Beyond *the* Numbers

Economics and Data Resources for Information Professionals

Sept. 29-30, 2014

Session Themes

Beyond the Numbers	Pedagogy
Data Management	Financial Data

Monday, September 29, 2014

8:00 am – 8:30 am	Continental Breakfast
8:30 am – 9:45 am	**Welcoming Remarks** David Wheelock, VP & Deputy Director of Research, Federal Reserve Bank of St. Louis **Keynote Address: Beyond Big Data** **Hal Varian, Chief Economist, Google** (Gateway Auditorium)

10:00 am – 10:45 am	**(In)Consistency of Economic Data across Federal Statistical Agencies: What Information Professionals Can Do** Katherine Smith, Council of Professional Associations on Federal Statistics (Gateway Auditorium)	**Workshop: Not Another Overview of International Economic Sources** Amy West, University of Minnesota (River Room)
10:45 am – 11:30 am	**Vendors' Methodologies for Assigning Industry Codes** Melinda Stasch, Cornerstone Research (Gateway Auditorium)	
11:35 am – 12:30 pm	**My Friend FRED! A Primer on the St. Louis Fed's Economic Website** Keith Taylor, Federal Reserve Bank of St. Louis (Gateway Auditorium)	**RePEc: Research Papers in Economics** Christian Zimmermann, Federal Reserve Bank of St. Louis (Missouri Room)

12:30 pm - 1:30 pm	Lunch (River Room)
1:30 pm - 2:30 pm	**The Good, the Bad and the Ugly (of Statistical Data Visualization)** **Tariq Khokhar, Data Scientist, World Bank** (Gateway Auditorium)

2:45 pm - 3:30 pm	**Restricted Use Data in Economics: A Collaborative Model Between the University of California Berkeley Libraries and D-Lab** Jim Church, University of California, Berkeley (River Room)	**Panel: Economic and Data Information Literacy in the Classroom** Mark Ferris, Saint Louis University Hiromi Kubo, California State University, Fresno James Ng, University of Notre Dame (Gateway Auditorium)
3:30 pm - 4:15 pm	**Research support and data management challenges: Is there such thing as too much data?** San Cannon, Federal Reserve Bank of Kansas City (River Room)	

4:15 pm - 5:30 pm	**Beyond the Numbers Panel Discussion** (Gateway Auditorium)
5:30 pm - 6:30 pm	Reception

Tuesday, September 30, 2014

7:00 am - 8: 00 am	Metadata (Closed Meeting)
8:00 am - 8:30 am	Continental Breakfast
8:30 am - 9:30 am	**Plenary Address: Open Data at the World Bank: Where it Comes from and Where it's Going** **Neil Fantom, Manager, Development Data Group, World Bank** (Gateway Auditorium)

9:35 am - 10:20 am	**Turning Data into Information with a Student Managed Investment Fund** Stephen Johnson, University of South Dakota (River Room)	**Workshop: OECD Data: Open, Accessible and Free** Kathleen DeBoer, OECD (Gateway Auditorium)
10:20 am - 11:05 am	**Linking Financial Data Sets: Possible Problems and Solutions** Kathleen Dreyer, Columbia University, and Todd Hines, Princeton University (River Room)	
11:15 am - 12:00 pm	**Taxonomy / Lexicon Project at the US Bureau of Labor Statistics** Dan Gillman, Bureau of Labor Statistics (Gateway Auditorium)	**Workshop: Data in the Undergraduate Economics Curriculum: Old and New Practices** Diego Mendez-Carbajo, Illinois Wesleyan University (Tennessee Room)
12:00 pm - 12:45 pm	**Panel Data Surveys and a Richer Policy Discussion** Forrest Wright, Thomson Reuters (Gateway Auditorium)	

1:00 pm - 2:00 pm	Lunch and Closing Remarks (River Room)

