

Modibo Camara

Northwestern Economics

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Fields	Research: Microeconomic Theory, Economics & Computation Teaching: Microeconomics, Econometrics	
Education	Ph.D., Economics, Northwestern University Dissertation: Complexities in Economic Theory Committee: Eddie Dekel (Chair), Jason Hartline (Chair), Marciano Siniscalchi, Jeffrey Ely M.A., Economics, Northwestern University B.A., Mathematics & Economics, University of Pennsylvania	(anticipated) 2022 2018 2016
Fellowships & Awards	Distinguished TA Award Dissertation University Fellowship, Northwestern University	2021-22 2021-22
Teaching Experience	Teaching Assistant, Northwestern University Econometrics (graduate), Econometrics (undergrad), Microeconomics (undergrad)	2017-2021
Research Experience	Research Intern, Nicole Immorlica, Microsoft Research Research Assistant, Eddie Dekel, Northwestern University Project Intern, Yian Liu, Federal Reserve Board of Governors Intern, Esen Onur, Commodity Futures Trading Commission Research Assistant, Susan Wachter, University of Pennsylvania	2020 2019 2015 2014 2013-14
Conferences	Cornell ORIE (invited) Economics and Computation (invited) Risk, Uncertainty, and Decision (RUD) Decision: Theory, Experiments, and Applications (D-TEA) North American Summer Meeting of the Econometric Society Africa Meeting of the Econometric Society European Summer Meeting of the Econometric Society World Congress of the Game Theory Society (GAMES) Foundations of Computer Science (FOCS) Econometric Society Winter Meeting (Europe) Young Economists Symposium (YES) Economics Graduate Student Conference (EGSC) Midwest Theory Day	2021 2021 2021 2021 2021 2021 2021 2021 2020 2020 2020 2020 2018
Refereeing	American Economic Review, Journal of Mathematical Economics	

Job Market Paper**“High-Dimensional Decision Theory”**

Abstract: This paper incorporates time constraints into decision theory, via computational complexity theory. I use the resulting framework to better understand common behavioral heuristics known as choice bracketing. My main result shows that a time-constrained agent who satisfies the expected utility axioms must have a Hadwiger separable utility function. This separability condition is a relaxation of additive separability that allows for some complementarities and substitutions but limits their frequency. One implication of this result is that a time-constrained agent may be better off violating the expected utility axioms. This can occur when the agent wants to maximize the expected value of a utility function that is not Hadwiger separable.

Other papers**“Mechanisms for a No-Regret Agent: Beyond the Common Prior”** (with J. Hartline, A. Johnsen)

Abstract: This paper studies a rich class of single-agent policy design problems that includes monopoly regulation, contract design, and Bayesian persuasion as special cases. Most existing solutions either (a) assume a common prior belief over the environment, or (b) make no prior knowledge assumptions and optimize against the worst case. We show that, in repeated settings with rich feedback, we can approximate the superior performance of (a) while preserving the robustness of (b). We develop simple calibrated policies that ensure vanishing or bounded regret, relative to the ex-post-optimal static policy. Our guarantees are prior-free and hold even in highly non-stationary environments. They rely on novel behavioral assumptions that capture concepts like “rationality” or “unpredictability” without relying on beliefs. These new approaches are needed because we do not treat the agent’s behavior as exogenous.

“Statistical Policy Design”

Abstract: In many settings, understanding an agent’s beliefs can be the difference between a successful policy and one that fails dramatically. Unfortunately, in many instances, the rich behavioral or survey data needed to identify an agent’s beliefs may not be available. In this paper, I propose a modeling assumption that bypasses this issue, and show that it can highlight important policy trade-offs not captured by existing models. The core idea is straightforward: if the available data convincingly demonstrates some fact about the world, the agent should believe that fact. Otherwise, her beliefs are left unspecified. I develop this approach in the context of incomplete-information games where a policymaker commits to a policy, an agent responds, and both have access to a public dataset. It turns out that policies that are too complex may be suboptimal because they lead to unpredictable behavior. To balance the benefits of policy complexity with its costs, I develop a method called strategic regularization and motivate it through both theoretical guarantees and illustrative examples.

Languages

English (fluent), German (native), Spanish (intermediate)

References

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