Decision Processes Colloquia

Monday, November 4, 2019

Where: 370 JMHH

When: 12:00 – 1:20 pm

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Pairwise Normalization:
A Neuroeconomic Theory of Multi-Attribute Choice

ABSTRACT:

We present a theory of multi-attribute choice founded in the neuroscience of perception. According to our theory, valuation is formed through a series of pairwise, attribute-level comparisons implemented by *(divisive) normalization* — a normatively grounded form of relative value coding observed across sensory modalities and in species ranging from honeybees to humans. As we demonstrate, "pairwise normalization" captures a broad range of behavioral regularities, including the compromise and asymmetric dominance effects, the diversification bias in allocation decisions, and majority-rule preference cycles (among several others). In binary choice, the model also offers a potential neurobiological foundation for Cobb-Douglas preferences and other classic microeconomic preference representations.

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