



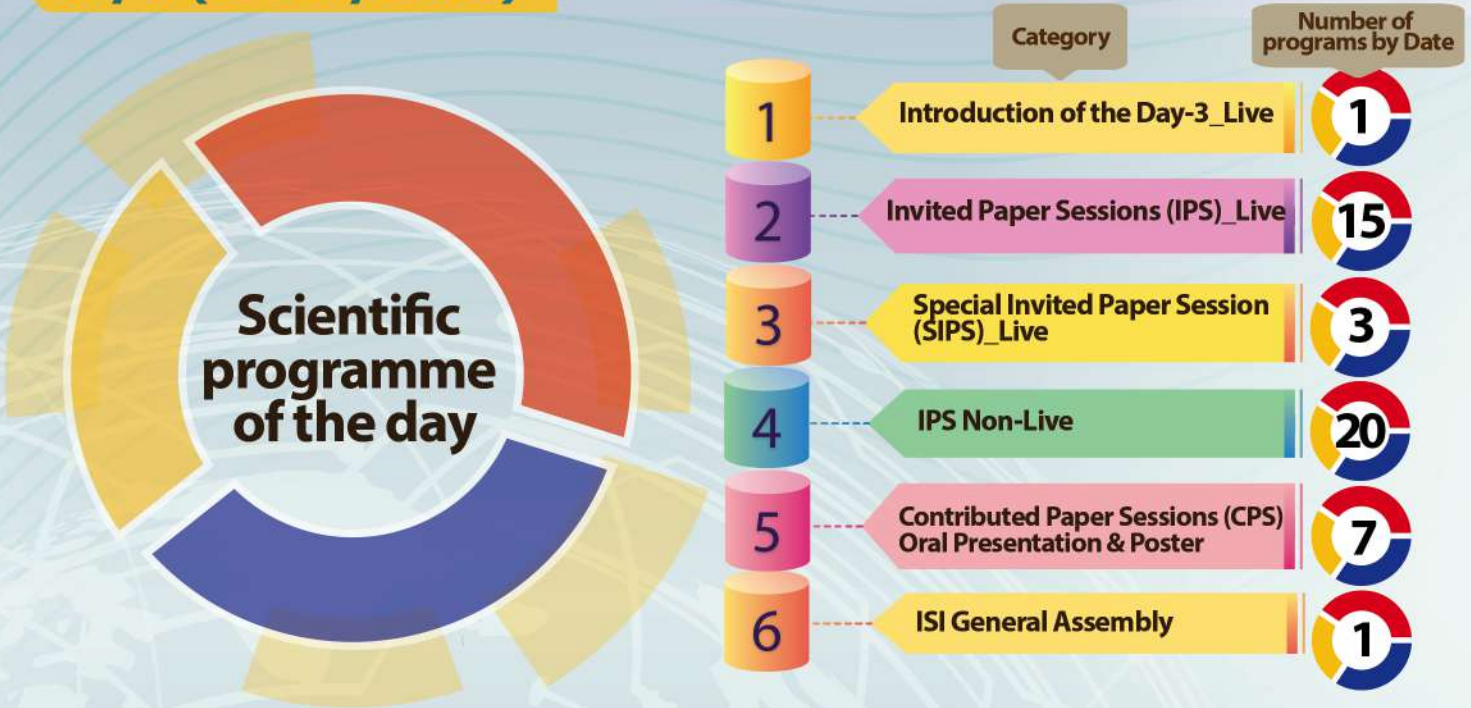
The involvement of the Department of Statistics, Malaysia at

63rd ISI WORLD STATISTICS CONGRESS 2021 - The Hague Virtually 11th - 16th July 2021

“Statistics and Data Science for a Better World”

Day 3 (14 July 2021)

VOLUME 3



ISI General Assembly(GA) LIVE

WHO

ISI Elected and Regular Members, Institutional and Corporate Members. 7 Association: TIES, ISBIS, IASS, IASE, IASC, IAOS & Bernoulli Society

WHAT

- Updates on the progress, achievement and upcoming activities of the ISI and its seven Associations through out 2 years
- Announcements of Members of the Executive Committee and Council for 2021-2023/ 2025
- Announcements of the ISI Elected & Regular Members 2020-2021
- Updates on the next ISI WSC in person:
 - a. Ottawa, Canada in July 2023: Formal Invitation
 - b. The Hague in July 2025

HOW

Live discussion: Sharing of ideas and views in expanding the membership of the ISI and its associations involving all regional levels



ISI ASSOCIATIONS



Bernoulli Society (BS)



International Association for Official Statistics (IAOS)



International Association for Statistical Computing (IASC)



International Association for Statistical Education (IASE)



International Association of Survey Statisticians (IASS)



International Society for Business and Industrial Statistics (ISBIS)



The International Environmetrics society (TIES)



DOSM Contributions

- To encourage aspiring young statisticians who are interested in writing papers related to official statistics
- To actively participate and experience the ISIWSC

As Speakers at CPS Oral Presentation

Statistics in Practice – Some Issues IV Activity

About What?

