General Session: Welcome & Keynote Address

Chair: Danni Lewis, Office for National Statistics

Small Data Solving Big Data Biases: Measurement of Social and Economic Outcomes (abstract)

R. Rigobon, MIT Sloan School of Management

Parallel Sessions

10:30-12:00 Invited session: The Design of a New Complex Survey for the Very Large Non-Financial Enterprises in the Netherlands: Process, Methods, and Lessons Learned

Chair: Gary Brown, Office for National Statistics, UK
Organizer: Leanne Houben, Statistics Netherlands
Discussant: Stefan Bender, Deutsche Bundesbank

Toward the New ‘CBS-DNB Finances of Enterprises and Balance of Payments’ Survey (abstract)
F. Demollin, Statistics Netherlands

Questionnaire Communication with Large Non-Financial Enterprises (abstract)
G. Snijkers, Statistics Netherlands

Survey Communication for the Newly Developed Business Survey (abstract)
L. Houben, Statistics Netherlands

10:30-12:00 Invited session: Robust Estimation in the Presence of Influential Units

Chair: David Haziza, Université de Montréal
Organizer: David Haziza, Université de Montréal

Bootstrap Estimation of the Conditional Bias for Measuring Influence in Complex Surveys (abstract)
J. Beaumont, Statistics Canada

Efficient Multiply Robust Imputation Procedures in the Presence of Influential Units (abstract)
S. Chen, Univ. of Oklahoma Health Sciences Center

Controlling Representative Outlier Bias of M-Quantile Model-Based Small Area Estimators (abstract)
G. Bertarelli, Department of Economics and Management, University of Pisa, Italy

10:30-12:00 Topic contributed session: Measuring the Impact of Technology on the Economy

Chair: Anne Russell, U.S. Census Bureau
Organizer: Cathy Buffington, Census Bureau
Discussant: Nathan Cruze, NASS; Jay Dixon, Statistics Canada

New Measures of Robot Use in US Manufacturing (abstract)
A. Rosengarth, US Census Bureau

Measures of Robotic Expenditures from the Annual Capital Expenditures Survey (abstract)
V. Mastalski, US Census Bureau

Toward a Digital Economy Satellite Account (abstract)
J. Nicholson, Bureau of Economic Analysis

10:30-12:00 Contributed speed session: Topics in Classification and Frame Development

Chair: Juana Sanchez, UCLA

How a Statistical Office Scrapes and Processes Internet Data (abstract)
C. Grahonja, Statistical office of the Republic of Slovenia

Application of Bidirectional Encoder Representations from Transformers (BERT) for the classification of occupations for establishment surveys (abstract)
N. Lucas, Ministry of Manpower
### Predicting the number of freshman and graduates at Universidad Nacional de Rosario using random forest techniques

**Abstract**

F. Jonsson, Statistics Sweden

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### Coverage and field disposition codes from a virtual listing frame of commercial buildings

**Abstract**

K. Lewis, EIA

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### 2018 CBECS Stratum Misclassification: Issue and Solutions

**Abstract**

F. Hubbard, Westat

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### Establishment base Informal Sector Statistics: An endeavor of measurement from Economic Census 2018 of Nepal

**Abstract**

M. Pradhan, Central Bureau of Statistics

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### Getting it Right: The Accuracy of Sampling Frame Data and Predicting Survey Contact

**Abstract**

J. Pacer, Abt Associates

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### Classifying university housing in the 2020 Census of Group Quarters

**Abstract**

A. Tuttle, US Census Bureau

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### Parallel Sessions

#### 13:30-15:30

**Introductory overview lecture: Experiments in Business Surveys: Opportunities and Challenges**

**Chair:** Joseph Sakshaug, Institute for Employment Research / University of Mannheim  
**Organizer:** Joseph Sakshaug, Institute for Employment Research / University of Mannheim

- **Strategies for Embedding Experiments in Establishment Surveys: Examples from the US Department of Agriculture’s National Agricultural Statistics Service Data**  
  **Abstract**
  K. Ott, National Agricultural Statistics Service

- **Experiments with Recruitment Strategies in a National Establishment Survey**  
  **Abstract**

- **Methodological Purity Meets Practical Reality in Embedded Business Survey Experiment Design: Experience and Learning from Australia**  
  **Abstract**
  T. Price, Australian Bureau of Statistics

