

## Bonn Melbourne Seminar in Decision Making and Computational Psychiatry

### Smart Heuristics: How to Make Good Decisions in a World of Uncertainty

Prof. Shenghua Luan (Institute of Psychology, Chinese Academy of Sciences, Beijing, China)

#### Abstract

The word “heuristic” originates in ancient Greek, referring to simple methods, processes, and strategies that can help people solve problems. “Smart” heuristics are heuristics that are well-suited to a task, allowing us to make decisions quickly, frugally, as well as accurately. In this talk, I will present two studies of smart heuristics. Study 1 focuses on a heuristic called “ $\Delta$ -inference.” In a personnel selection task, where the goal is to choose the better job candidate of two, we show that  $\Delta$ -inference makes more accurate selection decisions than logistic regression and three machine-learning algorithms. Study 2 introduces a class of heuristics called “fast-and-frugal trees.” In a task that classifies high- and low-risk companies applying for bank loans, we constructed a fast-and-frugal tree whose classification accuracy is on par with that of eight machine-learning algorithms. These two studies demonstrate that in the world of uncertainty and without the luxury of big data, smart heuristics can lead to good decisions, while being transparent, interpretable, and easy to learn.

Thursday, 30<sup>th</sup> March 2023, 9am (CEST)

<https://uni-bonn.zoom.us/j/67862809703?pwd=WHM3b3llUUFJY2x0ekxLZUhxS3UvUT09>

Meeting-ID: 678 6280 9703, Code: 193789

#### Contact

Prof Ulrich Ettinger, Department of Psychology, University of Bonn, Germany; [ulrich.ettinger@uni-bonn.de](mailto:ulrich.ettinger@uni-bonn.de)

Prof Carsten Murawski, Department of Finance, The University of Melbourne, Australia;  
[carstenm@unimelb.edu.au](mailto:carstenm@unimelb.edu.au)

**#BonnMelbourneDecisionSeminar**