- Over the years, technology has taken over conventional working process
- How does this applies to electrical, electronic and optical products activity?
- Are we on track for the transition of labour intensive to capital intensive?




Authors: Ms. Rab'atul'adawiah Shabli (Speaker)
Ms. Farrah Hanim Fawziah Johary & Mr. Mohd Asyraf Adzmin
Malaysian Bureau of Labour Statistics (MBLS) Division

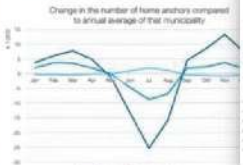


POPULATION & HOUSING
CENSUS MALAYSIA 2020
YOUR DATA IS OUR FUTURE

1. Population Projections (Residents)

Number of residents in local government units

When number of residents falls in Tallinn and Tartu in summer, it increases on the islands, such as Hiiumaa and Saaremaa. There are many university students, who leave during summer.



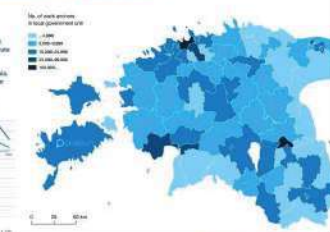
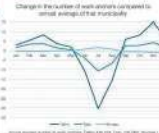
2. Daytime/Worktime Population

Number of work locations in local government units

In Tallinn, there are about 23,000 more work anchors than home anchors, meaning that people often commute there for work.

Apply to the next government month for vacations in Estonia. They people leave the cities to go to the countryside or travel abroad.

Change the number of work anchors compared to annual average of the municipality.



Handbook on the use of Mobile Phone Data (MPD) for Dynamic Population Mapping

IPS81

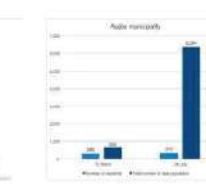
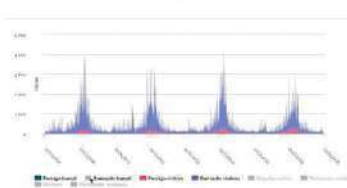


UN Committee of Experts on Big Data and Data Science for Official Statistics has prepared guiding materials for the use of mobile positioning data for dynamic population mapping for the statistical community

3. De facto Population

The number of people present in specific municipality during a period of time (example: day). The population count can differ significantly. Who are residents, temporary residents, visitors and others who stay in an area.

Case: This application is used by the law enforcement to allocate the number of patrol cars in Estonian municipalities.



4. COVID-19 population mobility

During the COVID-19 pandemic, mobile phone data analysis was conducted in several countries around the world to provide insight into adherence to mobility restrictions and change of residents (urban-rural movement)

JRC TECHNICAL REPORTS

Mapping Mobility Functional Areas (MFA) by using Mobile Positioning Data to Inform COVID-19 Policies

A European Regional Analysis

by J. C. Rodríguez Cordero, J. C. Rodríguez Cordero, J. C. Rodríguez Cordero

2020



Example work from European Commission based on aggregated mobile phone data from 16 EU countries
<https://ec.europa.eu/jrc/en/publication/human-mobility-and-covid-19-initial-dynamics>

