

WSS NEWS

WASHINGTON STATISTICAL SOCIETY

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**A Message from the WSS President:
Thank You for What You Have Made the WSS this Year**

Mark Otto



Well, the Washington Statistical Society year is winding up. Looking back, I was crazy to agree to run for President as I was moving to Colorado and retiring. But I would not have gotten another chance to give back in such a big way. The WSS has been a part of my life for my whole career. I tried to make the most of this year. With COVID, I don't think many people, even on the board, knew I was two time zones away. Just as well.

I didn't set out to have a theme for this year. It could be best described as the [nail-soup](#) presidency. Look what the board and members brought to it. Eileen O'Brien wanted to start a conversation between current leaders and their wealth of experience that is heading out the door and those young statisticians who are becoming leaders taking their places without a clue of what is coming. We started a lunch-time series with Sally Morton (ASA President), Gary Sullivan (ASA Statistical Leadership Program), Sidney Schwartz (GAO), Allison Florance (Novartis), Jennifer Parker (NCHS), and ending with Rob Santos (ASA President and Census Director). Eileen and I have probably learned more from 25 participants as the speakers.

Jill Dever wanted to have a mentor workshop. With Benmei Liu (NIH) chairing the Mentoring Committee, we pulled it off. The recording is on our [YouTube channel](#). David Morganstein (Westat, retired) led off, with President-Elect Erin Tanenbaum and one of my mentees giving the mentee experience. This mentoring session, we had 32 pairs, more than we have ever had. When we didn't close the application site in time, four mentors offered to take second mentees. We had a session on [negotiating USAJobs to land a government job](#), organized by Benmei and Mike Jadoo (BLS). The committee helped each other out with mentees and joking with each other. This is volunteering and supporting each other makes our effort more worthwhile and enjoyable.

The core of the WSS that members see are our seminars and workshops. Hopefully, you have found more than one interesting and have taken time to watch. You can check them out on our [YouTube Channel](#). Yan Li (UMD) and Jeff Gonzales (USDA/NASS) have been working hard to bring a variety of talks throughout the year. There are more to come. Qing Pan is giving the

Cox lecture on Risk Predictions with Applications in Medicine & Law and Jim Nichols is going to give the President's lecture on [Structured Decision Making](#) (SDM).

I encourage you to attend this talk even though decision analysis seems far from statistics. As we are trying to squeeze more information out of surveys with lower and lower response rates, we need to tie our analyses closer to the decisions that result from the collected data. SDM is a process to work through those decision processes. SDM has taken regulating waterfowl hunting from smoke-filled back rooms to a transparent process. It has been used to bring groups on different sides of the resource problems to set water level on the Colorado and Missouri Rivers. It has become an [official practice of the Department of Interior](#). See how the data and modeling are developed in this process.

The WSS seems practically to run itself. It does seem to, but much of that is due to long time members that have become part of the WSS infrastructure that we don't even think about it much less appreciate what they do. Vince Massimini is the face of WSS in your emails. Emails must make sense to Vince before they go out. He protects you from any extra mailings. Chris Moriariaty has held a number of roles, including 2015 president and webmaster for close to ten years. (check). Colleen Choi has been the newsletter editor for years. Finally, Phil Kalina has been communication resource since I have been with the WSS. Give them a hand.

One newer member to the above group is our Treasurer, Amy Lin, she is our "piano player," quietly, but solidly keeping the band together, at least financially. (She's actually learning piano too!). Read about her in the Spotlight column.

Nail soup. I haven't so much come up with new ideas as try to listen and support those that you all have brought up. If you are in the leadership lunch group, the mentoring program, helped with science fairs or the statistics poster contest, join us June 8 and hear more about what you and others have done, Join the half hour social before. Thank you for making the WSS what it is.

Robert Feenstra and Charles Hulten receive 2022 Shiskin Award

Robert Feenstra, Distinguished Professor at the University of California, Davis, and **Charles Hulten**, Professor Emeritus at the University of Maryland, College Park have been selected as co-recipients of the 2022 Julius Shiskin Memorial Award for Economic Statistics. The award recognizes unusually original and important contributions to the development of economic statistics or to their use in interpreting the economy.