- **More Information, Less Item Nonresponse? Implementation of a Question Experiment in the IAB Job Vacancy Survey**  
  **Abstract**
  B. Küfner, Institute for Employment Research (IAB)

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#### 13:30-15:30

**Topic Contributed session: Adaptive Cluster Sampling: Methodology and Implementation to Survey Informal Businesses**

**Chair:** Laura Bechtel, US Census Bureau  
**Organizer(s):** Joshua Wimpey, World Bank

- **Surveying Informal Businesses Using Adaptive Cluster Sampling**  
  **Abstract**
  J. Rodriguez Meza, World Bank Group

- **Challenges and Potential Improvements of Methodology and Practices of ACS**  
  **Abstract**
  F. Jolevski, World Bank

- **Practical Implementation of ACS: Tools and Steps**  
  **Abstract**
  D. Francis, World Bank

- **Results from the Application of ACS in the Field**  
  **Abstract**
  A. Aga, World Bank

- **Evaluating Application of Adaptive Sampling Approaches to Survey Informal Firms: Simulation Results Based on (Real) Population Data**  
  **Abstract**
  J. Wimpey, World Bank

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#### 13:30-15:30

**Topic Contributed session: Updating Surveys in Response to Stakeholder Feedback: The 2017 Census of Agriculture as a Case Study**

**Chair:** Linda Young, USDA, National Agricultural Statistics Service  
**Organizer(s):** Virginia Harris, USDA, National Agricultural Statistics Service

- **Measuring Women in Agriculture**  
  **Abstract**
  H. Ridolfo, National Agricultural Statistics Service

- **Agile Processing: Modifying the Editing and Imputation Procedures to Quickly Handle Questionnaire Changes to the 2017 Census of Agriculture**  
  **Abstract**
  M. Lipke, National Agricultural Statistics Service

- **Effects of Changes to the 2017 Census of Agriculture Questionnaire on Capture-Recapture Methodology**  
  **Abstract**
  D. Miller, National Agricultural Statistics Service

- **Adapting a Census Publication Program to Changes to the 2017 Census of Agriculture Questionnaire**  
  **Abstract**
  V. Harris, USDA, National Agricultural Statistics Service
### 13:30-15:30  **Topic contributed session: Adventures in Administrative and Alternative Source Data**

**Chair:** Joseph Parsons, USDA/NASS  
**Organizer:** Andrew Dau, USDA/NASS

<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>In Search of Alternative Data</td>
<td>J. Bailey, USDA/NASS</td>
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<tr>
<td>Developing Statistical Frameworks for Administrative Data:</td>
<td>T. Tarling, Office for National Statistics</td>
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<tr>
<td>The Good, the Bad, and the Unknown</td>
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<tr>
<td>Cruising with Administrative Data as a Co-Pilot: Using Administrative Data in a Screening Survey</td>
<td>A. Dau, USDA/NASS</td>
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<tr>
<td>Improving the Quality of Administrative Data at Their Source:</td>
<td>A. Hernandez, U.S. Census Bureau</td>
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<tr>
<td>Two Case Studies Applying Cognitive Methods to Developing and Testing Regulatory Forms</td>
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<tr>
<td>Tax Data: The Backbone to the Modernized Agriculture Program at Statistics Canada</td>
<td>J. Girard, Statistics Canada</td>
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### Tuesday, June 15

#### Parallel Sessions

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<thead>
<tr>
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<th>Organizer</th>
<th>Discussants</th>
<th>Presenters</th>
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</table>
| 9:30-11:00 | **Invited session:** Modelling of Time Series Data - Challenges and Applications to Economic Statistics | **Chair:** Juana Sanchez, UCLA  
**Organizer:** Steve Matthews, Statistics Canada  
**Discussant:** Paul Smith, University of Southampton | | | S. Matthews, Statistics Canada |
| 9:30-11:00 | **Topic Contributed Session:** Measuring Investment in Intangible Assets | **Chair:** Steve MacFeely, UNCTAD  
**Organizer:** Mojca Bavdaz, University of Ljubljana  
**Discussants:** Peter Van de Ven, OECD; Sanjiv Mahajan, Office for National Statistics, United Kingdom | | | J. Martin, UK Office for National Statistics |
| 9:30-11:00 | **Topic Contributed session:** More Data, Geography, and Reduce Burden? Approaches to Improve Measurement of Goods Movements in the United States | **Chair:** Berin Linfors, US Census Bureau  
**Organizer:** Berin Linfors, US Census Bureau  
**Discussant:** Julie Parker, Bureau of Transportation Statistics | | | O. Brozek, U.S. Census Bureau |
Parallel Sessions