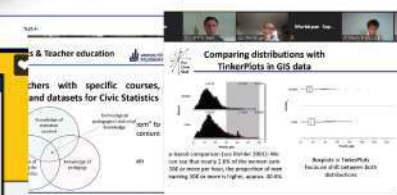
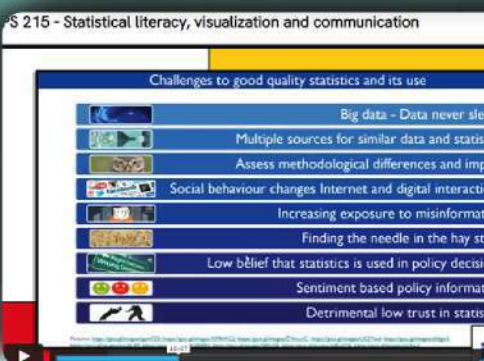
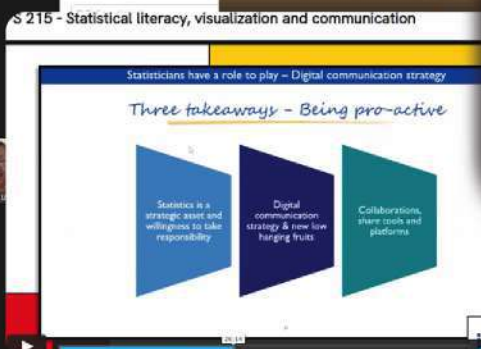
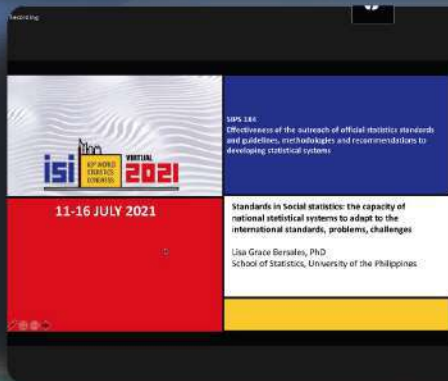


IPS Non-Live 106 - Exploring Statistics on Tourism, Migration, Population and Displacements by Using Mobile Positioning Data



To enable closed captions, please hover over the screen and click 'CC' that appears on the bottom right

In the tourism sector, it is important to know the proportion of domestic versus foreign



IPS Non-Live 140 - COVID-19 and household surveys: what have we learned and what does it mean for the future?

WHY?

- Growing demand of information
- Surveys working as independent projects
- Non-homogeneous processes
- Methodological updates

Start 2018 Implementation 2024

6. Creating dynamic sample frames for surveys

Population data is often used to determine sampling frame for enumeration areas (EAs) such as sampling blocks or community areas

- Inaccurate population data will lead to suboptimal choice of EAs
- canvassing the whole EA to generate an up-to-date sampling frame, makes an already expensive process even more costly

Mobile positioning data can be used to create sampling frames in the following ways:

- In countries or regions where a reliable source for population does not exist, is not valid or has aged considerably.
- In situations where it is unsafe to physically visit areas and canvass exhaustively EAs. This could be due to conflict (e.g., Syria, Somalia) or it could also be due to health threats such as COVID-19.
- Validation of sample frames - for countries where a reliable source for population data exists and needs validation (UNFSCAP, 2019)
- Extension of sample frame formation to specific circumstances - for surveys that cannot rely on static population data or target population subgroups of certain mobility patterns, e.g. surveys of nomadic groups, surveys of populations with high seasonality, for surveys that measure seasonal aspects.

Example use of gridded population for sampling frame generation for tourism trips

IPS Non-Live 140 - COVID-19 and household surveys: what have we learned and what does it mean for the future?

CHALLENGE & LESSON LEARNED

- RESPONSE RATE:** Response rate dropped from 70% to 50%.
- METHODOLOGY:** Use statistical models to adjust for non-response to produce indicators. Identify non-respondents.
- MULTIPLE DATA COLLECTION:** Use LBS, UAS, LBS, PPS to different conditions.
- DATA LITERACY:** Improve respondent literacy for self-administration.

United Nations Department of Economic and Social Affairs

Evolving international statistical standards, principles, recommendations and guidelines; the backbone of the production of comparable official statistics in support of the 2030 Agenda for Sustainable Development

ISI World Statistics Congress
Virtual, July 2021

Two Challenges: Knowing and Doing

What to teach? How to teach it effectively?

Technical Skills

- Rely on international experts
- Advice from consultants
- Fly in/Fly out

Go abroad Fly in experts

What to teach? How to teach it effectively?

- Go abroad
- Become exposed
- Apprentice internationally
- Return with best practices

Outside experts do have great advice! Listen, Learn, Adapt to your local context

Collaboration Skills

What to teach? How to teach it effectively?

5 steps

- Preparation
- Practice
- Doing (Collaborate)
- Reflecting
- Mentoring

You must teach from your own experience

Statistical Collaboration Laboratories ("Stat Labs") Have 3 Missions

- Train statisticians and data scientists to become effective, interdisciplinary collaborators who can move between theory and practice
- Create space for collaboration (infrastructure) to transform academic evidence into action
- Teach short courses and workshops to improve...

