

First symposium on Biases in Human Computation and Crowdsourcing

Human Computation and Crowdsourcing have become ubiquitous in the world of algorithm augmentation and data management. However, humans have various cognitive biases that influence the way they make decisions, remember information, and interact with machines. It is thus important to identify human biases and analyse their effect on complex hybrid systems. On the other hand, the potential interaction with a large pool of human contributors gives the opportunity to detect, quantify, and handle such biases in existing data and systems.



Best Abstract Award to Ioannis Petros Samiotis, Christoph Lofi, and Alessandro Bozzon Delft University of Technology, Netherlands.

To tackle such issues, The University of Sheffield and the University of Southampton organised the [First symposium on Biases in Human Computation and Crowdsourcing 2019](#) that has taken place on October 21-22 in Sheffield, UK. The goal of the symposium was to analyse both existing human biases in hybrid systems, and methods to manage bias via crowdsourcing and human computation. Attendees discussed human bias, focusing on

Multidisciplinarity

Speakers and attendees came from very different fields, demonstrating that bias in human computation is an issue that impacts a vast set of scenarios. Attendees appreciated the opportunity to see how colleagues from different disciplines tackle the same issues.

Data Science perspectives

The majority of the presentations were delivered by computer scientist, who typically deal with crowdsourcing into hybrid Human-Machine systems. In these contexts, the presence of biased data can strongly affect the quality of the systems performances. Particularly appreciated were the interventions of the two invited speakers, [Amrapali Zaveri who discussed](#) the use of crowdsourcing to produce high-quality dataset of drug indications, and Ujwal Gadiraju who delivered a talk about biased annotations produced by workers with strong opinions.

Industries perspectives

One of the two keynotes speakers, Ricardo Kawase discussed biases for the point of view of the industry, where understanding how to deal with biased data can lead to higher profits. In particular, Ricardo argued two main topics, personalisation and search, and how bias affects the machine learning algorithms and the strategies used to mitigate it.

Sociological perspectives

Prof. Michael Rovatsos discussed the dystopia (enabling ubiquitous surveillance, getting innocent people into prison) and utopia (measuring citizens needs and desires, rewarding contributions in fair ways) of future cyber societies.

Legal perspectives

The talks of Michael Rovatsos and Stefanie Pletz brought important legal and societal issues of hybrid human-AI systems. In particular, Michael Rovatsos focused on the limitations of co-design practices in future human-in-the-loop systems, showing how human biases and prejudice, as well as discriminatory practices are inevitably propagated in automated systems.

Stefanie Pletz answered this by claiming that there is a clear efficiency vs. equality trade-off caused by discriminatory biases in human computation. She contends that “existing legislative frameworks are insufficient to support the detection and identification of human biases in computation”. Moreover, she illustrated how recent legislative developments and proposals such as the use of super-soft law, or the Algorithmic Accountability Act could mitigate discriminatory human biases.

Ethical perspectives

It has been appreciated the participation of Jomanah Alhamidi and Hend Alhudaib, two students who delivered a very interesting presentation about the use of algorithms in predictive policing. Their studies face the ethical implications of the use of algorithms to assess or to help judges in court cases.

Styliani Kleanthous from CyCAT discussed gender and racial biases in image annotation systems, and their related social and ethical issues.

Sponsorship

The BHCC2019 symposium was made possible thanks to the synergy of two H2020 projects, [FashionBrain](#) represented by Alessandro Checco and [Qrowd](#) represented by Eddy Maddalena. The second edition of the symposium will be held in Cyprus, in collaboration with [CyCAT](#).