Robert Feenstra is recognized for his conduct of fundamental research on price index measurement in the presence of product turnover, his pioneering work in advocating for the use of scanner data for improved economics measurement and his major contributions to our understanding of the evolution of living standards worldwide through the creation and dissemination of the next generation of the Penn World Tables.

Charles Hulten is recognized for his insights into the measurement of capital and productivity, including measurement of economic depreciation, development of a methodology for aggregating industry level productivity, and measurement of investment in intangible capital, as well as his leadership role in chairing the Committee on Research on Income and Wealth (part of the National Bureau of Economic Research -- NBER) for three decades.

Feenstra and Hulten become the 51st and 52nd recipients of the Award. The award is sponsored by the Business and Statistics Section of the American Statistical Association, the National Association for Business Economics, and the Washington Statistical Society.

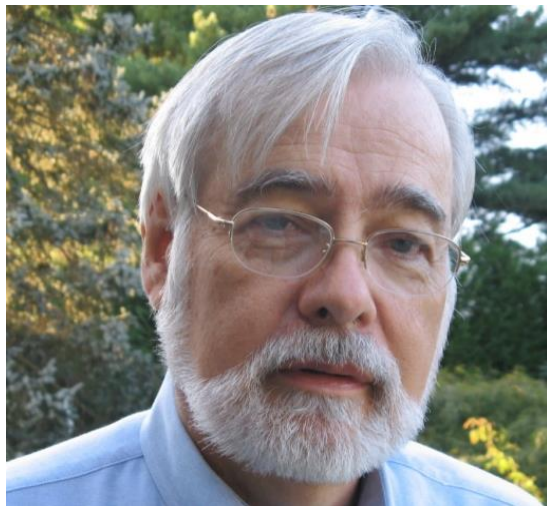


Robert Feenstra has spent most of his career as a faculty member at the University of California, Davis after earlier being on the faculty of Columbia University. He is a well-known international trade economist, who has made path-breaking contributions to economics measurement more broadly. This includes contributions to index number theory, measuring changes in the cost of living in the presence of product turnover, the use of scanner data for measurement of key economic indicators and international comparisons of economic activity. He has made major methodological contributions to economics measurement as well as developed innovative measures of international trade activity and measures of living standards worldwide.

Professor Feenstra's research on the measurement of changes in the cost of living over time in the presence of product turnover has been transformative to economics measurement. Most existing price indices abstract from the entry and exit of goods, which introduces a selection bias in the measurement of prices, because entering and exiting

goods tend to systematically differ from one another and from surviving goods. Given the prevalence of entry and exit in micro datasets, this is a major problem for conventional price indexes as measures of the change in the cost of living over time. The key insight of his research is that the expenditure share of surviving varieties contains information about the relative attractiveness of entering, existing and surviving varieties. Building on this intuitive insight, he derived an exact price index that measures the overall change in the cost of living, taking into account entry, exit and changes in the prices of surviving varieties. This research has provided a platform for a sequence of major contributions in the fields of macroeconomics and international trade.

He has also made major contributions to economic measurement through the dissemination of comprehensive data on U.S. and World Trade through the NBER International Trade and Investment (ITI) program with his dissemination of data on world trade flows as well as on US exports, imports and tariffs. He has played a leadership role in the creation and dissemination of the next generation of the Penn World Tables. He has also played a leadership role in advocating for the use of scanner data in the measurement of key economic indicators.



Charles Hulten has spent most of his career on the faculty of the University of Maryland, College Park after earlier serving on the faculty of Johns Hopkins University. His pathbreaking research provides the conceptual framework or empirical basis for measures of inflation and total factor productivity (TFP), and for national accounts measures of wealth and consumption of fixed capital (depreciation), and intangible assets. In addition, during his many years of service as chair of the Executive Committee of the Conference on Research and Income and Wealth, he revitalized its support for economic measurement research at the US Statistical agencies through well-attended

summer meetings and special conferences and publication of timely, topical conference volumes containing important research papers.