Continually evolving role

Strategic:

- System-wide Road Map for Innovating United Nations Data and Statistics
- Secretary General's "Data Strategy for Action by Everyone, Everywhere"
- World Development Report 2021 - "The need for a new global consensus on data - Spotlight R.I. / World Economic Forum - We urgently need a Global Data Convention"

Relevance:

- How Covid-19 is changing the world: a statistical perspective - Vol 1 - 3.
- Fu, H., Hereward, M., MacFeely, S., Mc, A. and Wilcock, J. (2020). How COVID-19 is changing the world: a statistical perspective from the Committee for the Coordination of Statistical Activities. *Statistical Journal of the International Association of Official Statistics*, Vol. 36, No. 4, pp. 851 - 860.
- Survey of National Statistical Offices during COVID-19

Operational:

Food and Agriculture Organization of the United Nations SUSTAINABLE DEVELOPMENT GOALS

Role of regional and country organizations in adapting to statistical standards and regional differences:

The case of food and agriculture statistics

Generic solutions and recommendations?

- Secure capacity and budget beyond experiments
- Involve production department, IT etc in experiments
- Expectation management: offer clarity, identify risks
- Ask about quality requirements and concerns
- Learn from COVID situation!
- Suddenly everybody was interested in statistics...

IPS 148: On the visualisation of digital socio-economic data

Correspondence analysis related biplot visualisations to aid analyses of categorical data containing missing values

Digital Labs, IRL & IRL, Project: National Statistical Institute and Centre for AI-Driven Statistics

Country: IRL - Department of Statistics and Economic Research, Department of Statistics and Economic Research

Why?

- Placing data in context is a key to good analysis.
- Visualising data helps to understand the data better.
- The main aim of this project is to help to understand the data better.
- Visualisation can be used to identify patterns and trends in the data.
- Visualisation can be used to identify patterns and trends in the data.
- Visualisation can be used to identify patterns and trends in the data.



Em Shafei added 4 new photos from 14 July at 07:00.
10 h · 🌐 · 👤

"From experimentation to implementation in official statistics".

Thank you for sharing great insight... experimentation to implementation are not confined to technological capability or know-how but it also necessitates a shift in thinking and culture. Thus, to capitalise on the benefits of new techniques in producing statistics, there is a need to venture into a variety of approaches to incorporating data science and analytics into day-to-day operations.

Department of Statistics, Malaysia
@StatsMalaysia
#ISIWSC2021

Komathi Subramaniam
1h · 🌐

IPS 245 - Teaching Statistics for Empowerment and Social Engagement

Attend the IPS LIVE Session, a very interesting session! Thanks to all the speakers. This is my new experience in learning about civic statistics and the importance of promoting civic engagement among citizens, especially youngsters in improving their understanding of statistics about burning social issues. Statistical education or literacy needs to be strengthened in improving the knowledge, skills of statistical understanding of the social and economic well-being of society. Further research is needed to improve my understanding of the resources of teaching civic statistics to developed informed citizens.

@StatsMalaysia
#ISIWSC2021
#MyStats4Lives

Wan Mohd
7h · 🌐

Day 2 Counting People With Administrative Data Instead of Traditional Census.

Administrative Data as new source of conducting census. Shifting from 'silos' to 'integration' to improve data collection in this new era. Kickstart for the new agenda 'Big Data'. Explore on Machine Learning Model, Model Two Sample Survey Register Approach and Fractional Counting Approach.

Thank you for excellence session
Department of Statistics Malaysia
#Statsmalaysia
#isiwsc2021
#MyStats4Lives

Eddy Stats
8h · 🌐

Day 4 : IPS 100 session- On the visualisation of digital socio-economic data

The impact of the internet, socmed and smart devices means that people are becoming increasingly literate with use of these technologies. This has changed how we engage with others on a professional and personal level...Visualisation has become the most important tools and techniques when dealing with big data...choosing right tools & techniques are important in data visualisation...

#MyStats4Lives

Mazreha Ya'akub
10h · 🌐

Attending the IPS 32 - From experimentation to implementation in official statistics:

This session shares on how NSO is moving to the new technologies and methodologies in producing the official statistics and how they overcome the challenges, especially in terms of production environment, technological capacity, agencies' policies and workforce.