2:00 pm – 5:00 pm	Afternoon Workshops – Optional

Workshops

	Missouri Room	Tennessee Room	Gateway Auditorium	St. Louis Room
Tuesday 2:05 pm – 2:55 pm	**Advanced uses of FRED and GeoFRED** Yvetta Fortova, Federal Reserve Bank of St. Louis	**Historical economic information** Rebecca Hyde, Saint Louis University, and Katrina Stierholz, Federal Reserve Bank of St. Louis	**Data from the Bureau of Labor Statistics** Dan Gillman, Bureau of Labor Statistics	**Data from the International Monetary Fund** Representatives from the IMF
Tuesday 3:05 pm – 3:55 pm	**Advanced uses of FRED and GeoFRED** Yvetta Fortova, Federal Reserve Bank of St. Louis	**Data from the Bureau of Labor Statistics** Dan Gillman, Bureau of Labor Statistics	**Tools for Librarians Teaching Data Literacy** Mark Bayles, Federal Reserve Bank of St. Louis	**Data from the World Bank** Representatives from the World Bank
Tuesday 4:05 pm – 4:55 pm	**Advanced uses of FRED and GeoFRED** Yvetta Fortova, Federal Reserve Bank of St. Louis	**Data from the International Monetary Fund** Representatives from the IMF	**Historical economic information** Rebecca Hyde, Saint Louis University, and Katrina Stierholz, Federal Reserve Bank of St. Louis	**Tools for Librarians Teaching Data Literacy** Mark Bayles, Federal Reserve Bank of St. Louis

These are small, hands-on workshops ideal for participants with specific questions or problems or who would like to learn more than the basics of these topics. Participants are encouraged to bring laptops.

Monday, September 29

10:00 a.m.-10:45 a.m.
(In)Consistency of Economic Data across Federal Statistical Agencies: What Information Professionals Can Do
Katherine Smith, Council of Professional Associations on Federal Statistics

Both the efficiency of federal economic data collection under budget-squeezing conditions, and the richness of analysis arising from the linkage of different data series, are best served by consistent naming, measurement, and organization of economic indicators. While federal statistical agencies recognize this and are seeking ways to minimize inconsistencies, federal economic data users confront a number of problems. This presentation outlines the benefits that can come from data synchronization, identifies common areas of inconsistency in federal economic data series, describes common reasons for data inconsistency, and suggests ways that information experts can present inconsistent economic information in ways that demonstrate similarities and point out differences.

Federal statistics often lack the compatibility for data synchronization because of a history of stove-piped data collection. Common economic variables can be defined and/or measured differently in different federal data series. Survey frames among programs and agencies differ. The temporal aspects of major collections vary. Even within agencies, the same phenomena may be referred to in different ways. Problems in comprehension and re-reporting can also be caused by the fact that a number of federal economic indicators are updated several times following their initial release.

Information professionals and journalists can be confused about which of differing estimates of the same phenomenon are "correct."□ Approaches that can be taken to maximize information value in light of this problem are to: Insist on clarity from providers; Focus on the reasons for differences in relaying information that appears inconsistent; and Give feedback to agencies

10:00 a.m.-11:30 a.m.
Workshop: Not Another Overview of International Economic Sources
Amy West, University of Minnesota

Finding the major international economic indicators is easy because international economic indicators are abundant. However, choosing the right indicators from the right source for the right use can be complicated. This will be a two-part workshop. In the first part of this workshop, attendees will review the major sources of international economic indicators for overall content, coverage, usability, use cases, and appropriate audience. In the second part of the workshop, attendees will put what they've learned into practice with small group exercises based on actual user experiences. Attendees will leave the workshop with greater familiarity with the landscape of sources and experience assessing at least two of the major international economic data sources.

10:45 a.m.-11:30 a.m.
Vendors' Methodologies for Assigning Industry Codes
Melinda Stasch, Cornerstone Research

Industry classification schemes (e.g., SIC, NAICS, GICS, etc.) are a topic familiar to information professionals and researchers. The schemes provide a helpful tool to create company peer groups. A common misunderstanding is that industry code assignments are universal; any company will carry the same industry code across various databases. Actually, each database vendor (Thomson, Compusat, Worldscope, etc) will apply their own criteria to the assigning of industry codes to the companies in their database. This presentation will discuss the various differences in methodology and offer a few tips for using industry classification schemes most effectively.

