



## EXAME DE QUALIFICAÇÃO DE DOUTORADO

**Aluno:** Eduardo da Costa Ramos

**Título da Proposta:** ABI APPROACH: AUTOMATIC BIAS IDENTIFICATION IN DECISION-MAKING UNDER RISK AND UNCERTAINTY

**Data, Horário e Link:**

20/10/2022 às 08:30 (Brasil)

Join Zoom Meeting: <https://puc-rio.zoom.us/j/94076250479?pwd=b3I5eTBtMU5UK3hZWVg1OzIyUGd0dz09>

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**Banca Examinadora:**

Maria Luiza Machado Campos	Orientadora / Presidente	PPGI-UFRJ
Fernanda Araujo Baião	Coorientadora	PUC-Rio
Marcos Roberto da Silva Borges		PPGI-UFRJ
Luís Antônio Dib		COPPEAD-UFRJ
Renata Silva Souza Guizzardi		UNIVERSITY OF TWENTE / UFES
Giseli Rabello Lopes	Suplente	PPGI-UFRJ
Flávia Maria Santoro	Suplente	UERJ

**Resumo da Proposta:**

Organizational decisions are made constantly and some of them may be extremely critical. However, most decision makers decide without being aware that their decisions are influenced by their cognitive biases and, thus, by their risk preferences, because it is difficult for them to recognize their own biases. A cognitive bias is an unconscious, systematic (non-random), predictable error in thinking in the sense that a judgment deviates from a rational expected value.

Decisions influenced by the risk seeking preference can lead to severe negative consequences to the organization, as for example, a bad decision to continue with a project with a high probability of failure, in exchange of a small possibility of avoiding a larger loss (KAHNEMAN, 2011). Risk seeking preference is studied by the Cumulative Prospect Theory (CPT), which is the main theory of Behavioral Economics (BE) and explains how decision makers are led by cognitive biases towards risk preference (TVERSKY & KAHNEMAN, 1992). The CPT is a descriptive theory of decision making in risky and uncertain situations and gives a good prediction of decision makers' behavior (THALER, 2015).

The research question that this thesis intends to address is "how to support organizational decision makers to identify that they are subjected to risk seeking preference during decision-making?". To answer it, we propose the ABI approach (Automatic Bias Identification and Explanation in Decision Making Under Risk and Uncertainty), a computational solution that automatically identifies the risk seeking preference and provides an explanation of the situation. The ABI approach is based on the CPT and encompasses a decision-making model represented by our proposed ontology of intuitive decision-making, which provides a semantically-precise characterization of intuitive decision situations in which the organizational decisions are biased.

We present partial results obtained by instantiating the proposed ontology of intuitive decision-making in a scenario, and evaluating the proposed ABI approach in a pilot experiment.