Sarah Palor Sylvester

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CURRENT POSITION & AFFILIATION

PhD candidate 2019	Experimental Economics George Mason University, Fairfax, VA Expected completion May 2024
Graduate Research Assistant 2019-current	Dr. Kevin McCabe Interdisciplinary Center for Economic Science (ICES) George Mason University, Arlington, VA
PhD Fellow 2019-current	Mercatus Center George Mason University, Fairfax, VA
ICES Graduate Fellow 2019-current	Interdisciplinary Center for Economic Sciences George Mason University, Arlington, VA

EDUCATION

2021	MA Economics, George Mason University, Spring 2021 Fields: Experimental Economics and Law and Economics
2019	BA Mathematics and Economics, The University of Arizona, 2019 (Graduated with Honors)

TEACHING

Fall 2023 & Summer 2023	Graduate Lecturer for LAW 108: Economics for Lawyers (LLM, online)
Spring 2023	Graduate Lecturer ECON 308: Managerial Economics/Strategy (undergraduate, in-person)
Fall 2021	Co-taught ECON 895: Computational Methods for Economists (undergraduate and graduate, hybrid) with Dr. Kevin McCabe
Summer 2020 & 2021	Mentor and Graduate Lecturer for IFREE/CeLab Workshop. Led a group of undergraduate students in a research project on cryptocurrency trading mechanisms, teaching research skills and computational, experimental economics. Workshop overview available here: https://medium.com/agoric/kevin-mccabe-on-the-inner-workings-of-computational-microeconomics-27caf66e20f6

RESEARCH and TEACHING FIELDS

Research Fields: Applied Microeconomics, Monetary Economics

Teaching Fields: Microeconomics, Managerial Economics

TEACHING EVALUATION SAMPLE

Sample evaluations for ECON 308, Spring 2023

"I gained an understanding of the main concepts in this course."
    Course: 4.7/5
    Department: 4.01/5

"The instructor clearly presented the course content."
    Course: 4.7/5
    Department: 4.21/5

"I learned through the variety of learning opportunities provided."
    Course: 4.6/5
    Department: 3.95/5

RESEARCH EXPERIENCE

Work in Progress	*Cryptocurrencies: Experiments on Individual Attitudes and Perceptions,* with Dr. Johanna Mollerstrom

Abstract: Cryptocurrencies utilize new technologies that improve the financial freedom of individuals in need. In this research, we design a survey experiment to understand the barriers to cryptocurrency use and potential information messages that could resolve them. We provide subjects with messages about cryptocurrencies and evaluate their willingness to own cryptocurrencies after reading the message. Our online survey experiment consists of 1400 Americans and contains cryptocurrency owners and nonowners. For nonowners, our results indicate that brief messages concerning the ease of use or security features of cryptocurrencies are effective in increasing the willingness to own cryptocurrencies in the short run. In line with the literature, we find that owners are generally young males. In a new measure, we find that individuals with a high tolerance for risk are more likely to be owners and are more willing to own them in the future. Our research is an introductory step in understanding the openness toward cryptocurrencies.

Working Paper	*Analyzing Arbitrage Behavior in Automated Market Makers,* with Dr. Kevin McCabe, Nalin Bhatt, Aleksander Psurek Draft available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4247283

Abstract: Automated Market Makers (AMMs) are mechanisms that allow people to trade cryptocurrencies in a decentralized manner. Using an agent-based simulation approach, we find that many features of AMMs allow them to function efficiently, by equilibrating prices to external

markets with relatively low volatility. Our research provides an introductory analysis of AMMs, modeled using the Microeconomic Systems framework and programmed with mTree, a decentralized computing platform. Our innovative method of simulating AMMs is accompanied by new methods of measuring AMM efficiency that could be useful in other studies evaluating AMMs. We focus on analyzing arbitrage agents, who are traders that use token price differences to make profits and equilibrate the prices of cryptocurrencies across markets. We provide the first analysis of arbitrage agents using simulations and explore how their behavior can influence an AMM's prices and volatility. We find that AMMs with low liquidity depths experience large price fluctuations away from tokens' external market prices and that AMMs without active arbitrageurs lead to long-standing price misalignment. Our results indicate that liquidity depth, arbitrage activity, and additional features should be considered when using and creating AMMs.

Work in Progress	*The Adaptive Rationality of Markets,* with Dr. Kevin McCabe, Stephen Kunath, and Aleksander Psurek
Work in Progress	*The Efficiency of Escrow Mechanisms on Online Exchange,* with Dr. Kevin McCabe and Nalin Bhatt

RESEARCH GRANTS/ SCHOLARSHIPS

Fall 2023	GSTF Conference Travel Funding *($450 travel stipend)*
Summer 2023	Mercatus Graduate Student Summer Research Fellowship *($1,000 Fellowship)*
Summer 2022	Mercatus Graduate Student Summer Research Fellowship *($1,000 Fellowship)*
Summer 2022	Agoric Summer Research Grant Research on lending and liquidation blockchain protocols, economic analysis, simulations, and field experiments *($15,000 Grant)*
February 2022	APEE Young Scholars Program Award (*$599 travel stipend)*
February 2021	APEE Young Scholars Program Award (*$599 travel stipend).*

AWARDS/ WORKSHOPS

May 31 – June 5, 2022	Participant in IFREE's 27th Annual Visiting Graduate Student Workshop in Experimental Economics
May 2019	*Outstanding Economics Graduate of 2019* Eller College of Management, University of Arizona

PRESENTATIONS

November 19, 2023	SEA 93rd Annual Meeting 2023, New Orleans, LA
October 21, 2023	ESA North American Meeting 2022, Charlotte, NC
April 17, 2023	APEE Conference Presentation, Cancún, Mexico
November 16, 2022	ESA North American Meeting 2022, Santa Barbara, CA
October 27, 2022	ICES Brown Bag Presentation, George Mason University
October 14, 2022	UCSB-Econ DeFi Seminar Series Presentation, Virtual
April 5, 2022	APEE Conference Presentation, Las Vegas, NV
March 24, 2022	ICES Brown Bag Presentation, George Mason University
October 14, 2021	ICES Brown Bag Presentation, George Mason University
April 12, 2021	APEE Conference Presentation, Fort Lauderdale, FL
April 1, 2021	ICES Brown Bag Presentation, George Mason University

COMPUTATIONAL SKILLS

Python
Java
Stata

REFERENCES

Professor Kevin McCabe, George Mason University, ICES
  kmccabe@gmu.edu

Professor Johanna Mollerstrom, George Mason University, ICES
  jmollers@gmu.edu

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  rcandela@mercatus.gmu.edu