International Conference (online)

**Fair Medicine and Artificial Intelligence:
Chances, Challenges, Consequences**

**3 – 5 March 2021
Center for Gender and Diversity Research (ZGD)
Eberhard Karls Universität Tübingen**

Organised by Dr. Renate Baumgartner

Call for Papers

At least since 2012, and following technological advancements in IT, the medical profession has become increasingly interested in artificial intelligence (AI). An aging society, the need to balance rising costs in the health sector with a certain stability in the average health of the population while trying to keep health inequalities in check have all contributed to investing AI with the hope to enable more successful medical care and better health for all. Visions range from seeing AI as a universal remedy, able to solve the key challenges of contemporary medicine, to the dystopia of a health care system without human medical staff. Medical diagnosis, prognosis (e.g. in personalised health care), and therapy recommendations are all possible application fields of AI, to name but a few. Despite the high hopes for AI in the field of medicine, only a few products have so far managed to meet the standards necessary for broad marketability in terms of adequate available data or validation. Even regardless of the velocity of developments, AI will most likely play an important role in the health sector in the near future.

Healthcare disparities are posing a political threat and a major challenge to the healthcare system. The use of AI in the service of fair healthcare makes for a persuasive argument that not only justifies its employment, but seems to make it more or less inevitable. AI could, for instance, reveal human bias in the field, and make equal treatment available to all. On the other hand, critical voices warn that AI might heighten existing inequalities, while technical complexities would make them harder to detect. The question is thus whether algorithm-based applications can influence systemic inequality in positive ways.

The aim of this interdisciplinary conference is to focus on concrete applications in the medical and healthcare sector that are based on AI, machine learning, and deep learning technologies.

Papers could address, but are not restricted to, the following questions:

- What role do questions of health equity and fairness play in these applications? What insights could gender- and diversity-sensitive research contribute?

- The computer sciences provide statistical means for the advancement of a mathematical fairness in the form of algorithmic fairness. What are the consequences of these methods when analysed from a sociological, ethical, or philosophical perspective?
- In order to counter systemic inequality, the public health sector usually introduces extensive measures. What could AI contribute here?
- Health data are especially sensitive, even more so when stemming from vulnerable groups. What can the social sciences and adjacent disciplines contribute to debates around data protection and data security in the context of AI and medicine? What perspectives could be put forward on the dilemma of, on the one hand, ensuring participation in the technology, while, on the other hand, protecting users' privacy?
- In what ways does AI contribute to a shift in power relations in the field? Who are the winners, who are the losers? What new players have entered the arena? Can we detect a growing tendency to economisation of the health care sector?
- How does AI change knowledge and the production of knowledge in the medical field? What kind of knowledge loses or gains importance in the process? What are the epistemic and real-life consequences?
- What happens with data used by AI applications? Which categories are being made relevant, and how? What changes in comparison to non-digital technologies such as patient files on paper? Which categories (like gender, race, etc.) are being reified, and which change in the process? What kinds of new categories are being created?

We invite scholars from the social sciences and related disciplines like philosophy, medical ethics, and public health research who engage with questions of AI in medicine and the health sector to submit an abstract.

We welcome abstracts and papers in both English and German.

The conference will be held online. Both invited keynote speakers and researchers who have been selected after the submission deadline will get the chance to present their papers in the form of live online presentations.

Please send an abstract of no more than 500 words and a short bio to:
medAI.conference2021@gmail.com

Deadline for abstracts: 30 November 2020.

There is no registration fee for the conference.