ASA Statistics and Biostatistics Department Chairs Meeting

Agenda

July 12-13, 2016

Headquarters of the American Statistical Association, 732 North Washington Street

Alexandria, VA

DAY 1 – JULY 12, 2016

8:00 am – 8:45 am	*Breakfast and Registration*
8:45 am – 9:00 am	**Welcome and Introductions** **Dave Hunter , Chair, ASA Caucus of Academic Representatives** **Jessica Utts, President, the American Statistical Association**
9:00 am – 12:00 pm Moderator: Speakers:	**Professional Workforce: Demand and Skills** Bruno Sanso Erica Groshen, Commissioner, Bureau of Labor Statistics, Slides Erik Andrejko, VP - Science, Head of Data Science, Monsanto/The Climate Corporation David Morganstein, Vice President and Director of Statistical Staff, Westat , Slides Christopher Peterson, Vice President of Data Science and Assistant Chief Model Risk Officer, Capital One Aarti Shah, Senior Vice President and Chief Information Officer, Eli Lilly and Company
12:00 pm – 1:00 pm	**Lunch**
1:00 pm – 4:15 pm Moderator: Speakers:	**Federal Research Funding** Arnold Stromberg and Varghese George (*Speakers staggered over the afternoon*) Michael Lauer, Director, Extramural Research, NIH, Slides Michelle Dunn, Senior Advisor for Data Science Training, Diversity, and Outreach, NIH Office of the Associate Director for Data Science (ADDS), Slides Michael Vogelius, NSF Division of Mathematical Sciences (DMS), Mathematical and Physical Sciences (MPS) Directorate Chaitan Baru, Senior Advisor for Data Science, NSF Computer and Information Science and Engineering (CISE) Directorate, Slides
4:15 pm – 5:00 pm Moderator:	**First Day Wrap-Up** Xihong Lin

DAY 2 – July 13, 2016

7:45 am – 8:30 am   Breakfast

8:30 am – 12:00 pm   **Driving the Conversation: Education in the age of data science**
   Moderator: Dave Hunter
   Speakers:

Chris Wiggins, Chief Data Scientist, New York Times, [Slides](#)
Andrew Moore, Dean, School of Computer Science, Carnegie Mellon University , [Slides](#)
Michael Rappa, [Institute for Advanced Analytics](#), North Carolina State University
Chris Malone, Department of Mathematics and Statistics, Winona State University,
     [Slides](#)
Sarah Nusser, Vice President for Research, Iowa State University, [Slides](#)

12:00 pm – 1:00 pm   **Lunch**

1:00 am – 2:45 pm   **Supporting and Mentoring Junior Faculty**
   Moderator: Jean Opsomer
   Speakers: Genevera Allen, Rice University, co-author of "Changing Our Culture: Perspectives from
                Young Faculty" in Dec. 2013 Amstat News, [Slides](#)
          Sally Morton, Dean, College of Science, Virginia Tech University, [Slides](#)

2:45 pm –3:30 pm
   Moderator: **Wrap-Up, Concluding Thoughts, Next Steps**
                    Organizing Committee

3:30 pm

                    Workshop adjourns

Speaker Biographies

Genevera Allen is the Dobelman Family Junior Chair and an Assistant Professor of Statistics and Electrical and Computer Engineering at Rice University. She is also a member of the Jan and Dan Duncan Neurological Research Institute at Texas Children's Hospital and Baylor College of Medicine where she holds a joint appointment. Dr. Allen received her PhD in statistics from Stanford University (2010), under the mentorship of Prof. Robert Tibshirani, and her bachelors, also in statistics, from Rice University (2006). Dr. Allen's research focuses on developing statistical methods to help scientists make sense of their 'Big Data' in applications such as high-throughput genomics and neuroimaging. Her work lies in the areas of modern multivariate analysis, graphical models, statistical machine learning, and data integration or data fusion. The recipient of several honors including a National Science Foundation CAREER award and the International Biometric Society's Young Statistician Showcase award, she also represented the American Statistical Association at the Coalition for National Science Funding on Capitol Hill in 2013 and 2014, and has had her research highlighted on the House floor in a speech by Congressman McNerney (D-CA). In 2014, Dr. Allen was named to the "Forbes '30 under 30': Science and Healthcare" list.

