UNIVERSITY OF CALIFORNIA, BERKELEY
DEPARTMENT OF ECONOMICS

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RESEARCH AND TEACHING FIELDS:

PRIMARY
Microeconomic Theory

SECONDARY
Fair Division
Mathematical Economics

EDUCATION	**DEGREE**	**DATE**
UC Berkeley	Ph.D. in Economics	2027 (expected)
Thesis: Essays in Fair Division		
Committee: Federico Echenique, Chris Shannon, Quitze Valenzuela-Stookey, Yuichiro Kamada		
Kyiv School of Economics	M.A. in Economic Analysis	2020
Taras Shevchenko National University of Kyiv	B.A. in International Economic Relations	2018

WORKING PAPERS:

- The Power of Sperner's Lemma in Fair Division (Job Market Paper)
  I establish the existence of an allocation that is simultaneously envy-free and weak Pareto efficient for a broad class of allocation problems. I develop a unified existence proof that encompasses classical settings with divisible and indivisible goods while extending fair-division analysis to infinite-dimensional environments, including dynamic and state-contingent allocation problems. A quantitative adaptation of the proof yields a new algorithm for computing allocations that satisfy both envy-freeness and efficiency to an arbitrary degree of precision, applicable to a broad class of allocation problems.
- Multi-period Fair Division
  with Federico Echenique and Albin Erlanson
  We prove existence of envy-free and Pareto efficient allocation in a multi-period indivisible goods assignment problem. Since Birkoff-von-Neumann fails in this environment, the allocation problem cannot be reduced to individual-level consumption problem where total demand cannot exceed supply. Therefore, we must treat economy-wide allocations as a public good. We provide a market-based implementation by showing that such an allocation can be supported as a Lindahl equilibrium. We then look at a large economy and show that for large enough economies, the incentives to misrepresent agents' preferences vanish.
- Implementation in the Cake-Cutting Problem
  I establish an equivalence between lotteries over deterministic cake partitions and fractional cake allocations—partitions of unity. The former is a common tool for convexifying a set of deterministic allocations, while the latter is an insightful embedding used in mathematical fair division. By proving that these two objects are utility-equivalent, I provide an implementation foundation for a mathematical representation commonly used in fair division. In addition, I show that every simple partition of unity belongs to the convex hull of degenerate partitions of unity, which means it is implementable by a lottery with finite support.

WORK-IN-PROGRESS:

- Approximately Marginal Contribution Allocations
  An allocation is a marginal-contribution allocation if agents' utilities are equal to agents' marginal contributions to the maximal total welfare. In environments with quasilinear utilities the set of marginal-contribution allocations and the set of Walrasian equilibria coincide. Under convergence of utilities to quasilinear utilities (small income effects), it turns out that the gap between equilibrium utilities and agents' marginal contributions can remain strictly positive in the limit. I provide a sufficient condition under which the gap goes to zero: equilibrium and welfare-maximizing allocations remain in a common compact set on which the utility gradients converge to quasilinear utility gradients.

PRESENTATIONS:

European Meeting of the Econometric Society University College Dublin, Dublin	August 2026
2nd Berlin PhD Conference in Economics Berlin School of Economics, Berlin	July 2026
North American Summer Meeting of the Econometric Society Emory University, Atlanta	June 2026
29th Coalition Theory Network Conference University of Padua, Padua	May 2026
Graduate Women in Economic Theory Conference (poster) Yale University, New Haven	March 2026
European Winter Meeting of the Econometric Society University of Cyprus, Nicosia	December 2025
Theory Lunch, Department of Decision Sciences Bocconi University, Milan	December 2025
CLIMB Retreat University of California, Berkeley	November 2025

PROFESSIONAL EXPERIENCE:

RESEARCH

Consultant, Global Sovereign Debt & Currencies, Barings LLC (2020)
Lead Economist, National Bank of Ukraine, Department of Monetary Policy (2019)

TEACHING

Teaching Assistant, Department of Economics, U.C. Berkeley (Fall 2021- Fall 2026)
Intermediate Microeconomics, Graduate Game Theory, Graduate Mathematical Tools for Economists

REFEREE

Theoretical Economics (2026)

FELLOWSHIPS AND AWARDS:

2026-2027	Doctoral Completion Fellowship, UC Berkeley
2020-2025	Departmental Fellowship, UC Berkeley, Department of Economics
2018-2020	FUIB Merit Fellowship, Kyiv School of Economics

OTHER INFORMATION:

Languages:	English, Ukrainian, basic German
Citizenship:	Ukraine
Age:	29 years old

REFERENCES:

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