Professor Hulten's published research on economics measurement spans multiple decades and topics. His research on Divisia indexes provides an economic rationale for chained price indexes and illuminates the advantages and potential disadvantages of chained indexes. This research provides a conceptual framework for BLS's chained Consumer Price Index (C-CPI-U). His paper on growth accounting with intermediate inputs provided the economic justification and interpretation of practical procedures used to analyze industry contributions to overall growth of total factor productivity (TFP). His estimates of economic depreciation for a variety of asset types provide the foundation for methods used by Bureau Economic Analysis to measure consumption of fixed capital in its fixed asset accounts and national income and product accounts. He also has important work providing guidance about the impact of capacity

utilization variation on productivity measurement.

In more recent years he has championed the importance of intangible assets in economic growth and helped pave the way for expanded coverage of intangibles in national accounts and productivity analysis in the US and around the world. His research shows that including intangible capital, capital deepening became the unambiguously dominant source of growth in labor productivity. This work on intangible capital has provided a path forward for the official statistical standards in this important area of economics measurement in the twenty-first century.

2022 WSS Board Election Results

We are pleased to announce the results from the 2022 WSS elections with 41.1% response from our eligible members:

President-elect: Jeff Gonzalez

USDA-Economic Research Service



Communications Chair: Erin Murphy

RTI



Treasurer: Amy Lin

Westat



Methodology Section Chair: Qing Pan

George Washington University



Representatives-at-Large:

Bev Pratt

US Census Bureau



Sabrina Zhang

Westat



A large thank you to everyone who participated in the election including Chris Moriarity, Amy Lin, Vince Massimini, Ashley Amaya, and the rest of the WSS Elections team. The new WSS Board under the leadership of Erin Tannenbaum, President will begin on July 1.

Washington Statistical Society

Member Spotlight: Amy Lin

Introducing your fellow members and showcasing the diversity of the WSS membership



Where do you work and what do you do?

I am a Senior Statistician in the Statistics and Data Science Unit of Westat, a survey research company in Rockville, MD. I've worked on a variety of surveys requiring different statistical techniques such as sampling, imputation, weighting, variance estimation, modeling and machine learning. The projects ranged from educational assessment to medical expenditure and prevalence measures of the HIV epidemic. The work involved meeting with clients and sponsors as well as coordinating the activities of statisticians with those of the operational and programming staffs.

"Be curious and never stop learning! Our field is ... ever changing. There is always something new around the corner"

What attracted you to your current position?

Having graduated from the Michigan Program in Survey and Data Science, it was a great honor to come to Westat to live and breathe the same air as Graham Kalton, one of the program's founders, and to continue to learn and work alongside other faculty members such as Keith Rust and Bob Fay.

Why did you join the Washington Statistical Society?

I joined to learn about professional development events, to connect with colleagues and to have opportunities to serve the community.

Why did you join the data science and statistics profession?

I stumbled into this profession. The Michigan Program in Survey and Data Science was the only statistics graduate program I applied for: the others were all in Economics. I was accepted and have been loving the field ever since!

What advice would you give to someone entering the data science and statistics profession?

Be curious and never stop learning! Our field is an ever changing one, constantly adapting its tools as the behavior of people change. When random digit dialing samples died out, we adapted to address-based samples. Now we are seeing an increased use of machine learning techniques, Bayesian models and

administrative data. There is always something new around the corner.

Have you had any great mentors? If so, what made them great?

Throughout my study and career, Jim Lepkowski, David Morganstein, Graham Kalton and Keith Rust have been the most influential. Jim helped build the strong foundation needed for the profession. David made Westat feel like home, always finding ways for young statisticians to grow professionally and as people. Graham pushed me technically, always urging me to dig deeper. Keith has truly helped me grow into the statistician I am now. He would distribute difficult issues and openly welcome ideas and debates. He encourages the staff to take risks and ask questions and patiently suggests how to make improvements. Most importantly, he treats each person as an equal, someone to be valued and as an important co-worker and friend.

How has COVID-19 changed your work environment? What changes do you think will persist post-pandemic?

Having used video calling for the past couple years, I think people will always look forward to having a virtual option. It makes it significantly easier to participate in conferences in other states or even other continents. The hardest thing about the pandemic was having to juggle young kids (plural!) and work. For that I am extremely grateful to my colleagues for the level of understanding they have displayed. I am really appreciative of the flexible work environment at Westat.

