BIAS IN AI AND NEUROSCIENCE

TRANSDISCIPLINARY CONFERENCE
17-18-19 June 2019 - Radboud University Nijmegen

BIAS2019 is jointly organized by the Donders Institute for Brain, Cognition and Behavior; the Radboud Department of Artificial Intelligence; Radboud Interdisciplinary Gender and Diversity Studies; and the Faculty of Philosophy, Theology and Religious Studies.

This conference intends to bring together scholars from various disciplines, including the cognitive sciences and the humanities, to discuss knowledges of human differences and bias in neuroscience and AI. Neuroscience and AI play a powerful role in our understanding of, and dealings with, human differences. For example, brain imaging is widely treated as a privileged source of evidence for the veracity or naturalness of various kinds, including identity markers such as sexual orientation. Brain imaging and machine learning algorithms are also advancing the field of precision medicine, a context in which efforts to stratify subjects according to sex and race have taken on renewed significance. Furthermore, as algorithms are impacting more and more areas of daily life, some hope that AI will enable us to eliminate bias from all processes of categorization and prediction (including hiring practices and parole decisions). At the same time, troubling technological blind-spots have been revealed by a number of incidents - ranging from voice-activated car technology unable to recognize women's voices, to image recognition software unable to correctly classify non-white faces. Such technological and scientific developments warrant critical consideration of the ways in which differences and categories are made (and perhaps un-made) in neuroscience and AI, and of the ways in which bias affects or emerges from this. The time is ripe to have open and ethically informed discussions on what is needed to navigate these challenges.

The keynote speakers are:
- **Krishna Gummadi,** Max Planck Institute for Software Systems / University of Saarland
- **Daphna Joel,** Tel-Aviv University School of Psychological Sciences / Sagol School of Neuroscience
- **Joanna Redden,** Cardiff School of Journalism, Media and Cultural Studies / Data Justice Lab

The conference will be organized in two broad, interconnected streams:

Bias and the making of scientific knowledge - This stream will focus on the ways in which patterns in scientific data are made meaningful and relevant in neuroscience and AI. What are the epistemological

and ontological underpinnings of scientific classifications of human differences? Which differences are deemed significant for which purposes? What are the social, technological, and institutional contexts by which these knowledges are constrained, and what role does bias play here? On which grounds do we accept evidence about human differences, or about bias? And (how) can we apply categories such as sex or race in our research in transparent and responsible ways?

Bias and the application of scientific knowledge - This stream will focus on the impact of neuroscience and AI on social equality. In which ways do these fields guide our very understanding of difference, diversity, bias and prejudice? How do claims about natural kinds impact cultural, political, or legal understandings of human differences? To what extent do ideas and technologies associated with neuroscience and AI help us to expose or overcome harmful biases and prejudice? And to what extent to they actually produce or reinforce them? Finally, what (and who) is needed to develop scientific applications that accurately reflect and benefit the diversity of human bodies, identities, and experiences?

Format
The conference will involve keynote lectures, panels, and roundtables. For the panels, we will solicit short papers (see below). These papers will be distributed to all participants one month prior to the conference. During the panels, speakers will have the opportunity to briefly present the highlights of their paper (~ 10 mins). A respondent will then present a prepared reaction to the presentations, after which the floor is opened for a moderated discussion.

Submissions
We invite abstracts for proposed papers of max. 250 words before January 1st 2019, to be submitted via BIAS2019@ru.nl. Please indicate the stream for which the paper is intended, and include a short biography (max. 100 words). Selections will be based on quality as well as the fit with the conference theme and aims. Final papers (1500-2000 words excl. bibliography) will be due before April 15.

Registration and fee
All participants (panelists and audience members) must register and pay a conference fee of €50. The registration deadline is April 15. More information can be found at www.ru.nl/BIAS2019.

Code of conduct
In order to make this conference as accessible as possible, and in order to ensure respectful and productive discussion, we ask that all participants follow our Code of Conduct. More information about the Code can be found at www.ru.nl/BIAS2019.