

# **Sixth Edition of Principles and Practices for a Federal Statistical Agency**

## **Committee**

### **Lawrence D. Brown**

#### **Chair**

Lawrence D. Brown (NAS) is Miers Busch professor in the Department of Statistics at the Wharton School in the University of Pennsylvania. He is an expert in statistical foundations, conditional inference, sequential methods, exponential families, and decision theory. His broad focus is the politics of health policy making and implementation, including reform initiatives at the national and state levels of government. His research includes the interplay between market forces (including competition and managed care) and regulation as well as the politics of programs for disadvantaged groups (Medicaid, safety net support, efforts to expand coverage for the medically uninsured). He is currently the chair of the Committee on National Statistics. He is currently a member of the Applied Mathematical Sciences Section of the National Academy of Sciences (NAS), a position he was elected to in 2000. He is also a member of the American Academy of Arts and Sciences and a fellow of both the Institute of Mathematical Statistics and the American Statistical Association. He has served on many Academies committees, including the Board on Mathematical Sciences; the Committee on Applied and Theoretical Statistics; and the Commission on Physical Sciences, Mathematics, and Applications. He was committee chair and co-editor for the CNSTAT reports "Measuring Research and Development Expenditures in the U.S. Economy" (2004) and "Envisioning the 2020 Census" (2010). He has a B.S. in mathematics from the California Institute of Technology and a Ph.D. in statistics from Cornell University.

## **Francine D. Blau**

### **Member**

Francine D. Blau is Frances Perkins professor of industrial and labor relations and professor of economics at Cornell University, and research associate at the National Bureau of Economic Research. She has written extensively on gender issues, wage inequality, immigration, and international comparisons of labor market outcomes. She is currently chairing the Panel on the Economic and Fiscal Consequences of Immigration, and previously served on two pay/labor-related NAS panels in the 1980s. She has served as president of the Society of Labor Economists, the Midwest Economics Association, and the Labor and Employment Association, and as vice president of the American Economic Association. She is also a fellow of the Society of Labor Economists, the American Academy of Political and Social Science, and the Labor and Employment Relations Association. In 2001, she received the Carolyn Shaw Bell Award from the American Economic Association Committee on the Status of Women in the Economics Profession for furthering the status of women in the economics profession, and in 2010 she received the IZA Prize for outstanding academic achievement in the field of labor economics—she was the first woman to receive this award. She has a B.S. in industrial and labor relations from Cornell University, and both an M.A. and Ph.D. in economics from Harvard University.

## **Mary E. Bock**

### **Member**

Mary Ellen Bock is a professor of statistics at Purdue University. Her research interests include bioinformatics and biologically related disciplines (genomics, nutrition, proteomics), massive data and additive manufacturing. She currently serves as chair of CNSTAT's Panel on Methods for Integrating Multiple Data Sources to Improve Crop Estimates. She has served on several Academies' panels, including the Panel for Information Technology; the Committee on Applied and Theoretical Statistics; the Panel for Computing and Applied Mathematics; the Board on Mathematical Sciences and Their Applications; and the U.S. National Committee for Mathematics. She is a fellow of the American Association for the Advancement of Science, the Institute of Mathematical Statistics, and the American Statistical Association. She is a past president of the American Statistical Association and has been elected to offices in the Mathematics Section and in the Statistics Section of the American Association for the Advancement of Science. She has a B.A. in German and a Ph.D. in mathematics from the University of Illinois, Urbana-Champaign.

