

Call for Papers

Workshop and Special Issue on
The Road to Autonomy?
**Autonomous Vehicles and Technologies Across East Asia in
the Twenty-First Century**

*An international workshop to be held at
The Hong Kong University of Science and Technology,
Division of Social Science
27th and 28th February, 2020*

We invite submissions for a workshop and subsequent special issue of a Science & Technology-related journal devoted to self-driving vehicles and technologies in East Asia in the twenty-first century.

Scholars interested in participating in this workshop and special issue should submit an abstract (at least 1,500 words) by **August 30, 2019**. Authors will be notified by **September 27, 2019** if their papers have been accepted for presentation at the workshop. There is no registration fee. Airfare and up to three nights of hotel accommodation will be provided. Complete drafts of the papers (comprising a minimum of 8,000 words in English including headings, references and footnotes) must be submitted by **November 29, 2019**. All papers will be circulated among the participants in advance and participants are expected to comment extensively at the workshop on each other's papers; discussion is a key objective and element of this workshop. A subset of authors will be asked to submit their papers for inclusion in the special issue by **January 31, 2020**, with the expectation that their papers will be published by late-2020, provided they pass the external review process.

Overview

This workshop will investigate the emergence and development of the autonomous vehicle (AV) industry across East Asia in the twenty-first century.

The development of an autonomous vehicle (AV) industry is important for many nations as they seek preparedness for the Fourth Industrial Revolution, an era defined by rapid advances in numerous technologies, notably intelligent computing technologies such as artificial intelligence (AI), robotics and the Internet of Things (IoT). All are central to the AV industry; indeed, across East Asia today, China, Japan and South Korea already have AV plans and impressive progress with regard to technology development, infrastructure considerations as well as policy and regulation.

The excitement surrounding AVs is understandable; they are hailed for their many perceived benefits. As electric vehicles (EVs), they help reduce emissions; as ride-hailing fleets, they help reduce automobile ownership and alleviate urban congestion, thereby improving the experience of public space; and as self-driving vehicles they provide mobility to previously marginalised groups such as the elderly and people with disabilities whom are unable to drive automobiles today. Importantly, if successful, AVs offer the promise of safety and significantly less—perhaps zero—accident fatalities. But are these assessments too optimistic? Is too much expected from AV technologies? AV technologies are not, after all, sentient beings but assemblages of various technologies that are “programed” by humans.

Workshop Scope

The goal of this workshop is to deliberate theoretical and empirical research findings with a view to identifying regulations and policies that can facilitate the broad-based development of the AV industry across East Asia. This may include, but is not limited to, questions pertaining to business models, ethics, profitability as well as transparency.

Broadly speaking, our goal is to investigate how AV technologies are imagined, conceptualised, designed, manufactured and ultimately deployed and used. Rather than view the development of AV technologies as occurring in a vacuum, we wish to pay attention to all agents involved in conceiving and producing AV technologies, human and non-human, the dialectic nature of these processes and the underlying values and judgements explicated by different actors throughout these processes. Actor-Network Theory (e.g. Latour 2005), for example, seeks to unravel how technologies become—or are “translated” into—objects that are used in daily lives and the complex network of actors involved in this process. Notions of “domestication” (e.g. Silverstone and Hirsch 1992), moreover, similarly seek to unravel the complex and unique ways in which a new technology becomes part of peoples’ daily lives in a particular society by examining the symbolic, practical and cognitive processes involved.

We see two broad areas of initial and promising inquiry. First, *infrastructure and environmental factors* and, by extension, the relationship the AV industry and its technologies have with Smart City agendas and surveillance proclivities. AVs use a combination of technologies including hardware (e.g. cameras, radars, sensors), software (e.g. algorithms that determine behaviour, navigational systems), mechanics and others; these are both internal and external to the AV. In fact, there is a continuum in the degree to which an AV relies on internal versus external technologies to operate; the more an AV relies on its external environment, the less its need for certain internal technologies (and the cheaper it may become). Competitive advantage may reside along this continuum; some nations need to retro-fit existing road networks to accommodate AVs while other nations can build new road networks that are AV-ready from day one. In doing so, some nations can leverage existing infrastructure built for different purposes—such as surveillance cameras—to fast track AV deployment. As this shows, AVs do operate “autonomously” at all but are instead embedded inside complex material and computational networks that hide institutional and personal hierarchies, relationships and

experiences (Zuboff 2019). This workshop welcomes papers that explore these and related topics.