11:30-13:00 Contributed Speed session: Modernization Efforts in Establishment Statistics 1

Chair: Mojca Bavdaz, University of Ljubljana

- Can we get anything from non-respondents? A pilot test of the third European Survey of Enterprises on New and Emerging Risks (ESENER-3) (abstract)
  X. Irastorza, European Agency for Safety and Health at Work (EU-OHA)

- Exploring Employment Discrimination Data: A First Look into EEO-1 Public Use Microdata File (abstract)
  J. West, U.S. Equal Employment Opportunity Commission

- Transition to WEB in the Survey on Consumption of Energy, Fuels and Selected Oil Derivatives (abstract)
  M. Nemec, Statistical Office of the Republic of Slovenia

- The Path to a 21st Century Data Collection: The Modernization of the Employer Information EEO-1 Survey (abstract)
  M. Noonan, EEOC

- A new sampling design for the Swiss Earnings Structure Survey (abstract)
  L. Qualité, Swiss Federal Statistical Office

11:30-13:00 Contributed Speed session: Topics in the Collection, Production, and Estimation of Short Term and other Business Statistics

Chair: Daniel Assoulin, BFS


- What Do the Business Tendency Surveys Measure, and What Is Their Information Content? (final paper)
  P. Smith, University of Southampton

- Adaptation of Winsorization to weight share method (abstract)
  A. Fizzala, INSEE

- Transitioning to Model-Based Official Statistics: the Case of Crops County Estimates (abstract)
  L. Chen, NISS

- Small Area Estimation for the Job Statistics, an example of innovative experimental statistics from SFS (abstract)
  D. Kilchmann, Swiss Federal Statistical Office

- Business Response Survey to the Coronavirus Pandemic (abstract)

- Data integration: the evolution of use of administrative data in business statistics (abstract)
  C. Hanley, Central Statistics Office Ireland

11:30-13:00 Contributed Speed session: Treatments for Nonresponse: Imputation, Weighting, and Other Models

Chair: Rebecca Andridge, The Ohio State University

- Variance estimation of calibration estimators under nonresponse in survey sampling (abstract)
  P. Andersson, Stockholm University

- Weighting for Nonresponding Institutions in a Two-Stage Probability Proportional to Size Sampling Design when Measure of Size Is Estimated (abstract)
  A. Sukasih, RTI International

- An expression for bias in an estimate of the change in the presence of non-ignorable nonresponse (abstract)
  D. Hedlin, Stockholm University

- Stratified Multiple Imputation Estimation for Complex Business Surveys (abstract)
  J. Sanchez, UCLA

- Balanced Imputation for Swiss Cheese Nonresponse (abstract)
  E. Eustache, University of Neuchatel

- An evaluation of some Imputation Methods on the Annual Survey of Commerce’s companies’ Revenue (abstract)
  J. Rodrigues, Brazilian Institute of Geography and Statistics (IBGE)
### 11:30-13:00 **Contributed Speed session: Understanding, Assessing, and Transitioning to Mixed Mode Collections**

**Chair:** Ger Snijkers, Statistics Netherlands

- **Lessons Learned in a National Survey of Robotics Use Among U.S. Manufacturing Companies**
  - **Abstract**
  - **H. Hagerty,** NORC at the University of Chicago

- **The path of least resistance: Changing mode to boost response rates in an establishment survey**
  - **Abstract**
  - **M. Spiegelman,** U.S. Department of Education

- **Library Data in the United States**
  - **Abstract**
  - **M. Riedmann,** Institute of Museum and Library Services

- **Experiences with sequential mixed-mode interviewing in ESENER-3, a cross-national establishment survey on health and safety at work**
  - **Abstract**
  - **A. Riedmann,** Kantar

- **Mixed-mode experiment in the IAB Establishment panel**
  - **Abstract**
  - **M. Volkert,** IAB

- **Differences in response patterns between telephone and push-to-web administration of a cross-national survey of establishments**
  - **Abstract**
  - **G. van Houten,** Eurofound