# Michael E. Chernew

## Member

Michael E. Chernew (NAM) is a professor of health care policy in the Department of Health Care Policy at Harvard Medical School. His research examines several areas related to controlling health care spending growth while maintaining or improving the quality of care. His research activities have focused on several areas, most notably the causes and consequences of growth in health care expenditures. Much of his most recent work has focused on designing and evaluating Value Based Insurance Design (VBID) packages that attempt to minimize financial barriers to high value health care services and simultaneously reduce costs, and his ongoing work explores geographic variation in spending and spending growth. Several large companies have adopted these approaches, and Dr. Chernew's ongoing work includes evaluations and design of such programs. He is currently a member of the Social Sciences, Humanities and Law Section of the National Academy of Medicine (NAM), a position he was elected to in 2010. He currently serves on CNSTAT's Panel on Improving Federal Statistics for Policy and Social Science Research Using Multiple Data Sources and State-of-the-Art Estimation Methods. He is also a research associate of the National Bureau of Economic Research, a member of the Medicare Payment Advisory Commission (MedPAC) (an independent agency established to advise the U.S. Congress on issues affecting the Medicare program), a member of the Congressional Budget Office's Panel of Health Advisors, and a member of the Commonwealth Foundation's Commission on a High Performance Health Care System. In 2000, 2004 and 2010, he served on technical advisory panels for the Center for Medicare and Medicaid Services (CMS) that reviewed the assumptions used by the Medicare actuaries to assess the financial status of the Medicare trust funds. In 1998, he was awarded the John D. Thompson Prize for Young Investigators by the Association of University Programs in Public Health and then received the Alice S. Hersh Young Investigator Award from the Association of Health Services Research in 1999. He has an A.B. and B.S. in economics from the University of Pennsylvania and a Ph.D. in economics from Stanford University.

## **Janet Currie**

### **Member**

Janet Currie (NAM) is the Henry Putnam professor of economics and public affairs at Princeton University and director of Princeton's Center for Health and Well Being. Her research focuses on the impact of government policies and poverty on the health and well-being of children over their life cycle. She has written about early intervention programs and expansions of the Medicaid program, public housing, and food and nutrition programs. Her current research focuses on socioeconomic differences in child health and environmental threats to children's health. She is a member of the National Academy of Medicine (NAM) in the Social Sciences, Humanities and Law Section, a position she was elected to in 2013. She served on the Board on Children, Youth and Families from 2012 to 2014 and the Committee on Population from 2001 to 2004, and has served on several Academies committees on the promotion of well-being of children and families. She is currently on the Board of Reviewing Editors of Science magazine and the editorial board of the Quarterly Journal of Economics. She has been elected to membership positions in numerous professional associations, including member of the American Academy of Arts and Sciences; member of the American Academy of Political and Social Sciences; and a fellow of the Econometric Society. She served as both president (2014-15) and vice president (2013-14) of the Society of Labor Economists, and served as vice president of the American Economic Association (2010). She has a B.A. and M.A. in economics from the University of Toronto and a Ph.D. in economics from Princeton University.

## **Donald A. Dillman**

### **Member**

Donald A. Dillman is Regents professor in the Department of Sociology at Washington State University. He also serves as the deputy director for research and development in the Social and Economic Sciences Research Center at Washington State University. From 1991 to 1995, he served as the senior survey methodologist in the Office of the Director at the U.S. Census Bureau. In 2000, he received the Roger Herriot Award for Innovation in Federal Statistics for his work at the Census Bureau. He is recognized internationally as a major contributor to the development of modern mail, telephone, and internet survey methods. Throughout his time at Washington State University, he has maintained an active research program on the improvement of survey methods and how information technologies influence rural development. He has served as investigator on more than 80 grants and contracts worth approximately \$12.5 million, and written 13 books and more than 235 other publications. He holds numerous memberships in professional organizations, including the American Sociological Association, and is a fellow of the American Association for the Advancement of Science and the American Statistical Association. He served as past president of the American Association for Public Opinion Research and the Rural Sociological Society. He chaired the Academies Panel on Redesigning the BLS Consumer Expenditures Surveys; served as a member of the Panel on Redesigning the Commercial Building and Residential Energy Consumption Surveys; the Panel on Residence Rules in the Decennial Census; and the Survey of Earned Doctorates Advisory Panel. He has a B.A. in agronomy, an M.S. in rural sociology, and a Ph.D. in sociology, all from Iowa State University.