11:35 a.m.-12:30 p.m.
My Friend FRED! A Primer on the St. Louis Fed's Economic Website
Keith Taylor, Federal Reserve Bank of St. Louis

FRED is the Federal Reserve Bank of St. Louis' free website of economic data. FRED aggregates more than 200,000 economic time series from domestic and international sources and provides tools to visualize and download the series. Through the site, users can graph, transform, and map U.S. and international macroeconomic time series. Users can also download the data from the website or import it directly into Excel and many popular statistical packages. There are also FRED apps on iPhone, iPad, and Android devices. The live demonstration will provide an overview of these tools, with special emphasis on searching, graphing, mapping, and transforming data on the website.

11:35 a.m.-12:30 p.m.
RePEc: Research Papers in Economics
Christian Zimmermann, Federal Reserve Bank of St. Louis

RePEc, a collaborative international effort to enhance the dissemination of research in economics, offers various tools to keep abreast of latest research developments in economics. Due to the unusually long refereeing and publication process in this field, following what is coming out in journals is often not the best way to keep current. The research frontier is advancing with working papers, and this is why RePEc puts a special focus on those. This overview of RePEc and its component sites will provide an in-depth look at the many tools available to researchers seeking to track up-to-date economic research and its impact.

1:30 p.m.-2:30 p.m.
The Good, the Bad and the Ugly (of Statistical Data Visualization)
Tariq Khokhar, Data Scientist, World Bank

Data visualization is having something of a renaissance - what's working well, what isn't, and how can we tell the difference? From journalists and academics to businesses and even data producers, using data visualization to communicate is more popular than ever. But what makes for an effective visualization? It's got to be statistically correct, socially engaging, accessible to people on the devices they're using, and ultimately it has to improve their understanding of an issue. There are a number of tools and techniques to achieve this and we'll discuss what works, what doesn't and how organizations can use them to their advantage.

2:45 p.m.-3:30 p.m.
Restricted Use Data in Economics: A Collaborative Model Between the University of California Berkeley Libraries and D-Lab
Jim Church, University of California, Berkeley

There is a growing interest in Restricted Use Data (RUD) in economics and other social sciences. RUD differs from "public use"¤ data where identifiable information from survey respondents has been coded or deleted to protect confidentiality. RUD often contains individual or unit-level information from survey respondents, which allow researchers greater freedom and power to explore models and relationships masked in the aggregate statistics. Until recently, researchers at the University of California Berkeley were required to individually acquire, fund, and provide a secure environment for unit- level data: in essence seeking individual solutions for a shared need not met by the campus. This siloing also created inefficiencies, redundant purchases, and legal hazards. It also left economics graduate students and faculty without access to the data at a competitive disadvantage.

This presentation will explore a collaborative model developed by the UC Berkeley library and campus D-Lab (a campus research center specializing in numeric and spatial data) for the acquisition, curation, security, access, and research review of RUD. The model builds on the strengths of each institution: the Library provides descriptive metadata, acquisitions, departmental outreach, and a collections budget. The D-Lab hosts the data in restricted facilities (cold rooms'), oversees security requirements, obtains campus legal permissions, assists researchers with usage, and conducts the final research review to avoid breaches. The presentation will also illustrate the importance of this data by providing examples of data sets acquired. It will benefit any institutions seeking solutions for providing access to this relatively new and important data.

2:45 p.m.-4:15 p.m.
Panel: Economic and Data Information Literacy in the Classroom

- **Mark Ferris, Saint Louis University: Statistics as Evidence: Teaching Critical Thinking**
  In this talk I will explore key evidential and pedagogical concepts behind Statistics as Evidence and how they relate to critical thinking.

- **Hiromi Kubo, California State University, Fresno: Faculty-Librarian Collaboration to Integrate Information Literacy and Assessment into an Economics Course**
  This presentation will describe in detail the successful faculty-librarian collaboration for incorporating information literacy into an economics course; the assessment results and data acquired through the study; and examples of designing information literacy assessment tools.