#isiwsc2021
#MyStats4Lives

Wan Mohd
7h · 🌐

Day 3 Attending excellence session. Congratulation to all the presenters IPS 106 Exploring Statistics on Tourism, Population...by Using Mobile Positioning Data.

Mobile phone data have become a valuable source of information for national statistical offices. We need to explore and begin to shift from conventional way of data collection to more modernize approach in conducting household and economic survey.

Transforming statistical landscape with mobile positioning data
Department of Statistics Malaysia
#Statsmalaysia
#isiwsc2021
#MyStats4Lives

Eddy Stats
9h · 🌐

Day 4 : IPS 32 Session- From experimentation to implementation in official statistics

New & modern methods plus tools have expended the possibilities for producing more timely and granular statistics and reaching broader audience and use of statistical information...traditional approach and machine learning plus AI have to be blend together in producing today's statistics...DOSM have started venturing in this...commitment & full support from everyone in DOSM will ensure the success of the effort...

#MyStats4Lives
#isiwsc2021
@StatsMalaysia

rosmaria @rosmaria05 · 1h

Attending Covid-19 household surveys: What have we learned? What does it mean for the future?

Thanks to all the panelists for sharing their experiences in conducting household surveys during the covid-19 pandemic

@StatsMalaysia
#MyStats4Lives
#isiwsc2021

Sabby Lim
2h · 🌐

Attending ISI WSC 2021: Day 4

SIPS - Effectiveness of the outreach of official statistics standards and guidelines, methodologies and recommendations to developing statistical system

Department of Statistics, Malaysia
@StatsMalaysia
#MyStats4Lives
#isiwsc2021

Mohammad Ilyas @24llyas · 6h

Analyzing high-dimensional correlated data is more challenging due to various inherent complexities. There are several advanced statistical models have been proposed to analyze multivariate and high-dimensional time series data.

Azreen @azreen · 1h
Exploring Statistics on Tourism, Migration, Population & Displacements: Using Mobile Positioning Data

Such a great session!

@StatsMalaysia #MyStats4Lives #isiwsc2021

Azreen @azreen · 1h
Mobile phone data can now help giving more detailed, more frequent and very timely information.

@StatsMalaysia #MyStats4Lives #isiwsc2021

Afiqah Norazizi @fiqazizi1 · 1h

IPS 215 - Statistical literacy, visualization and communication: "In a world full of data, just release information is no longer a goal. Even clearly-explained content may count for nothing if people don't engage with it".

@StatsMalaysia @isi_wsc_2021 #MyStats4Lives #isiwsc2021

Nor Alkashah Arif Shah
1h · 🌐

IPS Non-Live 98 - Statistics education and practice in developing countries: experiences, challenges, and opportunities

We are living amidst what is potentially one of the greatest threats in our lifetime to global education, a gigantic educational crisis. The challenge today is to reduce as much as possible the negative impact this pandemic will have on learning and schooling and build on this experience to get back on a path of faster improvement in learning. Thank you to ... See more

Norita Ali Othman
1h · 🌐

"Trust isn't something that we demand from somebody. We have to inspire the trust."

Department of Statistics, Malaysia
@StatsMalaysia
#MyStats4Lives
#isiwsc2021

Wanrizwa @Wanrizwa1 · 3m

Data Integration Techniques In Household Surveys

Each presenters share interesting methods in data integration from different sources 🌟

@StatsMalaysia
#MyStats4Lives
#isiwsc2021

aseken @nasekenn · 3m

ISI 141 - Great sharing of participants from StatCan, UBOS & VSO Nepal.

One of the take aways is to consider relevance, accuracy & interpretability that may contribute to better use of citizen-generated data (CGD) for public policy. @StatsMalaysia #ISIWSC2021 #MyStats4Lives



63rd ISI WSC 2021
Yesterday at 12:38 AM

We want to say a big thank you to all #isiwsc2021 delegates, speakers, presenters, sponsors, exhibitors, Worldspan, ISI Executive Committee, ISI staff members. What a wonderful week it has been! Stay in touch and look forward to WSC 2023 in Ottawa!