- **Transitioning to a Mixed-Mode Data Collection: Questionnaire Considerations and Data Quality Impacts**
  - **Abstract**
  - **J. Michaels,** U.S. Energy Information Administration

### 14:30-16:30 **Invited session: Panel: Producing official statistics during the COVID-19 pandemic**

**Chair:** Jacqui Jones, Australian Bureau of Statistics

**Organizer:** Jacqui Jones, Australian Bureau of Statistics

- **Producing Official Statistics During the COVID-19 Pandemic**
  - **Abstract**
  - **M. Volkert,** IAB
  - **J. Sakshaug,** Institute for Employment Research/University of Mannheim
  - **D. Elliott,** Office for National Statistics
  - **D. Mead,** Australian Bureau of Statistics
  - **L. Ryan,** Australian Bureau of Statistics
  - **N. Ahmad,** OECD
  - **T. Price,** Australian Bureau of Statistics
  - **C. König,** Institute for Employment Research

### 14:30-16:30 **Invited session: Integrating Administrative Data Into Business Statistics**

**Chair:** Steve Matthews, Statistics Canada

**Organizer:** Nicholas Cox, Statistics New Zealand (Stats NZ)

**Discussant:** Danni Lewis, Office for National Statistics

- **Integrating Alternative and Administrative Data Into the Monthly Business Statistics: Some Applications from Statistics Canada**
  - **Abstract**
  - **M. Duval,** Statistics Canada

- **Establishment of a Standardized Design in the Production of Economic Statistics: The Stats NZ Experience**
  - **Abstract**
  - **G. Rabaiotti,** Office for National Statistics
  - **N. Cox,** Statistics New Zealand (Stats NZ)

### 14:30 – 16:30 **Topic Contributed session: Research, Development, and Evaluation of Survey Communication Materials**

**Chair:** Kari Klinedinst, US Census Bureau

**Organizer:** Kari Klinedinst, US Census Bureau

- **Developing a web portal for reporting businesses**
  - **Abstract**
  - **L. Houben,** Statistics Netherlands

- **Communicating with Businesses Through the Altinn Portal**
  - **Abstract**
  - **B. Hole,** Statistics Norway

- **A Creative Approach to Promoting Survey Response**
  - **Abstract**
  - **C. Brady,** US Census Bureau

- **Building Capability in Business Data Collection Methodology**
  - **Abstract**
  - **T. Price,** Australian Bureau of Statistics
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<tr>
<td>14:30 – 16:30</td>
<td><strong>Contributed Speed session: Balancing Response Burden and Data Quality</strong></td>
<td><strong>Chair:</strong> Denise Abreu, National Agricultural Statistics Service</td>
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<td></td>
<td><strong>Evaluating the Impact of Enrollment Nonresponse on an Establishment Panel Survey</strong></td>
<td>J. Dixon, Bureau of Labor Statistics</td>
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<td><strong>Improving Data Quality and Reducing Respondent Burden of the U.S. Public Libraries Survey</strong></td>
<td>M. Pelzar, Institute of Museum and Library Services</td>
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<td><strong>Impact of Instant Feedback on Data Quality Follow Up</strong></td>
<td>S. Ginder, RTI International</td>
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<td><strong>Getting Beyond the Front Office is Half the Battle: Multiple Levels of Incentives in a Two-Stage School Establishment Survey</strong></td>
<td>A. Zotti, U.S. Census Bureau</td>
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<td><strong>Developing best practices of managing response burden and data quality for law enforcement agency surveys</strong></td>
<td>Y. Hsieh, RTI International</td>
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<td><strong>The Effects of Interview Length and Rest Period on Response in Establishment Surveys</strong></td>
<td>J. Rodhouse, National Agricultural Statistics Service</td>
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<td>Wednesday, June16</td>
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<td>9:00 – 10:10</td>
<td><strong>Invited session: Waksberg Address</strong></td>
<td>Jean-Francois Beaumont, Statistics Canada</td>
<td>Wesley Yung, Statistics Canada</td>
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<td><strong>Science and the Management of Surveys</strong></td>
<td>R. Tourangeau, Westat</td>
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<td>10:30-12:00</td>
<td><strong>Parallel Sessions</strong></td>
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<td>10:30-12:00</td>
<td><strong>Invited session: Response Burden Management: Toward Burden Reduction Noticeable by Businesses</strong></td>
<td>J. Erikson, Statistics Sweden</td>
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<td><strong>Beyond Managing Response Burden</strong></td>
<td>J. Erikson, Statistics Sweden</td>
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<td><strong>Managing Response Burden in Business Surveys and Minimizing Its Negative Perception by Respondents</strong></td>
<td>P. Saraiva dos Santos, Statistics Portugal</td>
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<td><strong>Response Burden Reduction More Noticeable for Businesses in the Netherlands</strong></td>
<td>D. Giesen, Statistics Netherlands</td>
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<td><strong>Discussant</strong></td>
<td>M. Bavdaz, University of Ljubljana</td>
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<td>10:30-12:00</td>
<td><strong>Invited session: Producing Synthetic Microdata with ’High’ Utility and ’Low’ Disclosure Risk</strong></td>
<td>J. Drechsler, Institute for Employment Research, Germany</td>
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<td><strong>Synthetic Microdata for Establishment Surveys Under Informative Sampling</strong></td>
<td>J. Drechsler, Institute for Employment Research, Germany</td>
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<td><strong>Risk-Efficient Bayesian Data Synthesis for Privacy Protection</strong></td>
<td>J. Hu, Vassar College</td>
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<td><strong>Validating Outcomes from Synthetic Data: Results from a Multi-Year Implementation</strong></td>
<td>L. Vilhuber, Cornell University</td>
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<td>10:30-12:00</td>
<td><strong>Topic Contributed session: Dealing with Missing and Erroneous Data in Establishment Statistics</strong></td>
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### Chair: Nicole Czaplicki, U.S. Census Bureau
**Organizer: Benjamin Reist, NASA**

