**Date**

Thurs 31 Oct

**Time**

12.30pm - 1.50pm

**Venue**

Room 131 | Tata Innovation Center
Cornell Tech | Roosevelt Island

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**Guest Speaker**

**Ben Fish**

Microsoft Research, Montreal

**Title**

Relational Equality: Modeling Unfairness in Hiring via Social Standing

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**Biography**

Benjamin Fish is a Postdoctoral Researcher in the Fairness, Accountability, Transparency, and Ethics (FATE) Group at Microsoft Research Montréal. He recently received his Ph.D. from the University of Illinois at Chicago as a member of the Mathematical Computer Science group. His research focuses on moving from machine learning that is only concerned with maximizing accuracy in isolated decision making processes to machine learning in context. This includes scholarship in fairness in machine learning and learning over social networks. He has previously been a visiting researcher at the University of Melbourne and the University of Utah, and earned a B.A. from Pomona College in Mathematics and Computer Science.

**Abstract**

Much recent work in machine learning has centered on formulating computational definitions of human values such as fairness. These translational efforts have largely focused on conceptualizing values easy to formalize, even if these resulting conceptualizations are narrow ones. In the literature on algorithmic fairness, for example, extant work has focused largely on distributional notions of equality, where equality is defined by the resources or decisions given to individuals in the system. On the other hand, it is not necessarily clear how to create computational definitions formalizing other notions of equality or fairness. One popular alternative has been proposed by the political philosopher Elizabeth Anderson, who focuses on the notion that equal social relations are central to human equality and fairness.

In this work, we propose this relational equality as a viable alternative to extant definitions of algorithmic fairness in a hiring market. Key to doing so is being able to model social standing amongst individuals in computational models, so we focus on creating a computational definition of social standing. This is very challenging because social standing is not amenable to formalization. It is also difficult because under Andersonian relational equality, there is an intimate tie between social standing and distributional equality, so that a lack of one can produce a lack of the other, making it difficult to distinguish these in algorithmic systems. To overcome these issues, we demonstrate that on a simple model of a hiring market, our proposal for defining social standing adheres to important properties of social standing, including that social standing is distinct from distributional equality, that an inequality in social standing produces distributional inequality, and that social standing can solidify over time.