- **James Ng, University of Notre Dame: Teaching Undergraduates How To Work With Economic/Social Science Data Using Stata**
  In Spring 2014, I developed and taught a 1-credit hour Stata course, "ECON 30300: Empirical Research in Economics using Stata". I would like to share with conference participants the following: 1) some background on the genesis of the course; 2) course logistics: selection of datasets, topics covered, class setup; 3) student outcomes and feedback; 4) lessons I learned: what worked well and what did not.

3:30 p.m.-4:15 p.m.
Research Support and Data Management Challenges: Is There Such Thing as Too Much Data?
San Cannon, Federal Reserve Bank of Kansas City

The ever growing assortment and volume of data available pose interesting challenges for researchers and for those who manage data and provide support to them: what to do with all these data? The tsunami of available data presents a variety of "opportunities" and may require new ways of thinking about long standing activities in the data world. The changing data landscape poses interesting questions at each stage of the data lifecycle. What if data acquisition does not mean a carefully crafted data collection but the acquisition of petabytes of sensor data? Do data processing, editing, and management have different considerations when data are commercially sourced? Are "predictive analytics" a better approach to data analysis now and how do they fit with "traditional" research methods? How can we think about archiving data that may to be too big to handle effectively with our current frameworks but that we still want to store for posterity and make available for reuse? Given that "big data" are now big business, does the potential for licensing constraints or usage restrictions on top of the more traditional privacy concerns hamper the research process?   This presentation will outline some of the topics to deliberate when thinking strategically about how to help advance research in the new data order.

4:15 p.m.-5:30 p.m.
Beyond the Numbers Panel Q&A

Kathleen DeBoer, OECD
Dan Gillman, Bureau of Labor Statistics
Will Prince, Development Data Group, World Bank
Keith Taylor, Federal Reserve Bank of St. Louis
Hal Varian, Google

Tuesday, September 30

8:30 a.m.-9:30 a.m.
Plenary Session
Open Data at the World Bank: Where it Comes from and where it's Going
Neil Fantom, World Bank

The World Bank launched its Open Data Initiative in 2010, with a complete change to our data business model, our technology approach, and the way we interact with our users and partners. It's been a big change, with ten-fold increase in website visitors. What prompted the decision, how did we do it, and what has happened since? Where does World Bank Open Data come from? What challenges do we face? Who uses it? And what are our plans for the future?

9:35 a.m.-10:20 a.m.
Turning Data into Information with a Student Managed Investment Fund
Stephen Johnson, University of South Dakota

Very little financial data that the University of South Dakota's "Student Managed Investment Fund" [SMIF] known as Coyote Capital Management [CCM] utilizes would exist were it not for the Securities Exchange Commission's 1934 "Disclosure" requirements. This presentation will discuss the data and how Coyote Capital Management utilizes it to make sound investment decisions for two portfolios, with a combined value of approximately $1.4 million dollars, on behalf of USD's Beacom School of Business and the university's foundation.

SMIFs provide students with hands-on investment experience. They have been in existence for a number of years at many institutions. One researcher found that there were 314 SMIFs in existence in 2007 that manage assets ranging from $2,000 to $62 million. The aggregate total for these 314 SMIFs was $407 million.
CCM is organized so that any business major can participate in the organization. Its members are divided into nine different "sector teams." Each sector covers a specific sector of the economy, such as energy, industrial, technology, etc. Sector teams are led by an experienced member of the group who helps less experienced members with the stock research and decision-making process. Arguably the primary function of any investment analyst lies in determining a stock's fair or intrinsic value. CCM members, like all investment professionals, seek to identify undervalued assets and good investment opportunities. To process this data into workable information, a "stock selection model" that CCM created will be displayed. This enables student investors to more accurately identify good and bad investment opportunities.

My two functions with CCM will also be discussed as an embedded librarian working with CCM's 75 students and being a junior analyst responsible for tracking CCM's position in John Deere.

