of experiencing information overload (i.e. infobesity). The blur between the real and virtual worlds, is not new but presents with more intensity and requires us to make sense of information in diverse forms and adapt to the digital world. Firstly, by advancing technology to become more human-oriented, and secondly, to consider information as an asset with measurable economic value and other valuable characteristics that must be understood. We need better understanding of human needs, emotions and behaviour in the human-centred society. Our foremost responsibility in Society 5.0, should be to design technology that is better for humans, better at interacting with humans, and at alleviating infobesity!

Description

Background: The global COVID-19 pandemic has profoundly impacted the means by which we work, play, learn, research and interact and how we need to reflect on our responses and preparation for a technology driven future (captured in discussions of Society 0.5) – but at the same time human centred. Society 0.5 refers to a human-centred society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space (Michiharu, 2019). The challenges faced during the COVID-19 pandemic should guide our preparation for the near future to meet with the opportunities offered by Society 0.5 and to address the gross inequalities (inequity, lack of justice for all, social

exclusion) identified during the COVID-19 pandemic. Information (in all its forms and interpretations e.g. as thing, process or knowledge according to Buckland, 1999) can be a valuable asset if technological developments are tailored to human centred needs and the empowerment of the most vulnerable members of our societies in a sustainable manner that can address access to information for all, but also counter information overload. Interdisciplinary research should address core questions and set research agendas.

Purpose and objectives: Society 5.0 and humanising technology is a fairly new field of research and the purpose of this session is to open discussion for further interdisciplinary research, collaboration and enrichment of educational curricula. More specifically the objectives are to:

- Explain Society 5.0 aspects and its focus on human-centeredness in a cyber-physical world, including interpretations of data, information and knowledge and their close alignment to sustainable development goals (SDGs) and the post-pandemic COVID-19 society challenges and revelation of societal inequalities.
- Highlight all factors around human experience and information flows in the cyber-physical world, including integration into everyday activities such as banking, shopping, consuming news, engaging with friends and family, smart home applications, as well as conversational interfaces (chatbots), natural language processing, voice recognition, augmented reality (AR) and virtual reality (VR).
- Acknowledge the blur between real and virtual worlds, the challenges that present and the impact on:
 - how we need to adapt to digital worlds across contexts and different facets of life that are blurring such as play, work, research.
 - how we need to make sense of information seen as thing, process and knowledge (Buckland, 1999) as well as other interpretations of information and how we need to reflect on interpretations of data and knowledge.
- Discuss and engage with the audience on what humanising technology means in this context and to consider the key “human-like” factors that must be considered that will drive human experience in Society 5.0.
 - Argue, from different disciplinary perspectives (i.e. computer science, informatics and information science) if information should be seen as an-asset class with measurable economic value that should be administered as any other recognised type of asset or, alternatively if there are other supplementary interpretations that should drive research and curricula for Society 0.5.
 - Explore how advancing technology becoming more human-oriented can be addressed.
 - Create visibility for the research opportunities in this field of study and a research map that can stimulate interdisciplinary collaboration addressing a variety of issues.

Target audience: The target audience that will benefit from this panel discussion includes researchers, educators and practitioners in information science, computer science, information systems, human computer interaction, information and knowledge management, education.

- **Proposed Format and engagement**

As it is a panel discussion, the first part of the session will be to position the topic (panel facilitator), statements from each panellist and then to actively engage with the audience. The panel facilitator will set the background, purpose of the panel discussion, goals and expected outcome and will explain the format (5 minutes).

Experts from three disciplines, computer science, informatics and information science and with experience in interdisciplinary and transdisciplinary research in cybersecurity, knowledge management, information behaviour, information ethics, and learning sciences will each sketch issue that will enable the audience to participate in a meaningful manner (25. minutes).

- The audience will be divided in four breakrooms where a panellist will facilitate the interactive activities for each. Questions related to the intended outcomes of the panel discussion will be presented to the audience. Each group will deal with a different set of questions. (40 minutes):
 - Electronic group brain storming / mind mapping to identify issues for further research and interdisciplinary expertise and interest (20 minutes)
 - Discussion of a core issue related to the topic; prompting questions will be provided (20 minutes)

The audience will all join again in the main room to discuss a potential research agenda, interest in research collaboration and to raise further issues related to the discussion topic. (20 minutes)

- Outcomes: A report of the panel discussion, audience discussion and a research map will be made available on the websites of the Society 5.0 research community: <https://www.conference-society5.org/> and the iSchool Organisation (or distributed through appropriate discussion lists).
- Importance and value: The exploration of research and educational initiatives required for the near future, Society 0.5, and with acknowledgement of challenges revealed by the COVID-19 pandemic, might stimulate timely actions that draw on all disciplinary strengths in the iSchool community.
- Relevance to the iConference: The theme of iConference 2022 includes aspects around our reliance on information technologies and the opportunity to apply information for a better world. Society 5.0 encompasses a human-centered society in a cyber-physical world and promotes equity, diversity, and inclusion for social good and to the benefit of all (from there its close alignment to Sustainable development goals). The speed at which technology is changing bears the risk of excluding less tech-savvy people from its usage. Inclusion will require special efforts to overcome current inequalities and to use the emancipatory potential of digital technologies to make our societies more inclusive. This panel proposal intends to position and clarify this aspect and to provide the audience with a human experience perspective, as well as aspects that we as researchers, may pursue. We believe that this outcome is directly aligned to the purpose of the iConference.

Duration: One session of maximum 1.5 hours (90 minutes)

Special Requirements: No special requirements. The ZOOM platform, with breakaway rooms, provided by the iSchool conference organisers will be sufficient.

Follow-up: Audience members who provide their contact details will be contacted after the conference to explore the outcomes of the panel discussion and opportunities for collaborative research.

References

Michiharu, N. (2019). Japan's science and technology strategy for the SDGs. In Discuss Japan: Japan Foreign Policy Forum.

<https://www.japanpolicyforum.jp/diplomacy/pt20190821075631.html>

Buckland, M.K. 1991. Information as thing. Journal of the American Society for Information Science, 42(5): 351-360.