Erik Andrejko is VP for Science and Head of Data Science, for Climate Corporation (leads the data science and research organization, which applies large-scale statistical machine learning and data science to solve challenging problems in numerous domains including climatology, agronomic modeling and geospatial applications. Erik's contributions to The Climate Corporation include defining the data science vision and leading the research underpinning pioneering products including Climate Basic and Climate Pro. Previously, Erik worked at several Bay-area start ups. He has a B.S. in Computer Science from Arizona State University and a PhD in Mathematics from University of Wisconsin-Madison.

Chaitan Baru is Senior Advisor for Data Science in the Computer and Information Science & Engineering (CISE) Directorate at the National Science Foundation where he leads data science initiatives within NSF and more broadly within the administration. He is on leave from San Diego Supercomputer Center (SDSC), UC San Diego where he is Distinguished Scientist and Associate Director of Data Initiatives where he works on applied and applications-oriented research problems related to data management and data analytics. Baru leads the Advanced Cyberinfrastructure Development (ACID) Group at SDSC and is also Director of the Center for Large-scale Data Systems research (CLDS). Prior to joining SDSC in 1996, Baru was at IBM, where he led one of the development teams for DB2 Parallel Edition Version 1 (released Dec 1995); and at the University of Michigan, where he served on the faculty of the EECS Department. He received his B.Tech in Electronics Engineering from the Indian Institute of Technology, Madras, and M.E. and Ph.D. in Electrical Engineering from the University of Florida, Gainesville.

Michelle Dunn is Senior Advisor for Data Science Training, Diversity, and Outreach in the NIH Office of the Associate Director for Data Science. Dr. Dunn's responsibilities focus on education, training, and workforce development in data science, as it is applied to the biomedical, behavioral, and clinical sciences. Having a diverse and sustainable workforce is a primary objective of the office. Prior to joining the NIH/OD, Dr. Dunn was a program director at the National Cancer Institute. In addition to holding a portfolio of research grants in statistical methodology development, she co-chaired the BD2K Initiative's subcommittee on training. Dr. Dunn received her Ph.D. in statistics from Carnegie Mellon University and her A.B. in applied mathematics from Harvard College.

Erica Groshen has been Commissioner of the Bureau of Labor Statistics since January 2013. Prior to joining BLS, Dr. Groshen was a Vice President in the Research and Statistics Group at the Federal Reserve Bank of New York.

Her research has focused on labor markets over the business cycle, regional economics, wage rigidity and dispersion, the male-female wage differential, and the role of employers in labor market outcomes. She also served on advisory boards for BLS and the U.S. Census Bureau. Before joining the Federal Reserve Bank of New York in 1994, Dr. Groshen was a visiting assistant professor of economics at Barnard College at Columbia University and an economist at the Federal Reserve Bank of Cleveland. She was a visiting economist at the Bank for International Settlements in Basel, Switzerland, in 1999–2000. Dr. Groshen earned a Ph.D. in economics from Harvard University and a bachelor's degree in economics and mathematics from the University of Wisconsin-Madison.

Michael Lauer is the Deputy Director for Extramural Research at the National Institutes of Health (NIH), where he serves as the principal scientific leader and advisor to the Director of the NIH on all matters relating to the substance, quality, and effectiveness of the NIH extramural research program and administration. He received education and training at Rensselaer Polytechnic Institute, Albany Medical College, Harvard Medical School, Harvard School of Public Health, and the NHLBI's Framingham Heart Study. He spent 14 years at Cleveland Clinic as Professor of Medicine, Epidemiology, and Biostatistics. During his tenure at the Clinic, he led a federally funded internationally renowned clinical epidemiology program that applied big data from large-scale electronic health platforms to questions regarding the diagnosis and management of cardiovascular disease. From 2007 to 2015 he served as a Division Director at the National Heart, Lung, and Blood Institute (NHLBI), where promoted efforts to leverage big data infrastructure to enable high-efficiency population and clinical research and efforts to adopt a research funding culture that reflected data-driven policy. He has received numerous awards including the NIH Equal Employment Opportunity Award of the Year and the Arthur S. Flemming Award for Exceptional Federal Service in recognition of his efforts to grow a culture of learning and accountability.

Chris Malone is a professor of Statistics and Data Science at Winona State University. Malone has contributed to the undergraduate statistics education community for many years. Recent work includes the study and development of an undergraduate data science program at Winona State. Malone was a member of the committee responsible for updating the curriculum guideline for undergraduate programs in statistical science. Malone serves as Director of the Midwest Undergraduate Data Analytics Competition (MUDAC) which brings together nearly 200 undergraduates, advisors, and working professionals.

