



### Contact Information

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### Education

**Duke University**  
Bachelor of Arts, 1991.  
Majors in Economics, Mathematics, and  
Ccomputer Science.

**Stanford Graduate School of Business**  
Ph.D., 1995  
Dissertation: “Comparative Statics in  
Stochastic Problems with Applications.”

### Position

**Stanford University Graduate School of  
Business**  
• 2014-present The Economics of  
Technology Professor  
• 2013-2014 Professor of Economics  
**National Bureau of Economic Research**  
• Research Associate, 2001-present  
• Co-organizer of Productivity and  
Information Technology/Digitization  
• Founding co-director of Market  
Design Working Group, 2008-2014

**Director**  
Stanford Initiative on Shared Prosperity  
and Innovation, 2018-present

**Boards of Directors**  
Lending Club, 2018-present  
Expedia, 2015- present  
Ripple, 2014-present  
Rover, 2016-present

**Visiting/Consulting Researcher**  
Microsoft Research, New England,  
2008-present

**Consultant**  
Microsoft Corporation, 2007-2016

### Research Interest

Industrial organisation ★★★★★  
Game theory-dynamic games ★★★★★  
Technology and machine learning ★★★★★  
Monotone comparative statics ★★★★★  
Math-based currency ★★★★★  
Internet search ★★★★★

Finding

# Susan C. Athey

The common theme of Susan's works is in "applied" and "fundamental" research. While the majority of academic economists work between the middle of these two fields of research, Susan worked on both extremes which makes her become special among the economist.

## Stunning Facts



### John Bates Clark Award



Susan was the first female winner of the John Bates Clark Award, which awarded annually in April since 1947 by American Economics Association. This award aimed to award an American economist under the age of forty who has a great contribution to economic thought and knowledge. As long as the economist is working in the US, having US citizenship is not necessary for them to be eligible for the award.

Susan Athey is an applied theorist who has made important contributions to economic theory, empirical economics, and econometrics. She has built a research program strongly focused on using theory to understand substantive economic issues, especially in Industrial Organization. She has developed tools and techniques that provide the basis for empirical work strongly grounded in sound economic theory. She has made particularly important advances in developing and applying tools that replace strong functional form assumptions in models with more plausible conditions such as monotonicity, thereby facilitating the development of more robust empirical results.



### Timber Auction



selected tract of  
timber and estimate  
the quantity of each  
species

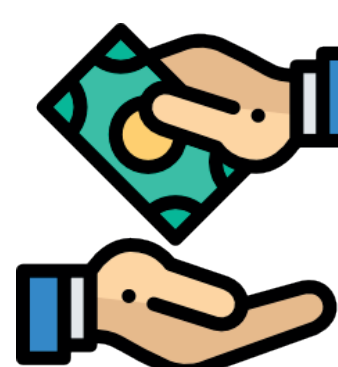


bid a per unit  
price for each  
species of timber  
winner: firm with highest  
“estimated” bid



remove timber

1. measure the amount of  
timber removed  
2. charge the winning firm



US Forest Service

Firm

Firm

US Forest Service

She co-worked with Jonathan Levin in 2001 to examine the bidders’ behaviours and the timber bidding market in U.S.. Susan and Jonathan make use of the econometrics to model the value of forest in the view point of bidders and compare with different auction method.

	Wood Type A	Wood Type B	Bid	Average Bid	Expected Payment
US Forest Service Estimate	50%	50%	(\$100, \$100)	\$100	\$100
Firm Estimate	60%	40%	(\$50, \$150)	\$100	\$90
Firm Estimate	65%	35%	(\$50, \$150)	\$100	\$85

1. The number of bidders entered into the market is more important than bidding methodology.
2. Since that every bidder have their private information, every one of them has different estimation towards the value of the forest. The U.S. Forest Service tend to underestimate the value of the forest. Taking advantages of private information, the bidders make a higher profit from the bid.

## Tech Economist



Search advertising auctions Microsoft



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**Ad** <https://www.aeaweb.org/about-aea/honors-awards/bates-clark>

**Susan** is currently focusing her research on the economics of digitization, marketplace design, and the intersection of econometrics and machine learning. On top of that, as the director of **Microsoft** Research, **Susan** conducts research on online-service data, for example, the effect of the news aggregators on local news consumption, the effect of currency fluctuations on **advertising** revenues and also some empirical health care economic projects.

**Search Advertising: The Design and Its Effectiveness...**

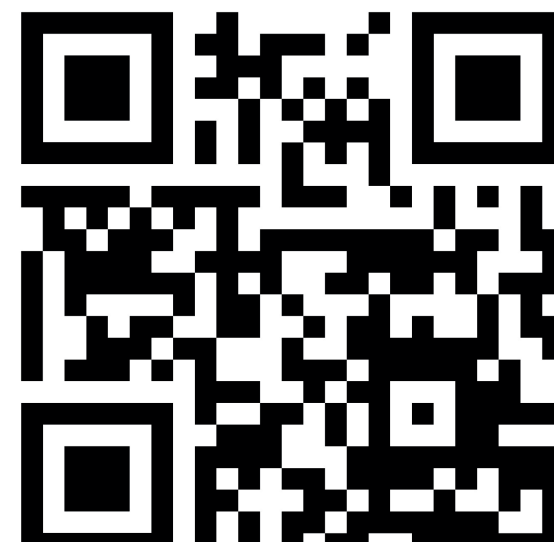
... In particular, Susan helps **Microsoft** to design **search advertising auctions**, which refers to the **auctions** for the ad location that usually found in right-hand margin on the webpage. Traditionally, the advertiser who paid the highest price can get the top position of the webpage so as to attract more attention from consumers by gaining more clicks. However, this traditional market design is ineffective in maximizing welfare since irrelevant **ads** are misleading to consumers.

**Learn How to Improve the Use of Search Advertisement...**

By analysing the **advertiser**-bidding behaviour as well as the consumer-clicking behaviour, Susan discovered that there will be an enhancement of the overall welfare for the search engine provider, advertiser and consumer if the search engine shows less but relevant **ads** to the consumers. Since the quality of **ads** is improved, they increase the customer's efficiency in finding their desired information and make consumption more easily. Therefore, showing more relevant and high-quality **ads** would lift the advertiser's revenue as more targeted consumer know their products or services. This new market design for **search advertising** contribute not only to **Microsoft** but also to other internet **search** engines (i.e. Bing, Yahoo or Google).



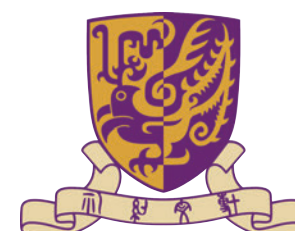
Poster Audio



Website



Susan's  
Personal Website



**Department of Economics**  
The Chinese University of Hong Kong  
香港中文大學經濟學系

Ascendare

Lai Hoi Ching Liu Tsz Ki Siu Wun Chi