# Constantine Gatsonis

## Member

Constantine Gatsonis is Henry Ledyard Goddard university professor of biostatistics and chair of the department of biostatistics at Brown University, where he joined the faculty in 1995. He is the founding chair of the department of biostatistics and the founding director of Center for Statistical Sciences at Brown. He is a leading authority on the design and analysis of clinical trials of diagnostic and screening modalities and has extensive involvement in methodological research in medical technology assessment and in health services and outcomes research. He is group statistician for the American College of Radiology Imaging Network (ACRIN), an NCI-funded collaborative group conducting multi-center studies of diagnostic imaging and image-guided therapy for cancer. He currently serves on three Academies panels in addition to CNSTAT: the Committee to Evaluate the Department of Veterans Affairs Mental Health Services; the Committee on Applied and Theoretical Statistics (chair); and Refining the Concept of Scientific Inference When Working with Big Data: A Workshop. He has previously served on Academies panels on applied and theoretical statistical evaluations for a variety of scientific and health-related topics, including forensic science, immunization safety, aviation security, modified risk tobacco products, among others. He was also elected fellow of the American Statistical Association and the Association for Health Services Research. He has a B.A. in mathematics from Princeton, an M.A. in mathematics from Cornell, and a Ph.D. in mathematical statistics from Cornell.

## Lars Peter Hansen

### Member

Lars P. Hansen (NAS) is the David Rockefeller Distinguished Service professor in economics and professor of statistics at the University of Chicago. He also serves as research director of the Becker Friedman Institute for Research in Economics at the University of Chicago. His areas of expertise include time series econometrics, quantitative analysis of dynamic equilibrium models, and asset pricing. He developed original econometric methods that now constitute the framework for modern empirical research on intertemporal economics, including consumption and asset pricing. In 1999, he was elected a member of the National Academy of Sciences in the Economic Sciences Section, serving as chair of the section from 2009 to 2012. He currently serves on the NAS International Temporary Nominating Group for Class V: Behavioral and Social Sciences. He has served on many Academies' committees, including the Class V Membership Committee; the Committee on Strengthening the Linkages between the Sciences and Mathematical Sciences; and the Award for Scientific Reviewing Selection Committee. He has received many awards throughout his career, including the BBVA Foundation Frontiers of Knowledge Award in the Economics, Finance and Management in 2010 and the CME Group-MSRI Prize in Innovative Quantitative Applications in 2008, and was one of two scholars to receive the prestigious 2006 Nemmers Prizes in economics and mathematics in 2006. He is also a recipient of the 2013 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel for his early research, an honor he shares with Eugene Fama and Robert Shiller. He has been elected to membership positions in various professional organizations, including fellow of the Econometric Society and member of the American Academy of Arts and Sciences; and has served as president of the Econometric Society (2007). He has a B.S. in mathematics and political science from Utah State University and a Ph.D. in economics from the University of Minnesota, Minneapolis.

## James S. House

### Member

James S. House (NAS/NAM) is the Angus Campbell distinguished university professor of survey research, public policy, and sociology at the University of Michigan. He has previously held positions at Duke University and the University of North Carolina, Chapel Hill. His research interests include social psychology, political sociology, social structure and personality, psychosocial and socioeconomic factors in health, survey research methods, and American society. He is currently a member of the Social and Political Sciences Section of the National Academy of Sciences (NAS) and a member of the Social Sciences, Humanities and Law Section of the National Academy of Medicine (NAM). He also serves as a section representative for the 2016 NAS Class V Membership Committee. He is also a member of several professional associations and societies, including the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and the American Sociological Association. His previous Academies service includes the Panel on Race, Ethnicity, and Health in Later Life; the NAM Membership Committee; NAM Membership Section Leaders; and has served as an NAS section liaison for the Social and Political Sciences Section. He has a B.A. in history from Haverford College and a Ph.D. in social psychology from the University of Michigan.

## **Thomas L. Mesenbourg**

### **Member**

Thomas L. Mesenbourg retired as acting director of the U.S. Census Bureau in August 2013. He served as deputy director from May 2008-August 2012. Before being named deputy director, he was associate director for economic programs, with responsibility for the Economic Directorate's myriad programs, including the Economic Census and the Census of Governments and over 100 monthly, quarterly, and annual surveys. He joined the Census Bureau in 1972. In 2004, he received a Presidential Rank Award for Distinguished Senior Executives, government's highest award for career executives. In October 2012, he received the Roger W. Jones Award from American University for exceptional leadership among people who devoted themselves to federal public service, and in 2011 he received the Julius Shiskin Award for economic statistics. He has a bachelor's degree in economics from Boston University and an M.A. in economics from Pennsylvania State University.