How do you like to spend your free time away from work?

During the pandemic, I picked up a couple of new hobbies: cross-stitch and watercolor. Also, I played the violin when I was a child and now I'm learning to play piano with my kids!

Upcoming Events

June is an exciting and busy month for WSS. We have several social and educational opportunities. Please see below for a list:

Virtual Seminar: Statistical Issues in Prediction-Based Medicine: Example of Lung Cancer Screening, Monday, June 6, 2022 Time: 11:00AM – 12:00PM EST

Speaker: Dr. Hormuzd Katki, PhD, Principal Investigator, Biostatistics Branch, DCEG, NCI

Chair: Yan Li, Program Chair, Washington Statistical Society (WSS)

Dr. Katki will discuss 4 topics in prediction-based approaches to screening. First, he will discuss why using prediction models is better than simple ad hoc criteria, and statistical considerations for choosing a model and threshold for action. Second, he will present an approach to continually updating risk during screening with screening test results and show how such an approach might provide superior management of people during screening. Third, he will present a new approach to eligibility based on predicted individualized lifeyears gained from screening, a measure of benefit which naturally combines considerations of individual risk and individual life-expectancy and could prove to be a superior approach to individual risk. Finally, he will discuss algorithmic fairness from use of prediction models, focusing on racial/ethnic disparities in eligibility for screening. Throughout the talk, he will demonstrate how prediction models provide a simplified, consistent, and fair basis for guidelines via the principle of “Equal management of equal risk/benefit”.

About the speaker: Dr. Katki is a Senior Investigator in the Biostatistics Branch of the NCI. His research focuses on understanding how epidemiologic findings could be used for screening and prevention, especially individualized prediction-based approaches to cancer screening. His methodologic research focuses on estimating individual absolute risk, strategies for risk-based screening and management, and metrics for evaluating risk models and biomarkers.

For additional information, please contact Yan Li (yli6@umd.edu), WSS Methodology Program Chair.

Join Zoom Meeting (if you miss it catch the recording on the WSS YouTube Channel)

<https://umd.zoom.us/j/93162002131?pwd=V1pTYTcrdUkyQVdpWklnc3duYjl1dz09>

Meeting ID: 931 6200 2131

Passcode: 789470

One tap mobile

+13017158592,,93162002131# US (Washington DC)

+19294362866,,93162002131# US (New York)

The Annual Awards Ceremony: Wednesday, 8 June 2022, 5:30–7:00 EDT

The ceremony is online again this year and follows a social gathering beginning at 5:30. Feel free to bring your own drinks and dinner. You may join 10 minutes early to make sure your connection and sound work.

The evening program will include:

- Social gathering (5:30 to 6:00)
- Introductions and opening remarks (6:00)
- Student Travel Award
- WSS K-12 Data Visualization Poster Competition Winners
- Curtis Jacobs Memorial Award
- WSS Outstanding Graduate Student Awards
- Gertrude Cox Award
- Shishkin Award
- President's Awards
- Past President's Certificate

Please register to get the link:

https://norc.zoom.us/meeting/register/tZwof--przMuE9QQc7cr2pzp5B0CYEB_-32J

No need to register ahead of time. The link starts for the 5:30 social, but you can just join the ceremony itself at 6:00 if you prefer.

A special thanks to NORC hosting and supporting the events.

Gertrude M. Cox Award Lecture: Thursday, 09 June 2022, 3–4 PM ET

Sponsored by Washington Statistical Society (WSS) and RTI International

Title: Risk Predictions with Applications in Medicine & Law

Speaker: Dr. Qing Pan, Professor, Department of Statistics, George Washington University

Chair: Marcus Berzofsky, Senior Research Statistician, RTI

Risk prediction has been a key issue in traditional statistical modeling and modern machine learning methods. Here I present two interesting examples from two seemingly very different fields which are inherently linked by statistics.



