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## The Schwartz Reisman Institute of Technology and Society University of Toronto

### JOB POSTING – POSTDOCTORAL FELLOW

**Posting Date:** October 25, 2021

**Area of Research:** Computational modeling and analysis. Multiagent systems. Cultural evolution. Behavioral economics.

**Description of duties:**

We aim to support a highly promising scholar with a background in a computational discipline, such as economics, computational social science, or computer science, with experience and interest in the phenomenon of human normativity: the practice of classifying actions or states as acceptable or not and coordinating enforcement schemes to channel behavior according to that classification. The scholar's research agenda should address a topic that engages with the phenomenon of normativity as a system-level feature of human groups and focus on questions such as what attributes contribute to the maintenance of stability and adaptability and in support of cooperation and coordination to generate group value. The proposed research is expected to yield both theoretical and empirical publications.

This role is expected to contribute to a research program headed by Dr. Hadfield focused on building computational models of norm emergence and dynamics, rooted ultimately as closely as possible in a rational agent and equilibrium approach to decisions about third-party norm enforcement and compliance. This approach builds on a conceptual framework for normative social orders developed in Hadfield and Weingast (2012, 2014), Hadfield-Menell, Andrus and Hadfield (2019) and Koster, Hadfield-Menell, Hadfield and Leibo (2019). Modeling techniques could include evolutionary game theory, multiagent models using POMDPs, and multiagent reinforcement learning. Key questions explored in this program are: how do groups of agents settle (equilibrate) on normative classification for novel behaviors? What features of norm systems contribute to stability/robustness and adaptability? The Hadfield-Weingast work, for example, argues that conventional “rule of law” features such as generality and openness contribute to securing an equilibrium that relies on third-party unofficial enforcement of shared normative classification; the Hadfield-Menell et al. and Koster et al. work looks at the role of “silly” (meaningless) rules in stabilizing a normative social order with important rules. Familiarity with formal modeling of norms and evolutionary approaches to norms (e.g. McElreath, Boyd and Richerson 2003; Boyd, Gintis and Bowles 2010; DeScioli and Kurzban 2012) as well as behavioral economics is a key asset.

The fellow will be an integral part of the research community at the Schwartz Reisman Institute. The Institute is dedicated to integrative research and human-centred solutions to make sure technology improves life—for everyone. We draw on world-class expertise across universities, government, industry, and community organizations to conduct ground-breaking research and develop innovative solutions to pressing real-world challenges.



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**Salary:** \$75,000 per annum.

**Required qualifications:** Ph.D. (computational discipline, such as economics, computational social science, or computer science).

**Application instructions:** All individuals interested in this position must submit the following documents:

- ✓ A current curriculum vitae;
- ✓ A research proposal (not to exceed 1,500 words). Please supply an indicative title for the project at the beginning of the proposal;
- ✓ A representative manuscript or publication;
- ✓ Contact information for three referees, who will be asked to comment specifically on your qualifications for the proposed research project. Referees will be contacted directly by email with instructions for submitting letters of reference.

Complete applications to be submitted to: [dawn.bloomfield@utoronto.ca](mailto:dawn.bloomfield@utoronto.ca) by the closing date.

**Closing date:** December 15, 2021.

**Supervisor:** Professor Gillian K. Hadfield.

**Expected start date:** September 1, 2022.

**Term:** One year, with potential for renewal.

**FTE:** 100%. Applicants are expected to be able to work remotely for the foreseeable future on a regular working schedule.

The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.

*Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.*

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*The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ2S+ persons, and others who may contribute to the further diversification of ideas.*