- **Using Multiple Imputation to Mitigate a Sample Reduction** *(abstract)*  
  T. Murphy, National Agricultural Statistics Service
- **Clean, Rinse, Repeat: Student Perceptions of Dirty Data** *(abstract)*  
  E. Keiffer, University of Arkansas
- **Imputation Strategies for Establishment Surveys Using Random Forest Models** *(abstract)*  
  T. Wilson, USDA, NASS
- **The impact of Persistent Measurement Error on Survey Estimates** *(abstract)*  
  C. Weng, U.S. Census Bureau

### 10:30-12:00  **Topic contributed session:** Leveraging Machine Learning to Improve Economic Surveys and Programs

**Chair: Michael Larsen, Saint Michael’s College**  
**Organizer: Anne Russell, U.S. Census Bureau**

- **Integrating Machine Learning in the ACES Survey Instrument** *(abstract)*  
  V. Mastalski, US Census Bureau
- **Industry Classification Using Machine Learning: An Application to the Economic Census** *(abstract)*  
  A. Russell, US Census Bureau
- **Automating the Extraction of Health Care Provision Data from Standardized Insurance Plan PDF Documents** *(abstract)*  
  B. Kopp, Bureau of Labor Statistics
- **A Smart Instrument NAPCS Classification Tool for the Economic Census (SIN-CT)** *(abstract)*  
  A. Goldsman, US Census Bureau

### 12:00-13:30  **Software Demo session:** Software Demonstrations

- **Survey Data Imputation and Analysis Using SAS/STAT®** *(abstract)*  
  P. Mukhopadhyay, SAS
- **Survey data analysis using Stata** *(abstract)*  
  Y. Marchenko, StataCorp LLC
- **R package: rpms, Recursive Partitioning for Modeling Survey Data** *(abstract)*  
- **Survey data analysis using Stata** *(abstract)*  
  K. MacDonald, StataCorp LLC
- **Survey data analysis using Stata** *(abstract)*  
  I. Canette, StataCorp LLC

### Parallel Sessions

#### 13:30-15:30  **Invited session:** The Future of Establishment Surveys Is Easy as ABC: AI, Big Data, Cutting-Edge Survey Design

**Chair: Danni Lewis, Office for National Statistics**  
**Organizer: Gary Brown, Office for National Statistics, UK**  
**Discussant: Wesley Yung, Statistics Canada**

- **AI Models in Survey Estimation** *(abstract)*  
  K. McConville, Reed College
- **Methods for Estimating the Quality of Multisource Statistics** *(abstract)*  
  A. Van Delden, Statistics Netherlands (CBS)
- **Smarter Designs, Not Just Alternative** *(abstract)*  
  G. Brown, Office for National Statistics, UK

