Keynote: Reassembling the Black Box(es) of Algorithmic Fairness: Methods, Interactions and Politics

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Research on algorithmic fairness promotes a view on algorithmic systems as black boxes that need to be "opened" and "unpacked" to make their inner workings accessible. Understanding the black box as a mode of inquiry and knowledge making practice (rather than a thing), I will explore what exactly researchers and practitioners aim to unpack when they examine algorithmic black boxes, what they consider to be constitutive elements of these black boxes, and what is othered or perceived as "monstrous". Following scholarship in the social studies of science and technology (STS), the notion of the monster captures what is considered irrelevant for the constitution and inner workings of an algorithmic black box. It is what is excluded and escapes analysis. I will argue, however, that attention to the outer limits of algorithmic black boxes allows us to explore how social actors, temporalities, places, imaginaries, practices, and values matter for knowledge making about algorithmic fairness. In my talk, I will review three modes of assembling black boxes of machine learning (ML)-based systems: (1) the black box of ML data, (2) the black box of ML algorithms and trained models and (3) the black box of ML-based systems in practice. In reassembling these three distinct ML black boxes, I demonstrate how generative engagements with algorithmic black boxes and their monsters are for the critical inquiry of algorithmic fairness.

Biography. Juliane Jarke is Professor of Digital Societies at the University of Graz. Her research attends to the transformative power of algorithmic systems in the public sector, education and for ageing populations. It intersects critical data & algorithm studies, participatory (design) research and feminist STS. Juliane received her PhD from Lancaster University and has a background in Computer Science, Philosophy, and STS. She has recently co-edited a special issue on Care-ful Data Studies (Information, Communication and Society). Her latest co-edited books include Algorithmic Regimes: Methods, Interactions and Politics (Amsterdam University Press) and Dialogues in Data Power: Shifting Response-abilities in a Datafied World (Bristol University Press). Juliane is also co-organiser of the Data Power Conference series and Co-PI in the research unit Communicative AI: The Automation of Societal Communication

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