## **Susan A. Murphy**

### **Member**

Susan A. Murphy (NAS/NAM) is H. E. Robbins professor of statistics, a professor in the Department of Psychiatry, and a research professor in the Institute for Social Research at the University of Michigan. She is also a principal investigator at the Methodology Center of Pennsylvania State University. Her research focuses on clinical trial design and the development of data analytic methods for informing multi-stage decision making in health. She recently became a member of the Social and Political Sciences Section of the National Academy of Sciences (NAS), and has been a member of the Social Sciences, Humanities and Law Section of the National Academy of Medicine (NAM) since 2014. Her previous Academies service includes the Panel on Handling Missing Data in Clinical Trials and the Committee to Improve Research Information and Data on Firearms. She was affiliated with Pennsylvania State University (1989-1997) prior to her appointment to the faculty of the University of Michigan. She was named a MacArthur fellow in 2013. She has a B.A. in mathematics from Louisiana State University, an M.P.S. in applied statistics from Tulane University, and a Ph.D. in statistics from the University of North Carolina.

## **Sarah M. Nusser**

### **Member**

Sarah M. Nusser is vice president for research and professor in the Department of Statistics at Iowa State University. She was recently director of the Center for Survey Statistics and Methodology, and she was a senior research fellow at BLS from 2000 to 2001 and a mathematical statistician at USDA NASS in 2011. Her research interests include using geospatial data in survey data collection and estimation, sampling and estimation methods for agricultural and natural resource surveys, and sample design and measurement error in surveys. She is familiar with the American Community Survey and other U.S. Census Bureau surveys through her work with Census Bureau researchers on using geospatial data for address listings and her service on the Census Advisory Committee of Professional Associations. She also has experience with administrative records data bases through research involving welfare program evaluation and numerous operational survey projects. She is a fellow of the American Statistical Association and an elected member of the International Statistics Institute. She serves on the UN Food and Agriculture Global Strategy to Improve Agricultural and Rural Statistics. Her previous Academies committee experience includes the Workshop on the Food Availability Data System and Estimates of Food Loss; the Panel on Redesigning the BLS Consumer Expenditures Surveys; the Panel on Estimating Children Eligible for School Nutrition Programs Using the American Community Survey; and the Committee on Social Security Representative Payees. She has a B.S. in botany from the University of Wisconsin-Madison, an M.S. in botany from North Carolina State University, and an M.S. and Ph.D. in statistics from Iowa State University.

## **Colm A. O'Muircheartaigh**

### **Member**

Colm A. O'Muircheartaigh is dean of the University of Chicago's Harris School of Public Policy Studies, professor in the Harris School, and senior fellow in the National Opinion Research Center (NORC). He is one of the nation's leading experts in the design and implementation of social investigations. An applied statistician, he has focused his research on the design of complex surveys across a wide range of populations and topics, and on fundamental issues of data quality, including the impact of errors in responses to survey questions, cognitive aspects of question wording, and latent variable models for non-response. He joined the Harris School faculty in 1998 from the London School of Economics and Political Science, where he was the first director of the Methodology Institute and a faculty member of the Department of Statistics since 1971. A fellow of the Royal Statistical Society and the American Statistical Association, and an elected member of the International Statistical Institute, he has served as a consultant to a wide range of public and commercial organizations around the world, including the Organisation for Economic Co-operation and Development (OECD) and the United Nations. He currently serves on CNSTAT's Panel on Improving Federal Statistics for Policy and Social Science Research Using Multiple Data Sources and State-of-the-Art Estimation Methods, and he previously served on the Panel on Residence Rules in the Decennial Census from 2004 to 2006. He received his undergraduate education at University College Dublin, and his graduate education at the London School of Economics.