#### 13:30-15:30  **Topic Contributed session:** Advanced Imputation Techniques for Handling Missing Data

**Chair: Sixia Chen, University of Oklahoma Health Sciences Center**  
**Organizer: Sixia Chen, University of Oklahoma Health Sciences Center**  
**Discussant: Don Jang, NORC**
On the Missing Data Analysis with High-Dimensional Data {abstract}  
C. Xu, University of Oklahoma Health Science Center

Why, When, and How to Weight When Imputing {abstract}  
P. Kott, RTI International

Estimation for nonignorable missing responses or covariates using semi-parametric quantile regression imputation and a parametric response probability model {abstract}  
E. Berg, Iowa State University

Bayesian Jackknife Empirical Likelihood Based Inference for Missing Data and Causal Inference Problems {abstract}  
Y. Zhao, Georgia State University

13:30-15:30  Topic Contributed session: Statistical Confidentiality and Establishment Surveys: Challenges and Solutions to Improving Data Utility

Chair: Daniell Toth, US Bureau of Labor Statistics
Organizer: Tom Krenzke, Westat

Construction of a Feasible, Complete Table from a Published Table with Suppressions {final paper}  
B. Wang, Census Bureau

Modemizing EIA’s Cell Suppression Software Used in Disclosure Limitation {final paper}  
D. Kinyon, U.S. Energy Information Administration

A Proposed ‘Bottom-Up’ Differential Privacy Approach for Disclosure Prevention in Data Query Tool {final paper}  
J. Li, Westat

Data Protection Toolkit’s Playbook as Demonstrated Through the PIAAC Prison Study {final paper}  
T. Krenzke, Westat

Improving Access to Statistics Canada Business Data {abstract}  
S. Thomas, Statistics Canada

13:30-15:30  Topic contributed session: Minimizing Revisions for a Monthly Indicator

Chair: Scott Holan, US Census Bureau/University of Missouri
Organizer: Laura Bechtel, US Census Bureau
Discussant: Scott Scheleur, U.S. Census Bureau

Evaluating the Link-Relative Estimator Used by a Monthly Economic Indicator Survey {abstract}  
L. Bechtel, US Census Bureau

Identifying High-Priority Units for Analyst Imputation in a Monthly Economic Indicator Survey {abstract}  
N. Czaplicki, US Census Bureau

Imputation Models for a Monthly Economic Indicator Survey with Seasonal Data and Low Unit Response {abstract}  
S. Kaputa, US Census Bureau

Nowcasting Versus Advanced Surveys for Estimating Austrian Principal Economic Indicators {abstract}  
M. Froehlich, Statistics Austria

Thursday, June 17

9:00-10:10  General Session: Keynote Address and Closing Ceremony

Chair: Katherine Thompson, U.S. Census Bureau

Big Data and Small Surveys: Which One Should We Trust More? {abstract}  
X. Meng, Harvard University

Parallel Sessions

10:30-12:00  Invited session: Measuring Global Production

Chair: Erich Strassner, Bureau of Economic Analysis
Organizer: Rami Peltola, United Nations; Tihomira Dimova, United Nations
Discussant: Sanjiv Mahajan, Office for National Statistics, United Kingdom
Multinational Profit Shifting and Measures Throughout Economic Accounts (abstract)  
D. Rassier, U.S. Bureau of Economic Analysis

Systematic Approach to Addressing MNEs and the Impact on National Processes (abstract)  
F. Demollin, Statistics Netherlands

Finnish Experience in Measuring Global Production and Guidance on Sharing of Economic Data (abstract)  
T. Koskimäki, Statistics Finland

10:30-12:00 Invited session: Machine Learning in the Production of Official Economic Statistics

Chair: Wesley Yung, Statistics Canada  
Organizer: Wesley Yung, Statistics Canada  
Discussant: Gary Brown, Office for National Statistics, UK

Machine Learning for Classification, Imputation, and Outlier Detection in German Establishment Statistics (abstract)  
F. Dumpert, Federal Statistical Office of Germany

Coding Text Survey Responses Using Machine Learning: 5 Years In (abstract)  
A. Measure, Bureau of Labor Statistics

Imputation Through Machine Learning Procedures: An Empirical Comparison (abstract)  
D. Haziza, Université de Montréal

