

# Kyle L. Woodward

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CONTACT INFORMATION	2155 12th Avenue San Francisco, CA 94116	+1 323 3 10 5 16 8 san.francisco@kylewoodward.com <a href="https://kylewoodward.com/">https://kylewoodward.com/</a>
EDUCATION	<b>UCLA</b> , Los Angeles, CA <i>Ph.D., Economics</i> Advisor: Marek Pycia	<b>June 2015</b>
	<b>UCLA</b> , Los Angeles, CA <i>Master of Arts, Economics</i>	<b>June 2011</b>
	<b>Stanford University</b> , Stanford, CA <i>Bachelor of Science, Mathematics</i> <i>Minors: Economics and Computer Science</i>	<b>June 2006</b>
PROFESSIONAL HISTORY	<b>Apple</b> <i>Machine Learning Scientist/Auction Economist</i>	<b>February 2024–present</b>
	Develop statistical and behavioral models to predict outcomes of marketplace experiments. Build framework distinguishing experimental from long-term outcomes, and conceive workarounds to bring the two into harmony. Pilot experiments to improve platform outcomes and experiment health. Promote respect for participant interests and incentives in designing marketplace mechanisms.	
	<b>Gopuff</b> <i>Senior Data Scientist, Economics</i>	<b>February 2022–February 2024</b>
	Leverage NLP and structural economic techniques to pilot experiments to improve ad returns and calibrate demand parameters, as well as to audit existing data pipelines. Develop ad auction simulator for ad placement, focusing on joint goals of improved relevance ranking and revenue/CTR optimization. Design experiments and apply causal inference to off-platform spend optimization. Build forecasting algorithms and ML pipelines for ad placement, promotion assignment, and CRM delivery. Advise external teams on best practices.	
	<b>University of San Francisco</b> <i>Adjunct Professor of Economics</i>	<b>August 2023–December 2023</b>
	Teach graduate-level courses on microeconomic theory and the development and design of institutions. Advise student research projects, and liaise between the academic and tech communities.	
	<b>University of North Carolina at Chapel Hill</b> <i>Assistant Professor of Economics</i>	<b>July 2015–June 2024</b>
	Conduct cutting-edge microeconomic research, specializing in game theory and market design. Teach undergraduate and graduate courses and advise student theses. Publish work in top-tier journals, present at international conferences, persuade policymakers to pursue intelligent implementation, and (as a reviewer) contribute to health of the field.	

**UCLA***Graduate Student***September 2009–June 2015**

Pursued advanced study of microeconomic theory and wrote dissertation on auctions of multiple units. Served as research assistant for econometrics research. Led undergraduate courses, and led recitation for undergraduate and graduate courses.

**Intuit***Senior Data Analyst***December 2007–February 2009**

Homestead Technologies was acquired by Intuit, and previous role converted to Senior Data Analyst. Monitored product pricing and assessed the effectiveness of marketing campaigns.

**Homestead Technologies***Manager, Data Analysis***July 2006–December 2007**

Hired as data analyst. Pulled business statistics and conducted analyses of pricing and customer retention. Promoted to manager and hired team of analysts to pull business statistics and conduct analyses of pricing and customer retention. Designed sales compensation scheme.

TECHNICAL  
PROFICIENCY

C, Excel, HTML, Java, JavaScript, Logo, LOLCODE, MATLAB, Perl, PHP, Piet, Python, R, shell scripting, SQL

## PUBLICATIONS

A Case for Pay-as-Bid Auctions

*With Marek Pycia*

*Journal of Political Economy, 2025*

Bidding in Multi-Unit Auctions under Limited Information

*With Bernhard Kasberger*

*Journal of Economic Theory, 2025*

Reserve Prices Eliminate Low Revenue Equilibria in Uniform Price Auctions

*With Justin Burkett*

*Games and Economic Behavior, 2020*

Uniform Price Auctions with a Last Accepted Bid Pricing Rule

*With Justin Burkett*

*Journal of Economic Theory, 2020*

WORKING  
PAPERS

Sharing Cost Information in Dynamic Oligopoly

*With Greg Kubitza*

*Revise and resubmit, American Economic Journal: Microeconomics*

Intertemporal Allocation with Unknown Discounting

*With Justin Burkett*

*Revise and resubmit, Journal of Economic Theory*

New Numeraires

*With Justin Hadad*

Equilibrium with Monotone Actions  
*Reject and resubmit, Econometrica*

Mixed-Price Auctions for Divisible Goods

Pollution Permits: Efficiency by Design  
*With Marek Pycia*

Ambiguous Scoring Rules  
*With Justin Burkett*

Self-Auditable Auctions

Moment Equilibrium  
*With Bernhard Kasberger*

Biased Sampling Equilibrium

Strategic Ironing in Pay-as-Bid Auctions

PRESENTATIONS

**2025**

Conference on Mechanism Design (Essex, U.K.)

