



Join us for this talk in the Seminar Series:
Mathematics of Ethical Decision-making Systems

Thursday, October 6th, 2022
Talk @ 3:30 pm
Reception @ 4:30 pm

Engineering Computer Science
Room - ECS 660
University of Victoria



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Networks of Classifiers and Classifiers with Feedback — Fairness and Equilibria

Fairness in machine learning classification has been a topic of great interest given the increasing use of such classifiers in critical settings.

There are many possible definitions of fairness and many potential sources of unfairness. Given this complex landscape, most research has focused on studying single classifiers in isolation.

In reality an individual is subjected to a network of classifiers: for example, one is classified at each stage of life (school, college, employment to name a few), and one may also be classified in parallel by many classifiers (such as when seeking college admissions). In addition, individuals may modify their behavior based on their knowledge of the classifier, leading to equilibrium phenomena. Another feedback effect is that the result of the classifier may affect the features of an individual (or of the next generation) for future classifications.

In this talk we present work that takes the first steps in exploring questions of fairness in networks of classifiers and in systems with feedback. Given the inherent complexity of the analysis, our models are very stylized, but it is our belief that some of the qualitative conclusions apply to real-world situations.

****For those unable to attend this talk in person, we have a Zoom alternative. For the Zoom meeting ID/Passcode, please send an email to pims@uvic.ca. Thank you ****