Second, investigations into *human-AV technologies interaction*—whether as passengers or as drivers of other vehicles, cyclists, pedestrians and so on—and how this feeds back into technology conception and development (Hancock 2018; Stayton, Cefkin and Zhang 2017; Vinkhuyzen and Cefkin 2016). This is especially important given that the industry is focused on developing Level 4 AV technologies, defined as vehicles that can drive themselves in many circumstances without needing to ask the passenger to take over. As this shows, Level 4 AVs necessitate a fundamental shift in human-automobile interactions and mobility practices. We are interested in actors' assumptions concerning human-technology interactions—and the values these assumptions reveal—as they go about imagining, conceptualising, designing, manufacturing and deploying AV technologies. What are the political, economic, social and cultural assumptions underlying these processes? How might these differ between different actors (e.g. automobile makers versus software companies; users versus investors; etc. At the very least, we seek to identify and discuss users and non-users and their relationship to AV technology development (Oudshoorn and Pinch 2003).

Summary of Objectives

These are but two broad areas we are interested in receiving submissions on. As the goal of this workshop is to deliberate theoretical and empirical research findings with a view to identifying regulations and policies that can facilitate the broad-based development of the AV industry across East Asia, other topics and questions we are interested in are (but not limited to):

- How are AV regulatory and policy frameworks developed, what does this reveal about attitudes toward the Fourth Industrial Revolution and what path dependencies, national values and other priorities does it explicate (either single-case or comparative in nature)?;
- How are specific AV technologies developed? Which actors are involved, and which are not? What global and/or regional production networks exist? Are there any transparency and/or ethical concerns? How does this configuration assist AV industry development and how might it be improved?;
- How are AV users and non-users—of private vehicles, public transportation vehicles or industry specific vehicles—conceived of and incorporated into technology development? How do users and non-users respond to and interact with AV technologies?' and
- This workshop is interested in autonomous vehicles in a broad sense and is not limited to private vehicles; we welcome submissions from scholars researching other autonomous vehicle applications such as public transportation, logistics and manufacturing, agriculture, , for example.

Submission Procedures

To submit an abstract for consideration for the workshop, please attach your abstract to an e-mail and send it to Sacha Cody (sachacody@ust.hk). In the subject line of the e-mail, please write: MMEA AV Workshop: The Title of Your Paper.

Please note your abstract should include the title of the paper, all author(s) names and affiliations as well as contact information. It should contain clear information on the research method(s), data source(s), analytical tool(s) and theoretical framework(s) to be used.

Please note we are seeking original contributions; papers that have already been published or submitted for publication will not be accepted.

**** NOTE:** *The organising committee (Sacha Cody and Naubahar Sharif) welcomes emails to informally discuss ideas prior to the submission of a proposal. Please write to Sacha and he will respond to all inquiries promptly. ***

Highest priority will be given to papers that combine a general theoretical discussion with new empirical findings as well as policy and regulatory implications. Papers may be based on new comparative research as well as single-case studies, and on qualitative as well as quantitative research methods.

This workshop is funded by the *Making Modernity in East Asia (MMEA): technologies of everyday life, 19th – 21st centuries* (<https://mmea.hku.hk>; RGC CRF HKU C7011–16G) research project. This is a collaborative research project between The University of Hong Kong and The Hong Kong University of Science and Technology. The main objective of this collaborative research project is to establish a new, interdisciplinary way of understanding East Asian modernity through the lens of everyday technology.

Workshop participants' work will be viewed by the broader MMEA team (<https://mmea.hku.hk/about-the-project/project-team/>). Workshop participants may have the opportunity to liaise and meet with other team members while in Hong Kong.

References

- Hancock, Peter A. 2018. *Some Pitfalls in the Promises of Automated and Autonomous Vehicles*. Ergonomics DOI: 10.1080/00140139.2018.1498136.
- Latour, Bruno. 2005. *Reassembling the Social: an introduction to actor-network theory*. Oxford: Oxford University Press.
- Oudshoorn, Nelly and Trevor Pinch. Eds. 2003. *How Users Matter: the co-construction of users and technology*. Massachusetts: The MIT Press.
- Silverstone, Roger and Eric Hirsch. Eds. 1992. *Consuming Technologies: media and information in domestic spaces*. London: Routledge.

- Stayton, Erik, Melissa Cefkin and Jingyi Zhang. 2017. Autonomous Individuals in Autonomous Vehicles: The Multiple Autonomies of Self-Driving Cars. *Ethnographic Praxis in Industry Conference Proceedings* 92–110.
- Vinkhuyzen, Erik and Melissa Cefkin. 2016. Developing Socially Acceptable Autonomous Vehicles. *Ethnographic Praxis in Industry Conference Proceedings* 522–534.
- Zuboff, Shoshana. 2019. *The Age of Surveillance Capitalism: the fight for a human future at the new frontier of power*. New York: PublicAffairs.
-

(end)