Andrew Moore is Dean of Computer Computer Science at Carnegie Mellon University. He returned to CMU as Dean in August 2014 after opening the Pittsburgh office of Google Inc. in 2006. While at Google, Moore led projects to improve user experiences in advertising and shopping and to help combat fraud. In October 2011, while continuing to serve as leader of Google's Pittsburgh office, Moore was named vice president of engineering of Google Commerce, where he became responsible for developing new products and services. Moore's tenure at Google Pittsburgh has been characterized by the office's rapid growth both in size and importance. Moore's research interests broadly encompass the field of "big data"—applying statistical methods and mathematical formulas to massive quantities of information, ranging from Web searches to astronomy to medical records, in order to identify patterns and extract meaning from that information. His past research has also included improving the ability of robots and other automated systems to sense the world around them and respond appropriately. A graduate of the University of Cambridge, where he studied mathematics and computer science, Moore began his career working for Hewlett-Packard's Bristol research lab. He returned to Cambridge in 1986 to earn his Ph.D. in computer science.

David R. Morganstein is Vice President and Director of Statistical Staff at Westat, Inc., where he has worked for 40 years. He is past-president of the ASA. At Westat, he directs a unit of 70 MS and PhD level statisticians and survey methodologists. Morganstein specializes in the design and application of surveys and systems of evaluation, quality control, statistical analysis and estimation. He leads research and development tasks that improve or enhance Westat's survey and census projects and has developed best practices for several key survey processes.

Morganstein is an ASA Fellow who has served the association as treasurer, vice president, an at-large member of its Board of Directors and a member of several committees. He was honored with the ASA's Founders Award for distinguished service. He is an elected member of the International Statistical Institute and a Special Faculty in the Joint Program in Survey Methodology at the University of Maryland. He also serves on the George Mason Statistics Department's Advisory Board. He earned a bachelor's in electrical engineering from Purdue University and a master's in statistics from the University of Michigan. In 2010 Morganstein was among the first 31 ASA members to be awarded PStat accreditation.

Sally C. Morton is Dean of Science at Virginia Tech as of July 1. Previously, she was Chair of Biostatistics, and Director of the Comparative Effectiveness Research Centerat the University of Pittsburgh. Before moving to academe she was Vice President for Statistics and Epidemiology at RTI International; and Head of the RAND Corporation Statistics Group. Her current methodological research addresses standards for systematic reviews and observational studies, and strength of evidence in literature synthesis. Dr. Morton is a member of the Patient-Centered Outcomes Research Institute (PCORI) Methodology Committee, and the Agency for Healthcare Research and Quality (AHRQ) Evidence-Based Practice Center Methods Steering Committee. She has been a member of several Institute of Medicine committees; the Census Scientific Advisory Committee; and the National Academy of Sciences Committee on National Statistics. Dr. Morton was the 2009 president of the American Statistical Association, and received a PhD in statistics from Stanford University.

Sarah Nusser is vice president for research at Iowa State University and a professor in the Department of Statistics. She is a faculty member in the Center for Survey Statistics and Methodology and in interdepartmental graduate programs for Ecology and Evolutionary Biology and Human Computer Interaction at Iowa State University. As vice president for research, Sarah leads efforts to advance and support the research mission at Iowa State University. She supports campus-wide programs for fostering faculty research development, new research initiatives, and new interdisciplinary and inter-institutional collaborations. Sarah oversees several interdisciplinary research centers, as well as units that support sponsored funding, responsible conduct of research, and institutional research facilities. Prior to joining the Office of the Vice President for Research in 2014, Sarah served as the director of the Center for Survey Statistics and Methodology at Iowa State University for 15 years, where she conducted research in survey statistics and methodology with the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service, National Agricultural Statistics Service, Economic Research Service, and National Institute of Food and Agriculture; National Science Foundation (NSF); National Institutes of Health (NIH); and federal statistical agencies, including the Bureau of Labor Statistics and U.S. Census Bureau.