10:30-12:00 Invited session: Integrating Survey and Non-Survey Data

Chair: Barbara Rater, USDA National Agricultural Statistics Service  
Organizer: Barbara Rater, USDA National Agricultural Statistics Service  

Using Alternative Data Sources in United States Census Bureau Retail Data Products (abstract)  
R. Hutchinson, US Census Bureau

Improving Agricultural Estimates While Reducing Respondent Burden (abstract)  
L. Young, USDA, National Agricultural Statistics Service

10:30-12:00 Invited session: Panel: The importance of the Statistical Business Register

Chair: Jacqui Jones, Australian Bureau of Statistics  
Organizer: Egon Gerards, Statistics Netherlands

Statistical Business Registers for Establishment Statistics (abstract)  
E. Marquette, US Census Bureau  
I. Machdi, BPS - Statistics Indonesia  
W. Erasmus, Australian Bureau of Statistics

12:00-13:30 Software Demo session: Software Demonstrations

Software, an R package for Model-Assisted Survey Estimation (abstract)  
K. McConville, Reed College

SUDAAN: the WTADJUST and WTADJX procedures (final paper)  
P. Kott, RTI International

Cantabular: a framework of tools for the protection & publication of statistics: The Sensible Code Company (abstract)  
M. Thompson, The Sensible Code Company

Parallel Sessions

13:30-15:30 Topic Contributed session: Creative Approaches to Questionnaire Development and Pretesting

Chair: Ger Snijders, Statistics Netherlands  
Organizer: Diane Willimack, U.S. Census Bureau  
Discussant: Danna Moore, Washington State University
## Using Multi-Method Testing to Improve Reporting of Complicated Constructs in Multiple Data Collection Modes

**Abstract**

H. Ridolfo, National Agricultural Statistics Service

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## Adapting Qualitative Research Techniques to Pretest Emerging Economic Topics

**Abstract**

A. Anderson Riemer, U.S. Census Bureau

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## Resurrecting a Survey After 20 Years of Dormancy

**Abstract**

R. Morrison, National Center for Science and Engineering Statistics

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## Expanding Record-Keeping Study Methodology to Assess Structure and Availability of Data in Business Records

**Abstract**

M. Cidade, U.S. Census Bureau

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### 13:30-15:30  **Topic contributed session: Cost and Acceptance of Cash, Cards, and Innovations for Retail Payments: Results from Central Banks Around the World**

**Chair:** Angelika Welte, Bank of Canada  
**Organizer:** Gradon Nicholls, Bank of Canada

- **Payment Acceptance Trends Among Small Merchants in Canada**  
  **Abstract**  
  G. Nicholls, Bank of Canada

- **The Costs of Payment Methods in the Retail Sector**  
  **Abstract**  
  J. Kimmerl, Deutsche Bundesbank

- **When Will Swedish Retailers Stop Accepting Cash?**  
  **Abstract**  
  B. Segendorf, Sveriges Riksbank

- **Measuring the Distribution of Payments Fraud in a Survey of Banks: What Factors Influence Fraud Rates?**  
  **Abstract**  
  G. Gerdes, Federal Reserve Board

- **The World Bank Practical Guide for Measuring Retail Payment Costs**  
  **Abstract**  
  H. Banka, World Bank Group

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### 13:30-15:30  **Topic contributed session: The Behavioral Health Services Information System (BHSIS): Monitoring Mental Health and Substance Use Treatment in the United States**

**Chair:** Aryn Hernandez, U.S. Census Bureau  
**Organizer:** Herman Alvarado, SAMHSA

- **Overview of BHSIS and the Use of Secondary Sources to Supplement Listing Frame**  
  **Abstract**  
  H. Alvarado, SAMHSA

- **Linking Facility-Level and Client-Level Substance Use Survey Data: A Cautionary Tale**  
  **Abstract**  
  K. Southwell, Eagle Technologies

- **Enhancements to Behavioral Health Establishment Surveys to Reduce Respondent Burden**  
  **Abstract**  
  M. Potts, Mathematica

- **The Use of Experiments to Improve Responses in Behavioral Health Establishment Surveys**  
  **Abstract**  
  K. CyBulski, Mathematica

- **The 'Venting' Question: How Open-Ended Comments Can Be Used to Improve Establishment Surveys**  
  **Abstract**  
  L. Vittoriano, Mathematica