9:35 a.m.-11:05 a.m.
Workshop: OECD Data: Open, Accessible and Free
Kathleen DeBoer, OECD

How the OECD is addressing its mandate to make all data open, accessible and free while still maintaining premium services for subscribing institutions.

Responding to the decision by Council to make all OECD data open, accessible and free by August 2015, OECD Publishing conducted focus groups to assess the needs of its various users. The result is the launch of two complimentary and interconnected services, OECD Data and an upgraded OECD-iLibrary. http://data.oecd.org/ is an innovative new data service web site, still in Beta, that presents 160 of the most frequently requested Indicators and invites users to find, compare and share the latest OECD data in a variety of formats including charts, maps, tables and related publications. OECD Data indexes all datasets and related publications and directs interested users to the OECD iLibrary to access the full content. OECD data is discoverable from the main www.oecd.org website under the topic "Statistics".

OECD-ilibrary.org also indexes the 160 new indicators from OECD Data, alongside all other published objects, so that they can be discovered by researchers on the iLibrary. Users at subscribing institutions have access to the pdf files and complete interactive databases while non- subscribers may have access to READ files which are read online only and do not permit downloading copying and pasting etc. OECD-iLibrary is an open site that is completely searchable to the abstract level by all users with subscribed content behind a paywall.
Kathleen will demonstrate both services.

10:20 a.m.-11:05 a.m.
Linking Financial Data Sets: Possible Problems and Solutions
Kathleen Dreyer, Columbia University, and Todd Hines, Princeton University

Linking different data sets is very common in business and economics research. Researchers will often need to merge data from two (or more!) data sets so that they can perform statistical analysis on the complete set. However, despite its frequency there are many pitfalls of which researchers are not always aware. For example, it is common to want to merge on the identifier CUSIP but CUSIP can change and these changes can affect the accuracy of the final data set.   This presentation will review the potential problems of which to be aware and present solutions. Attendees will have a better understanding of common data sets used in economics and finance and the typical ways that researchers use them. However, because different statistical packages require completely different program code to perform the same operation, we do not anticipate having the participants write/perform a linking program as part of the presentation.

11:15 a.m.-12:00 p.m.
Taxonomy / Lexicon Project at the US Bureau of Labor Statistics
Dan Gillman, Bureau of Labor Statistics

The US Bureau of Labor Statistics (BLS) is building a taxonomy and lexicon of terms and concepts of its technical language. The terms will also be linked to plain English words the public tends to use in place of them. These plain English words will serve as map between users' needs and ideas and the technical language and data at BLS. The taxonomy will first be organized as a thesaurus, with possible expansion as resources permit and the need demands. The lexicon will be an alphabetical listing of the terms. The main drivers for the project are to support 1) the development of an agency wide series dissemination system, and 2) tagging documents, reports, and periodicals. An aim is to ensure consistent retrieval of documents and data. A team was assembled over the summer to address these issues. First, we gathered the terms and underlying concepts describing time series. These will be organized, and concurrently, the plain English words the public uses will be identified. Finally, terms, concepts, and plain English describing other data will be added. The first phase of the project was finished in January, and the second phase is underway. A simple taxonomy is due in October.

11:15 a.m.-12:45 p.m.
Workshop: Data in the Undergraduate Economics Curriculum: Old and New Practices
Diego Mendez-Carbajo, Illinois Wesleyan University

A central component of the undergraduate Economics curriculum is the development of the connection between the mathematics-based and abstract theories that underpin the discipline and the empirical evidence used to test those theories. In short, learning to find and use quantitative data is key to the education of students in Economics.

Traditionally, students are exposed to the sequential tasks of finding and using data in their junior and senior years: in their econometrics (i.e. methods) and senior project (i.e. capstone) courses. There the focus is mostly on the use/analysis of data, frequently through specialized statistical software; limited attention is paid to the task of understanding where the data and information come from. More recently, through the use of online data aggregators, students can be exposed to the sequential tasks of finding and using data during the earlier years of their education: in their subfield specific (e.g. finance, labor, macroeconomics…) elective courses.