Chris Peterson is Vice President of Data Science and Assistant Chief Model Risk Officer at Capital One. His current responsibilities include overseeing model validation across Capital One's domestic and international consumer lending portfolios (Card, Auto, Mortgage, Small Business), consumer deposits (Retail Bank, National Direct Bank), and Anti-Money Laundering activities. Additionally, Chris is also responsible for Data Science recruiting and training across the enterprise. He has been with Capital One since 2006, where he led teams responsible for building and maintaining predictive modeling frameworks for risk and valuation. Prior to joining Capital One, Chris worked at Intel Corporation in a variety of capacities ranging from supplier management, technology development, reliability forecasting, and supply chain management. Chris has also worked at 3M Company and the National Security Agency. Throughout his career Chris has been actively involved in developing and delivering training throughout the world in topics ranging from basic statistical techniques, to experimental design, reliability forecasting, machine learning and other advanced predictive modeling methodologies. Chris holds M.S. and B.S. degrees in Statistical Science from Brigham Young University.

Michael Rappa is the founding director of the Institute for Advanced Analytics and a member of the faculty in the Department of Computer Science at North Carolina State University. As head of the Institute, he leads the nation's

first [Master of Science in Analytics](#) as its originator and principal architect. Before joining NC State as Distinguished University Professor in 1998, for nine years he was a professor at the Massachusetts Institute of Technology. Dr. Rappa has over 25 years of experience working across academic disciplines at the nexus between management and computing. An accomplished researcher and instructor, his passion is to bring an entrepreneurial and forward-thinking mindset to innovation in higher learning. His current role is to prepare a new generation of data savvy professionals for leadership in a digital world. Since launching the Institute in 2006, the Master of Science in Analytics has quickly become one of the largest and most selective degree programs on campus, and his students among the [most sought-after and highly compensated](#) graduates of the university.

Aarti Shah became senior vice president and chief information officer for Eli Lilly and Company July 1 after being the global brand development leader for immunology since 2013. Shah joined Lilly in 1994 as a senior statistician after completing her doctorate in applied statistics from the University of California, Riverside. During her career at Lilly, she has held many technical and administrative leadership positions, both in the United States and abroad, including serving as vice president for biometrics and advanced analytics and as executive director of global information sciences. In her new role, she will lead the efforts of a worldwide IT organization with more than 1,300 employees, in addition to many contractors and external business partners, to deliver innovative IT solutions to the business. She will report to Derica Rice, Lilly's executive vice president of Global Services and chief financial officer. Shah serves on the board of directors for the Indianapolis Public Library Foundation and Center for Interfaith Cooperation and on the Executive Advisory Council for the Healthcare Businesswoman's Association (HBA) Indiana Chapter. She received the 2011 Rising Star Award from HBA.

Michael Vogelius is the Division Director for the NSF Division of Mathematical Sciences, a position he has held since January 2014. Dr. Vogelius is on leave from Rutgers University where he is a Board of Governors Professor in the Department of Mathematics and where he served as the Department Chair from 2009-2013. Dr. Vogelius was previously on the faculty of the University of Maryland and has held visiting appointments at Stanford University, Ecole Polytechnique Federale de Lausanne, and the University of Copenhagen. Dr. Vogelius earned his Ph.D. in Mathematics from the University of Maryland, College Park in 1980, and his research interests include mathematical analysis, partial differential equations, and numerical analysis. He has published over 90 articles and is a Fellow of the American Mathematical Society, a Foreign Member of the Royal Danish Academy of Sciences and Letters, and a recipient of a Sloan Research Fellowship. Dr. Vogelius has also been an Associate Editor of the SIAM Journal on Mathematical Analysis and served on the Editorial Boards of several other mathematical journals.

Christopher Wiggins is chief data scientist for the New York Times, an associate professor of applied mathematics at Columbia University, and a founding member of Columbia's Center for Computational Biology and Bioinformatics (C2B2). Prior to joining the faculty at Columbia he was a Courant Instructor at NYU and earned his PhD at Princeton University. Since 2001 he has also held appointments as a visiting scientist at Institut Curie (Paris), the Hahn-Meitner Institut (Berlin), and the Kavli Institute for Theoretical Physics (Santa Barbara). At Columbia he serves as the faculty advisor for the Society of Industrial and Applied Mathematics (SIAM) as well as the Application Development Initiative (ADI). He is a founding member of the Institute for Data Sciences and Engineering (IDSE), serving on the Executive Committee, the Entrepreneurship Committee, and as Advisor to the Education Committee in forming the IDSE Curriculum and a Certificate program. His research focuses on applications of machine learning to real-world data. This includes inference, analysis, and organization of naturally-occurring networks; statistical inference applied to time-series data; applications of information theory and optimization in biological networks; and large-scale sequence informatics in computational biology.