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### 13:30-15:30  **Contributed Speed session: Modernization Efforts in Establishment Statistics 2**

**Chair:** Samson Adeshiyan, Energy Information Administration

- **Score-Matching Representative Approach for Big Data Analysis and Its Extension**  
  **Abstract**  
  K. Li, Northwestern University

- **Explicit Parameterizations for Linking Establishments and Entities under Sparse Classifications**  
  **Abstract**  
  Y. Thibaudieu, Census Bureau Center for Statistical Research and Methodology

- **Demonstration of the National Hospital Care Survey: Inpatient and Emergency Department Encounters for Congestive Heart Failure, 2016**  
  **Abstract**  
  D. White, National Center for Health Statistics, CDC

- **“Crowd-sourcing” Information About Missing Frame Units**  
  **Abstract**  
  S. Ginder, RTI International

- **Strategies for Ensuring the Accuracy and Completeness of an Establishment Frame**  
  **Final paper**  
  S. Brumbaugh, RTI International

- **Towards Necessary and Sufficient Conditions for Transparency in Establishment Surveys**  
  **Abstract**  
### Invited session: Introductory Overview Lecture: Coordinated Sampling and Bayesian Methods Applied to Small Area Estimation for Establishment Statistics

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<thead>
<tr>
<th>Title</th>
<th>Abstract Available</th>
<th>Speaker &amp; Institution</th>
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<tbody>
<tr>
<td>Some Thoughts on Sample Coordination in Repeated Surveys</td>
<td>[abstract]</td>
<td>Y. Tillé, University of Neuchatel</td>
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<tr>
<td>Sample coordination methods and systems for establishment surveys</td>
<td>[abstract]</td>
<td>A. Matei, University of Neuchâtel, Switzerland</td>
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<tr>
<td>Sample coordination methods and systems for establishment surveys</td>
<td>[abstract]</td>
<td>P. Smith, University of Southampton</td>
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### Invited session: Introductory Overview Lecture: Data Integration and Data Linking/Matching

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### Invited session: Introductory Overview Lecture: Introduction to Business Surveys - Questionnaire Design

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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Computerized Business Questionnaires</td>
<td>[abstract]</td>
<td>G. Haraldsen, Statistics Norway</td>
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<tr>
<td>Questionnaire Completion Paradata in Business Surveys</td>
<td>[abstract]</td>
<td>G. Snijkers, Statistics Netherlands</td>
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### Invited session: Introductory Overview Lecture: Introduction to Issues in the Production of Official Establishment Statistics

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### Invited session: Introductory Overview Lecture: Introduction to New Data Sources, New Technologies, and New Methods

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<tr>
<th>Title</th>
<th>Abstract Available</th>
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<tbody>
<tr>
<td>Data, Algorithms and Data Governance</td>
<td>[abstract]</td>
<td>S. Olhede, University College London</td>
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<tr>
<td>Statistical Data-Production in a Digitized Age: Potentials for Statistics, Research and Society</td>
<td>[abstract]</td>
<td>S. Bender, Deutsche Bundesbank</td>
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### Invited session: Introductory Overview Lecture: Introduction to New Measures/Indicators for the Economy

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<thead>
<tr>
<th>Title</th>
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<tr>
<td>SNA and GDP in detail: The Future</td>
<td>[abstract]</td>
<td>P. Van de Ven, OECD</td>
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### Invited session: Introductory Overview Lecture: Introduction to Sampling and Estimation

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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Sample Design in Establishment Surveys</td>
<td>[abstract]</td>
<td>P. Smith, University of Southampton</td>
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<tr>
<td>Estimation Approaches in Establishment Surveys</td>
<td>[abstract]</td>
<td>W. Yung, Statistics Canada</td>
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### Invited session: Measuring and improving data quality

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<tr>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>The use of administrative data in business statistics: methodological developments</td>
<td>A. Van Delden, Statistics Netherlands (CBS)</td>
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<tr>
<td>Methodology of the use of administrative data in business statistics: practical considerations</td>
<td>D. Lewis, Office for National Statistics</td>
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### Invited session: Introductory Overview Lecture: Variance Estimation for Probability and Nonprobability Surveys

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Variance Estimation for Nonprobability Surveys</td>
<td>J. Dever, RTI</td>
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<tr>
<td>Variance estimation for probability surveys</td>
<td>D. Liao, RTI</td>
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