Promising as they are, these new sources of information require from instructors the use of non-traditional pedagogical strategies and from students the development of a basic set of information literacy skills.

This hands-on workshop will illustrate how to incorporate real-time data from the St Louis FRED database into the instruction of two separate, mid- level, courses in Economics: Intermediate Macroeconomics and Money & Banking. Participants will complete the following tasks: (a) topic and data selection; (b) design of case studies; and (c) structuring and grading out-of-class student work and in-class student-led discussions. Three separate information literacy skills will be highlighted: resource literacy, socio-structural literacy, and research literacy.

Through this workshop participants will be able to identify new avenues to introduce data in the instruction of Economics and to design effective pedagogies building on information literacy skill sets.

12:00 p.m.-12:45 p.m.
Panel Data Surveys and a Richer Policy Discussion
Forrest Wright, Thomson Reuters

In the US, economic and public policy debates are often shaped by data found in well-known surveys: the Bureau of Labor Statistics' monthly employment report; Federal Reserve and ISM manufacturing surveys; and the quarterly GDP report for example. However, data found in panel surveys--those surveys that report on the same individuals and household over time--are rarely mention in the discussion. Yet by capturing the impact of significant life events such as the birth of a child, divorce, going to college, or moving panel data surveys enrich our understanding of the economy by providing meaningful context to otherwise raw economic data. For this reason, panel data surveys require additional attention for librarians serving economic and policy researchers.

In this presentation I will first discuss the characteristics of panel data surveys in the US, including how they contribute to the economic and public policy literature. I will then discuss how panel data surveys are used internationally, specifically in Europe and Asia, and conclude with a discussion of opportunities for future.

Librarians and researchers will benefit greatly from understanding how panel data surveys contribute to a richer discussion of economic trends. With this knowledge they will be able to explain to both faculty and students across multiple disciplines why these surveys can contribute to their research projects.

Speakers

Sandra "San" Cannon is an Assistant Vice President and Economist at the Federal Reserve Bank of Kansas City. As a data management expert with more than 15 years of experience in research and analytical support, she has worked in all phases of the data life cycle from collection through management to dissemination. She holds multiple degrees in Economics : B.S. from the University of California, Irvine, an M. Sc. from the London School of Economics, and a Ph. D. from the University of Wisconsin, Madison.

Jim Church is the librarian for economics and international government information at the University of California Berkeley, where he has been employed since 2002. Prior to that he worked at the University of California San Diego, Yale University, and Princeton University in various capacities relating to economics, urban studies, and government information. His primary area of interest is in development and international economics, wealth and poverty, micro-finance, and other areas of economic concern to countries in the developing world.

Kathleen DeBoer is the Deputy Head of the OECD Washington Center and an Adjunct Professor at The George Washington University. She holds a BA in Economics from Harvard University. Before joining the OECD in 2006 she lived and taught in the People's Republic of China for five years. Previously Kathleen worked in the publishing industry for over 25 years. She serves on the governing board of the National Economists Club and is the president of the Washington Publishers Association.

Kathleen Dreyer is the Head of the Watson Library of Business and Economics at Columbia University. She has over 15 years experience providing business and economics research support in academic libraries. She received her MS in Library and Information Science at Drexel University and an MA in Quantitative Methods from Columbia University.

Featured speaker **Neil Fantom** is a Manager at the World Bank in Washington DC. He leads the World Bank's Open Data initiative, and oversees the publication of World Development Indicators and Global Development Finance and the compilation and dissemination of the associated datasets. Neil studied statistics and mathematics at University College London, and the Universities of Oxford and Durham.

Mark Ferris is Associate Professor at the John Cook School of Business at Saint Louis University.

Dan Gillman has worked 14 years in the Office of Survey Methods Research at the US Bureau of Labor Statistics. His research interests include metadata, standards, terminology, and classification. Currently, he is leading an effort at BLS to build an agency-wide taxonomy of terms and concepts covering all programs, and he is involved in the work to determine the feasibility of standardizing those terms and concepts. This work is the subject of his talk today.

