Jabatan Perangkaan
MALAYSIA

VIRTUAL SHORT COURSE FOR THE 7th MALAYSIA STATISTICS CONFERENCE 2020 : CENSUS SHAPES NATION'S FUTURE

22 OCTOBER 2020

SPEAKERS

Linda Peters
Business Development Manager, Geographer
Environmental Systems Research Institute, ESRI

Linda Peters has over 30 years of business experience and is skilled in GIS analysis, market research, demographic analysis, and business development.

She works to help organizations better understand how to use GIS and spatial thinking combined with data in overcoming contemporary challenges. She also works to help them understand how this data can be applied to the Sustainable Development Goals (SDGs).

Christine Bycroft
Principal Statistician
Statistics New Zealand

Christine has worked across a number of methodological areas important in official statistics, such as sample design and estimation, confidentiality, record linkage, quality assessment, and the use of administrative data. She has extensive experience with the traditional census model in New Zealand, and in recent years has led a programme of work on the potential of administrative data to transform the census in New Zealand in future.

Dr. Hukum Chandra
ICAR-National Fellow & Principal Scientist
Indian Council of Agricultural Research (ICAR).

He works on diverse areas of methodological and applied problems in statistics including survey design and estimation methods, small area estimation, bootstrap methods, disaggregate level estimation and analysis of agricultural, socio-economic and health indicators, spatial models for survey data, statistical methodology for improvement in agricultural and livestock statistics, energy management in production agriculture, evaluation of agriculture census and survey schemes.

Natalie Shlomo
Professor of Social Statistics
The University of Manchester

Her research interests are in topics related to survey statistics and survey methodology which include survey design and estimation, small area estimation, non-response analysis and adjustments, quality indicators for representative response, adaptive survey designs, statistical disclosure control, statistical data editing and imputation, data linkage and integration

8.00am - 9.00am	Registration
9.00am - 10.30am	Session 1 : Title : Integrating Statistical and Geospatial data for better decision making Speaker : Linda Peters Organization : ESRI
10.30am - 11.00am	Break
11.00am - 12.30pm	Session 2 Title : Leveraging the administrative data source Speaker : Christine Bycroft Organization : Statistics New Zealand
12.30pm - 2.00pm	Lunch Break
2.00pm - 3.30pm	Session 3 Title: Small area prediction from aggregated level data Speaker : Dr. Hukum Chandra Organization : Indian Agricultural Statistics Research Institute
3.30pm - 4.00pm	Break
4.00pm - 5.30pm	Session 4 Title : The Disclosure Risk and Data Utility Paradigm Speaker : Natalie Shlomo Organization : Social Statistics, School Of Social Sciences, University Of Manchester

Register Here Before 22/10/2020

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Integrating statistical and geospatial data for better decision making

Linda Peters

Content Description

This short course will begin with a lecture/demo followed by a hands-on exercise.The participants will learn how demographic and other types of data can be analyzed in a GIS system to improve decision making in many areas. In order to test for comprehension a short quiz will be provided at the end of the session using examples from key issues in policy- making that can be better understood by utilizing census data. E.g., housing or education needs, jobs and healthcare.

Hands on Scenario

Floods can result in tremendous damage and loss of life as well as impacts on the local economy. By utilizing GIS maps and socio-economic data, you can begin to understand impacts that will be felt by citizens and business community alike. This lesson will help you understand how to use GIS and create a map of Kuching, Sawarak, Malaysia utilizing census data as well as other openly available data. By analyzing flood impact across the city, you will identify areas that may suffer impacts due to severe flooding. Then, you will present your results in professional looking web app for others to explore.

Leveraging the administrative data source

Christine Bycroft

Content Description

This session will focus on methodology and tools for using administrative data sources to provide census information, based on the New Zealand experience. Stats NZ has been researching the potential for administrative data to transform the way census could be conducted in future. That knowledge was applied in the innovative use of administrative in the 'traditional' New Zealand census in 2018 when response rates to the field collection were lower than expected.

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Small area prediction from aggregated level data

Dr. Hukum Chandra

Content Description

This session will focus on SAE under area level version of small area models assuming that the covariates are available only at the area (or aggregated) level. Some of the applications to generate reliable small area estimates such as crop yield, poverty, food insecurity and health indicator from existing surveys will also be demonstrated.

Content Outline

i) Overview of small area estimation (SAE): need, problem and challenges
ii) Commonly used SAE approaches
iii) SAE under area level models using aggregated data
- SAE under a Fay and Herriot model
- SAE under spatial version Fay and Herriot models (SAR and Spatial nonstationary)
- Application: Crop yield estimation
- SAE under a generalized linear mixed model (GLMM)
- SAE under SAR and Spatial nonstationary version of GLMMs
- Applications: Disaggregate level estimation and mapping of poverty and food insecurity related parameters.

The disclosure risk and data utility paradigm

Natalie Shlomo

Content Description

The short course aims to provide an overview of statistical disclosure control (SDC) from the perspective of government statistical agencies. I first provide an introduction to SDC, disclosure risk scenarios and types of disclosure risks. I then provide an overview of some common SDC methods and the 'safe access' and 'safe data' approaches for protecting the data against disclosures. Finally, I present the measurement of disclsoure risk and data utility for traditional forms of statistical data outputs: microdata from social surveys and tabular data from censuses, surveys and registers and the Disclosure Risk-Data Utility Confidentiality mapping.

Content Outline

i. Introduction and motivation of statistical disclosure control (SDC) for statistical outputs: disclosure risk scenarios, types of disclosure risk
ii. Measuring and quantifying disclosure risk for tabular data, microdata and other forms of outputs
iii. SDC methods for statistical outputs
iv. Measuring and quantifying the impact of SDC methods on the quality of the data
v. The Disclosure Risk-Data utility Confidentiality map