

ERNESTO RIVERA MORA

September, 2024

University of Colorado Boulder  
ernestoriveramora.com  
ernesto.riveramora [at] colorado.edu

---

## Education

**Ph.D. in Economics** University of Arizona, 2023  
**M.Sc. Economics** Arizona State University, 2019  
**M.Sc. Economics** Centro de Investigación y Docencia Económicas (CIDE), 2016  
**B.Sc. Mathematics** University of Guanajuato, Mexico, 2014

## Work Experience

**Assistant Professor** University of Colorado, Boulder, Department of Economics, 2024  
**Postdoctoral Fellow** Cowles Foundation, Yale University, 2023-2024

## Research Fields

**Primary:** Microeconomic theory, Information economics  
**Secondary:** Dynamics, Behavioral Economics, Industrial Organization

## References

Professor Amanda Friedenberg      Professor Andreas Blume  
amfriede [at] umich.edu              ablume [at] arizona.edu

Professor Inga Deimen  
ideimen [at] arizona.edu

## Teaching Experience

**Fall 2023** Topics in Advanced Microeconomic Theory (Graduate), Instructor  
**Fall 2022** Climate Science and Economics (Undergraduate), University of Arizona, TA  
**Spring 2021-2022** Game Theory (First-Year PhD), University of Arizona, TA  
**Winter 2021** Microeconomic Analysis for Business D., University of Arizona, Instructor  
**Fall 2019-2021** Microeconomic Theory (First-Year PhD), University of Arizona, TA  
**Fall 2021** Game Theory (Undergraduate), University of Arizona, TA  
**Fall 2020** Microeconomic Principles (Undergraduate), University of Arizona, TA

<b>Spring 2020</b>	Intermediate Microeconomic (Undergraduate), University of Arizona, TA
<b>Spring 2020</b>	Dynamic Optimization (First-Year PhD), University of Arizona, TA
<b>Fall 2019</b>	Experimental Economics (Undergraduate), University of Arizona, TA
<b>Summer 2019</b>	Microeconomic Principles, Arizona State University, Instructor
<b>Spring 2019</b>	Macroeconomic Theory (First-Year PhD), Arizona State University, TA
<b>Fall 2017</b>	Mathematics for Economics (First-Year PhD), Arizona State University, TA
<b>Summer, 2015</b>	Mathematics for Economics (Graduate Masters), CIDE, TA
<b>Fall 2014</b>	Analysis (Undergraduate), University of Guanajuato, TA
<b>Fall 2012</b>	Calculus (Undergraduate), University of Guanajuato, TA
<b>Fall 2010</b>	Linear Algebra (Undergraduate), University of Guanajuato, TA
<b>Spring 2009</b>	Mathematics Olympiad, State Team of Guanajuato, Trainer

## Seminars and Conferences

**2024** 4th Durham Economic Theory Conference; The XXXII European Workshop on Economic Theory (Manchester); North American Winter Meeting of the Econometric Society (San Antonio); European Summer Meeting of the Econometric Society (Barcelona); CU Boulder

**2023** Emory University (Department of Quantitative Theory and Methods); University of Colorado Boulder; University of New South Wales; Yale University; Cowles Foundation Theory Conference; North America Summer Meeting of the Econometric Society (Los Angeles); Virtual Seminar in Economic Theory (VSET); University of Notre Dame Economic Theory Conference; Western University; University of Georgia

**2022** University of Michigan; University of California, Berkeley; Virginia Tech

**2021** University of Arizona; Arizona Think Tank for Behavioral Decision Making

## Honors, Scholarships, and Fellowships

**2022** G. Coleman Award for Strong Academic Performance, University of Arizona

**2021** Ed Zajac Award for Best Third Year Paper, University of Arizona

**2020** Steve Manos Award for Best Second Year Paper, University of Arizona

**2018** Best Third Year Paper Award, Arizona State University

**2017** Best Qualifier Exam in Microeconomics, Arizona State University

**2014-2015** Honors scholarship for top GPA for the semester of the M.Sc. program, CIDE

**2014-2016** Full scholarship for the M.Sc. program, granted by the Mexican National Science and Technology Council (CONACYT), Mexico

**2008-2014** Full scholarship for the bachelor program, granted by the Mexican National Science and Technology Council (CONACYT), Mexico

2009 Finalist, Pierre Fermat National Mathematics Contest, Mexico  
2007 Silver Medal, National Mexican Mathematics Olympiad

## Professional Service

I have served as a referee for the following journals: *Econometrica*, *Journal of Economic Theory*, *Games and Economic Behavior*, *The Economic Journal*, *American Economic Review: Insights*, and *Journal of Mathematical Economics*.