**2024**

Conference on Mechanism and Institution Design (Budapest, Hungary); Queensland University of Technology (Brisbane, Australia)

**2023**

Stanford University (Stanford, CA); North American Summer Meeting (Los Angeles, CA); EC'23 (London, U.K.); SAET (Paris, France)

**2022**

Stanford University (Stanford, CA); IFN (Stockholm, Sweden); Oxford University (Oxford, U.K.); Stony Brook International Conference on Game Theory (Stony Brook, NY); NBER Market Design Working Group (Stanford, CA)

**2021**

Swiss Society of Economics and Statistics (Zürich, Switzerland/Virtual); Games2020 (Budapest, Hungary/Virtual); INFORMS (Anaheim, CA/Virtual)

**2020**

(COVID)

**2019**

Southern Economic Association (Fort Lauderdale, FL); INFORMS (Seattle, WA); North American Summer Meeting (Seattle, WA); Asia Meeting of the Econometric Society (Xiamen, China); Queensland University of Technology (Brisbane, Australia)

**2018**

INFORMS (Phoenix, AZ); Oxford University (Oxford, U.K.); University of Rochester (Rochester, NY); Collegio Carlo Alberto (Torino, Italy); University of Zurich (Zürich, Switzerland)

**2017**

Southern Economic Association (Tampa, FL); Columbia/Duke/Northwestern/MIT Theory Conference (Durham, NC); INFORMS (Houston, TX); North American Summer Meeting (St. Louis, MO); MWET (Lexington, KY); ZWABT (Zürich, Switzerland); Paris School of Economics (Paris, France)

**2016**

INFORMS (Nashville, TN); NC State University (Raleigh, NC); EC'16 (Maastricht, Netherlands); SAET (Rio de Janeiro, Brazil)

**2015**

ISMP (Pittsburgh, PA); UNC-Chapel Hill (Chapel Hill, NC); Northwestern University (Evanston, IL); SWET (Tucson, AZ)

**2014**

SWET (Irvine, CA)

**MEDIA**

“Anxiety builds over S.F. school closures. Here’s when SFUSD will release the list,” *San Francisco Chronicle* (31 July 2024)

“San Francisco school board considering cuts that could include closing schools,” *KTVU* (29 August 2023)

“It’s Never Been Smarter to Hate Duke,” *The Wall Street Journal* (20 March 2019)

**TEACHING**

**USF ECON 601: Microeconomics: Theory and Applications**  
Fall 2023

**UNC ECON 701: Analytical Methods for Mathematical Economics**  
Fall 2021; Fall 2020; Fall 2019; Fall 2018; Fall 2017; Fall 2016; Fall 2015

**UNC ECON 510: Advanced Microeconomic Theory**  
Fall 2020 (honors); Spring 2019; Fall 2017; Spring 2017; Fall 2015

**UNC ECON 890: Contract Theory**  
Fall 2019; Spring 2019

**UCLA ECON 495: Teaching College Economics**  
AY 2013-2014 (Kathleen McGarry)

**UCLA ECON 97: Economic Toolkit**  
Summer 2013

**UCLA ECON 106D: Designed Markets**  
Spring 2013 (Marek Pycia)

**UCLA ECON 41: Statistics for Economists**  
Winter 2013 (Rosa Matzkin); Winter 2012 (Maximilian Kasy); Fall 2010 (Kata Bognar)

**UCLA ECON 101: Microeconomic Theory**  
Fall 2012 (Jernej Čopič); Winter 2011 (Bill Zame)

**GGBW: Introduction to Game Theory**  
Summer 2012; Summer 2011

**UCLA ECON 11: Microeconomic Theory**  
Spring 2012 (Bill Zame)

**UCLA ECON 201A: Theory of the Firm and Consumer**  
Fall 2011 (Bill Zame)

**UCLA ECON M134: Environmental Economics**  
Summer 2011 (Matt Kahn)

**UCLA ECON 201C: Equilibrium and Welfare**  
Spring 2011 (John Riley and Joe Ostroy)

**(MS)<sup>2</sup> CS: Introduction to Computer Science**  
Summer 2005

ADVISING

**Graduate committees**

Andrew deJong (UNC, 2022); Julien Isnard (UNC, 2022); Zhechen Yu (UNC, 2021; NCGA); Aisling Winston (UNC, 2018; University at Buffalo)

**Undergraduate honors theses**

Justin Hadad (UNC, 2021; Rhodes Scholar); Aarthi Kannan (UNC, 2021; Harvard Law); Patrick Costley (UNC, 2020; UCLA Economics)

REVIEWING

*American Economic Journal: Microeconomics; B.E. Journal of Theoretical Economics; Dynamic Games and Applications; EC'16; EC'22; EC'23; Econometrica; Economic Theory; Economics Letters; Electronic Commerce Research; Games and Economic Behavior; IEEE Access; IEEE Systems Journal; IEEE Transactions on Automatic Control; IEEE Transactions on Systems, Man, and Cybernetics: Systems; Information Systems Research; International Economic Review; International Journal of Game Theory; Journal of Economic Theory; Journal of Economics & Management Strategy; Journal of the European Economic Association; Journal of Mathematical Economics; Management Science; MATCH-UP 2019; National Science Foundation; Naval Research Logistics; PLOS ONE; RAND Journal of Economics; Review of Economic Design; Review of Economic Studies; Theoretical Economics*

HONORS

**Junior Faculty Development Award, UNC** August 2017

**Dissertation Year Fellowship, UCLA** June 2014

**Graduate Economics Association Service Award, UCLA** May 2014

**Economics Teaching Assistant Award, UCLA** October 2013

SERVICE

**Rosa Parks Elementary PTA**  
*Treasurer* July 2023 – present

**Rosa Parks Elementary PTA**  
*Parliamentarian* December 2022 – June 2023

**Rosa Parks Elementary PTA**  
*Auditor* June 2022 – December 2022

**San Francisco Parent Coalition**  
*Budget Committee Member* April 2022 – present

<b>UNC Economics Placement Committee</b>	
<i>Co-director</i>	<b>August 2015 – August 2017</b>
<b>UCLA Social Sciences Council</b>	
<i>Representative</i>	<b>June 2011 – November 2013</b>
<b>UCLA Graduate Economics Association</b>	
<i>Commissar</i>	<b>June 2011 – April 2013</b>
<b>UCLA Graduate Economics Association</b>	
<i>Vice President</i>	<b>September 2010 – June 2011</b>