## **Ruth D. Peterson**

### **Member**

Ruth D. Peterson is Professor Emerita of sociology at Ohio State University (OSU), where she has been on the faculty since 1985. She currently serves as retiree faculty of the Criminal Justice Research Center (CJRC) at OSU, where she formerly served as director from 1999 to 2011. She is also a member of CJRC's Spatial Crime Research Working Group and co-organizer of the Racial Democracy, Crime, and Justice-Network and its Crime and Justice Summer Research Institute. Her areas of expertise include community conditions and crime, racial and ethnic inequality in patterns of crime, and the consequences of criminal justice policies for racially and ethnically distinct communities. She has conducted research on legal decision making and sentencing, crime and deterrence, and patterns of urban crime. Specifically, she has studied the linkages among racial residential segregation, concentrated social disadvantage and race-specific crime, and the social context of prosecutorial and court decisions. She is widely published in the areas of capital punishment, race, gender, and socioeconomic disadvantage. She currently serves as vice chair of the Committee on Law and Justice and member of CNSTAT's Improving Collection of Indicators of Criminal Justice System Involvement in Population Health Data Programs: A Workshop. She has served on several Academies panels related to criminal justice, including the Panel on Measuring Rape and Sexual Assault in Bureau of Justice Statistics Household Surveys; the Panel to Review Programs of the Bureau of Justice Statistics (BJS); and the Committee to Review Research on Police Policies and Practices for the National Institute of Justice (NIJ). She has both a B.A. and an M.A. in sociology from Cleveland State University and a Ph.D. in sociology (with a minor in law) from the University of Wisconsin, Madison.

## **Roberto Rigobon**

### **Member**

Roberto Rigobon is the Society of Sloan Fellows professor of management and professor of applied economics at the Massachusetts Institute of Technology Sloan School of Management. He is also a visiting professor at the Instituto de Estudios Superiores de Administración (Institute of Advanced Studies in Administration, IESA) in Venezuela and a research associate of the National Bureau of Economic Research. He is a Venezuelan economist whose areas of research are international economics, monetary economics, and development economics. His research has addressed the causes of balance-of-payments crises, financial crises, and the propagation of them across countries. His current research includes studying the properties of international pricing practices and how to produce alternative measures of inflation. He currently serves on CNSTAT's Panel on Improving Federal Statistics for Policy and Social Science Research Using Multiple Data Sources and State-of-the-Art Estimation Methods. He is one of the two founding members of the Billion Prices Project as well as a co-founder of PriceStats. He is a member of the Census Bureau's Scientific Advisory Committee and president of the Latin American and Caribbean Economic Association. He has a B.S. in electrical engineering from Universidad Simón Bolívar (Venezuela), an M.B.A. from IESA, and a Ph.D. in economics from the Massachusetts Institute of Technology.

## **Edward H. Shortliffe**

### **Member**

Edward H. Shortliffe (NAM) is professor of biomedical informatics and senior advisor to the executive vice provost in the College of Health Solutions at Arizona State University in Phoenix. A resident of New York City when not in Arizona, he is also a scholar in residence at the New York Academy of Medicine, adjunct professor of biomedical informatics at Columbia University's College of Physicians and Surgeons, and adjunct professor of health policy and research at Weill Cornell Medical College. His research interests include the broad range of issues related to integrated decision-support systems, their effective implementation, and the role of the Internet in health care. Specifically, his areas of expertise are medical education, medical school administration, biomedical informatics, computer applications, computer science research, decision procedures and theory, internal medicine, and health information technology. He is a member of the Physics, Mathematics, Computer, Information, and Engineering Section of the National Academy of Medicine (NAM), a position he was elected to in 1987. He currently serves as chair of the Academies' Committee on Developing a Smarter National Surveillance System for Occupational Safety and Health in the 21st Century. He has previously served on many Academies panels related to health care, biomedical applications, behavioral health, and clinical research. Previously, he served as president and chief executive officer of the American Medical Informatics Association and before that held academic positions at the University of Texas Health Science Center at Houston (professor of biomedical informatics), University of Arizona College of Medicine (founding dean of Phoenix Campus), Columbia University (professor of biomedical informatics), and Stanford University (professor of medicine). He has an A.B. in applied mathematics from Harvard College, and both a Ph.D. in medical information sciences and an M.D. from Stanford University.