## Publications

### **Mechanism Design with Belief-Based Preferences (*Journal of Economic Theory*, 2024)**

This paper studies mechanism design when agents have psychological preferences, in that utilities depend on the agents' ex-post beliefs about types. For instance, agents may be subject to curiosity, image concerns, or privacy concerns. In this setting, the textbook revelation principle does not hold, since mechanisms can provide agents with information that affects ex-post beliefs. This paper uses a psychological game framework suited for mechanism design and provides a novel version of the revelation principle for belief-based preferences. The new revelation principle makes use of extended direct mechanisms that map each reported type into material outcomes and private suggestions of what ex-post beliefs the agents should have. The paper shows that it suffices to use extended direct mechanisms that satisfy three conditions: Bayesian incentive compatibility, individual rationality, and a new condition called credibility. The new revelation principle provides an alternate tool—distinct from Myerson's communication revelation principle—to study mechanism design with after-games.

## Working Papers

**Neutral Mechanisms: On the Feasibility of Information Sharing** The paper analyzes information sharing in neutral mechanisms when an informed party will face future interactions with an uninformed party. Neutral mechanisms are mechanisms that do not rely on (1) the provision of evidence, (2) conducting experiments, (3) verifying the state, or (4) changing the after-game (i.e., the available choices and payoffs of future interactions). They include cheap talk, long cheap talk, noisy communication, mediation, money burning, and transfer schemes, among other mechanisms. To address this question, the paper develops a reduced-form approach that characterizes the agents' payoffs in terms of belief-based utilities. This effectively induces a psychological game, where the psychological preferences summarize information-sharing incentives. The first main result states that if an expert's reduced form (i.e., belief-based utility) satisfies a weak supermodularity condition between the state and hierarchies of beliefs, then there is a neutral mechanism that induces complete revelation of the state. Moreover, it identifies a mechanism that is easy to implement. The second main result states that if the expert's reduced-form representation (i.e., set of belief-based utilities) satisfies a strict submodularity condition between the state and the hierarchies of beliefs, neutral mechanisms are futile for any (relevant) information sharing. This implies a limit in the ability to use neutral mechanisms for information sharing. The paper goes on to show how the approach is useful in applications related to political economy and industrial organization.

**Optimal Scaling Auctions: A Consumer Theory Deconstruction** We study scaling auctions for procurement environments where sellers are risk-averse and have private fixed costs. We

show that sellers' bidding behavior can be obtained as the solution to an auxiliary Hicksian demand problem, in which the weights of the scoring rule serve as prices. Consequently, changes in weights induce a pure substitution effect, rationalizing the skewed bidding behavior observed in the empirical literature. Utilizing the Hicksian properties of equilibrium bidding, we characterize the scaling auctions that minimize the buyer's expected payment. Furthermore, we conduct a comparative analysis between scaling auctions and cash auctions, demonstrating that scaling auctions reduce the buyer's expected payment when sellers incur relatively large marginal costs. Lastly, we establish that a hybrid format outperforms both pure scaling and cash auction formats

**Selling Information under Prior Disagreement** This paper studies information selling in environments in which (1) the seller has limited commitment power, and (2) the buyer and the seller hold different beliefs about the state of the world. We show that in environments with a common prior, there is no advantage to selling information sequentially; the seller cannot achieve higher revenue than by offering an experiment that fully reveals the state in one period. We find that if, on the other hand, the agents agree to disagree about their prior beliefs, the seller achieves a strictly higher revenue by gradually selling information over multiple periods. Moreover, increasing the number of periods of the selling protocol strictly increases the seller's expected revenue. In addition, in some environments, it is optimal for the seller to first offer a free sample test, i.e., an experiment that partially reveals information, at no charge

**Deterministic Mechanism Design** This paper studies mechanism design in environments where a designer can only commit to deterministic mechanisms. If there is one agent, stochastic mechanisms may strictly dominate deterministic mechanisms. The main theorem shows an equivalence between stochastic and deterministic mechanisms, whenever there are two or more agents. The equivalence is achieved through an indirect deterministic mechanism. The paper goes on to show a deterministic revelation principle: Under ex-post implementation, direct deterministic mechanisms suffice, provided the set of outcomes is binary.

**Information Markets in Games** Markets for information are ubiquitous in modern society. Understanding how information providers choose to sell information is important for designing policies that improve efficiency. This paper studies markets for information when two uninformed agents play a quadratic game and characterizes the revenue maximizing information-selling schemes. The optimal way to sell information depends on the degree to which agents' actions are strategic substitutes or complements. In the case of strategic complements, it is always optimal to sell perfect information to both agents. However, in the case of strategic substitutes, there is a trade-off; revealing more information increases the correlation between the agents' actions, which in turn decreases the value of information. If the degree of strategic substitutability is sufficiently high, it is optimal for the seller to obfuscate information. Depending on the degree of substitutability, it is either optimal to sell perfect information to exactly one agent, or to sell a noisy signal to both.