Todd Hines is the Assistant Economics, Finance and Data Librarian at Princeton University and is the current chair of the Business Reference and Services Section (BRASS) of the American Library Association. His industry experience includes employment in law, a private investigative firm and as a Certified Public Accountant. He received his MSLS from Catholic University and an MBA from George Mason University.

Stephen Johnson has been the University of South Dakota's Business and Distance Education Librarian since 1994. He received his MLIS degree from the University of Iowa in 1992. Prior to being at the University of South Dakota, Johnson was a patent-trademark and economic development librarian for Oklahoma State University in Stillwater, Oklahoma.

Tariq Khokhar is a Data Scientist and the World Bank's Open Data Evangelist. He is a graduate of the University of Cambridge and has close relationships in the global Open Data and Open Government communities.

Hiromi Kubo is Business and Economics Librarian at California State University, Fresno. She received a Master's of Arts degree in Information Science and Learning Technologies from the University of Missouri, Columbia in 2003. She served as Reference and Instruction Librarian at Arkansas State University from 2004 to 2008 and taught the library research course. She has developed and offered numerous business/economics-related research workshops both at Arkansas State and Fresno State.

Professor **Diego Mendez-Carbajo** teaches Economics at Illinois Wesleyan University, where he also holds the appointed position of Technology Fellow. He joined IWU in 2000 and has taught at all levels of the undergraduate curriculum. His current research focus is on local applied economics, working with students on topics ranging from residential foreclosures to crime flows.

James Ng is the Economics Librarian at the University of Notre Dame. Currently, his main interests professionally are teaching beginning researchers how to discover and use social science data, and gaining expertise in the life cycle of social science data, in particular metadata creation.

Dr. **Katherine (Kitty) Smith** is Executive Director of the Council of Professional Associations on Federal Statistics, an organization that advocates on behalf of researchers and other professionals for a strong statistical system and ready access to federal data. She was formerly Administrator of the USDA's Economic Research Service (ERS), one of the 13 principal statistical agencies of the U.S.

Since 2006, **Melinda Stasch** has been a Senior Information Specialist at Cornerstone Research, a litigation support firm which provides Economic and Financial Consulting and Expert Testimony. Her responsibilities include information retrieval and business development support. Through her work, Melinda understands that details pave the path to accuracy in any research project. Melinda attended University of Redlands for her undergraduate work and earned an MLS from San Jose State University, California.

Keith Taylor is the data desk coordinator at the Federal Reserve Bank of St. Louis. In that capacity, he helps create and maintain many of the free economic data tools that the Bank provides to business leaders, market analysts, academics, journalists and others around the world. Taylor received his bachelor's degree in business administration and economics from Elmhurst College in Elmhurst, Ill. and his Juris Doctor from Washington University in St. Louis' School of Law.

Keynote speaker **Hal R. Varian** is the Chief Economist at Google. He is also an emeritus professor at the University of California, Berkeley in three departments: business, economics and information management. He was the founding dean of the i-School at Berkeley. He received his SB degree from MIT in 1969 and his MA in mathematics and Ph.D. in economics from UC Berkeley in 1973.

Forrest Wright is an Implementation Specialist with Thomson Reuters. In this position he consults customers on research management and bibliometric projects. He received his MSLIS from Drexel University, and possesses a BA in history from Clark University

Amy West has been the University of Minnesota Data Services and Economics Librarian since 2007 and was the Electronic Government Publications Librarian from 1999-2007. She is a past-chair of the Government Documents Round Table of the American Library Association and is the current archivist for the International Association for Social Science Information Services & Technology (IASSIST). You can find her @umdatalib (https://twitter.com/umdatalib).

Christian Zimmermann is an economist and Assistant Vice President of Research Information Services at the Federal Reserve Bank of St. Louis, where he is in charge of the IDEAS and EDIRC sites, part of the RePEc open archive for economic research, and oversees the team of web developers of the St. Louis Fed's research websites. He received his Ph.D. in Economics from Carnegie Mellon University in 1994.