#statisticians #datascientists #worldcongress #thankyou

6 DAYS	1600 DELEGATES	106 COUNTRIES	140 SPEAKERS
264 SESSIONS	710 ABSTRACTS	59 POSTERS	6 SOCIAL EVENTS
5 DATA WALKS	1 QUIZ		

Liz Rafflesia is feeling thankful.
July 15 at 10:58 PM

Virtual ISI World Statistics Congress 2021
~CPS Oral Presentations: Pandemic II~
Alhamdulillah, paper wrote by my colleagues from DOSM Perak was presented during the 63rd ISI WSC, entitled "COVID-19 and Its Impact in the Manufacturing Sector: A Case Study in Perak". Congratulations! Ms Maslina and Ms Nur Aizatul Hajar. I'm proud for you guys.

Siti Haslinda added 10 new photos.
July 15 at 9:10 PM

An opportunity to be in line with the experts and shared our team research paper at #ISIWSC2021 virtually today.
The main disadvantage of attending international conference virtually is most sessions on air at late hours due to different time zones.
Anyway, a new experience indeed.
#... See More — feeling professional in The Hague, Netherlands.

Umi Tiha
July 12 at 5:23 PM

12 July 2021 - 2nd day of 63rd ISI WSC
IPS Non-Live Session : Fintech Statistics
What is Fintech? Fintech, broadly defined as digital financial innovation, has rapidly grown over the last years. Monitoring and measuring these new developments is a key task for statistics providing an empirical basis for financial stability, economic, markets, and payment analysis as well as for financial supervision.
The 3 key messages given by the speaker was : Monitoring Fintech is important but difficult, however it is feasible



Liz Rafflesia is feeling thankful.
July 14 at 3:48 AM

IPS 42 - Counting People with Administrative Data instead of a Traditional Census
Take points:

- The counts of people or households in a nation, by basic demographic and geographic characteristics, are foundational statistics that support a nation's key decisions.
- These counts are often estimated by National Statistical Institutes (NSI) by conducting a traditional population Census- while these counts are of high quality, they are very costly owing to the need for a lar...

Nor Alkashah Arif Shah
Yesterday at 6:54 PM

I wish to congratulate the DOSM presenters for this paper. I hope that this effort to capture Informal and Micro Economy data in the Era of Digital will pave the way for Malaysia to continue improving the informal employment statistics for improved policies and programmes for the benefit of vulnerable peoples. Welldone speakers!!
Department of Statistics, Malaysia
#MyStats4Lives
#isiwsc2021

Roslawati Yahya
July 11 at 1:12 PM

63rd ISI World Statistics Congress 2021-Virtual
ISI Young Statistician Event 10 July 2021
During this session an interview was held with Mr. Stephen Penneck, currently the Vice President of ISI. Among the points he mentioned were trusted and reliable data are among the essence of evidence based decision making.
#MyStats4Lives
#isiwsc2021

Umi Tiha
July 14 at 5:49 AM

The Use of Big Data to Predict Economic Activity
Pandemic Covid-19 forced us to stay at home. The NSOs need to explore more on non-traditional data collection in compiling statistics as well as to modernize the data life cycle of compilation, production, and dissemination to make it robust to shocks, including pandemic.
This session discussed on the use of mobile positioning data, google mobility index as well as night time light data in predicting economic activity.
Department of Statistics, Malaysia
#MyStats4Lives
#isiwsc2021

Department of Statistics, Malaysia added 13 new photos.
July 15 at 9:57 AM

INTERNATIONAL PROGRAMME (Day-3@ISIWSC2021)
Yesterday we successfully completed the third day of the #ISIWSC2021 virtual congress. Many thanks and congratulations to all the speakers for their excellent commitment shown throughout the congress!
The world has now become even more increasingly complex and the demand for statistics dramatically increases, in the face of these pandemic challenges. The statisticians, economists, researchers, data scientists are called upon to think differently and predict the future whilst creating new methods, new analyses, methodologies, and innovative in producing the latest statistics to meet the world increasing statistics on a more frequent basis while maintaining a dynamic and gratifying the statistics culture.
International peers and experts demonstrate their findings and the latest approach in the statistical field by presenting on a wide variety of topics in which provide a sense of the current state and future direction of statistics, data science, and their applications.
Looking forward today to see more new approaches and findings of the statistical community. Stay tuned for the #ISIWSC2021 !!



DOSM congratulates and appreciates all speakers for their fabulous efforts and willingness to **share variety of informative findings** that allowed delegates and participants **to acquire new methods and ideas** in improving the official statistics for decision-making process.

Congratulations



POPULATION & HOUSING
**CENSUS
MALAYSIA 2020**
YOUR DATA IS OUR FUTURE