First Case: Accurate prediction of risks of disease and its precursors during screening are essential for optimal scheduling of screening exams. In epidemiology studies of screening-detected disease, researchers often face interval censored panel count data. We analyze the Study of Colonoscopy Utilization within the PLCO (prostate, lung, colorectal, and ovarian) Cancer Screening Trial, which followed patients for up to 15 years on colorectal cancer screening results including both cancer and its non-advanced/advanced adenoma precursors. Screening times strongly depend on past screening results.

Second Case: When plaintiffs prevail in a discrimination case a major component of the calculation of economic loss is the lost chance they would have been hired or promoted during the period for which they deserve compensation. The problem has certain features in common with that of estimating the restricted mean lifetime that occurs in clinical trials, however, the process of terminating one's eligibility, e.g., taking retirement, may also be affected by the discriminatory practices. The promotion process among employees and the retirement process are modeled by two semi-parametric regressions with calendar time as the time axis. Data from the reverse discrimination case, *Alexander v. Milwaukee*, where white male lieutenants were discriminated against their promotions to police captain are reanalyzed. The results obtained by the proposed method are compared to those of the original jury.

About the speaker: Dr. Qing Pan is a professor at the Department of Statistics and the Biostatistics Center at The George Washington University. Dr. Pan conducts applied, and methodological research motivated by real-world problems, particularly in biostatistics. She is a co-investigator on both the Diabetes Prevention Project (DPP) study and the Statistical and Data Management Center (SDMC) for the Antibacterial Resistance Leadership Group (ARLG). She is a devoted mentor to students and junior faculty.

For additional information, please contact Yan Li (yli6@umd.edu), WSS Methodology Program Chair.

Join Zoom Meeting: <https://umd.zoom.us/j/91234862246?pwd=cngwdC9kRFF0cnZpcUIwREhHTkhqUT09>
Meeting ID: 912 3486 2246 Passcode: 159638

Presidents' Lecture: Tuesday, 14 June 2022, 1–2 PM ET

Title: Decision-Making Processes and Statisticians: An Example from Natural Resource Management

Speaker: James D. Nichols

Decision-making is important to virtually every aspect of our lives, yet seldom receives the attention that it deserves. The discipline of statistics plays multiple roles in informed decision processes:

- (1) providing estimates of current system state,
- (2) developing models for predicting future state associated with each potential action, and
- (3) combining these estimates and models with a decision algorithm to make the optimal decision.

For many decisions, estimates of system state and predictive models are characterized by substantial *uncertainty that must be dealt with by decision algorithms*. One source of uncertainty, imperfect knowledge of the effects of different actions, is a target of some decision processes (e.g., adaptive management) that seek to reduce this uncertainty (i.e., learn) as the process proceeds through time.

The presidents' address will provide an overview of the adaptive management decision process used for 27 years in the establishment of annual duck hunting regulations by the U.S. Fish and Wildlife Service which provides a nice example of how such processes work. The adaptive management decision process reduced the contentious arguments that once accompanied annual decision-making at the U.S. Fish and Wildlife Service and has led to a reduction in uncertainty about the effects of hunting on duck populations. Perhaps most important, *decisions that result from such processes are objective, transparent, scientific, and readily defensible*. Decision-making in many diverse areas (e.g., public health, education, economy, military) likely could be improved by use of formal decision processes, and statisticians are critically important in implementing such processes.

Bio: James D. Nichols is a retired research scientist who worked for the U.S. Fish and Wildlife Service and the U.S. Geological Survey (Biology) for his entire career. His research broadly emphasized the analysis and management of animal populations. Specific research foci were estimation of population parameters for animal populations, development of models for animal population dynamics, and use of formal decision processes for managing animal populations. He was given the [Aldo Leopold Memorial Award](#) in 2016 for a career in statistical estimation innovations and for his collaborations to bring better decision making to wildlife management.



Join Zoom Meeting <https://umd.zoom.us/j/95475024063?pwd=U0FiNWpUUmxLVFBUakNjMlVlSnZlZz09>
Meeting ID: 954 7502 4063
Passcode: 144713

Congratulations to the 5 WSS members who have become ASA Fellows!

Let's give a well-deserved round of applause to:



- Misrak Gezmu
- Beth Ann Griffin
- Mark S. Levenson
- Elizabeth Mannshardt
- Tucker McElroy

Keep up the great contributions to the field!