

IGF 2021 Workshop on Big Data for Environment Sustainability

Katowice (PL)



10th
December, 2021

UTC TIME
10:15-11:45AM

**Workshop on Big Data for
Environmental Sustainability**
during the 16th Internet Governance Forum

SPEAKER
LIU Chuang

SPEAKER
Ricardo I. Robles Pelayo

SPEAKER
ZHOU Xiang

SPEAKER
Horst Kremers

SPEAKER
Daisy Selematsela

Registration - <https://www.intgovforum.org/multilingual/>
More Information - <https://www.intgovforum.org/en/content/igf-2021-ws-125-big-data-for-environmental-sustainability>
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Agenda

Time: UTC 10:15 AM - 11:45 AM, 10th December, 2021
Moderators: ZHOU Xiang (Online), Horst Kremers (Onsite)

Time (UTC)	Content
10:15 - 10:20	Opening Remark (5 mins)
	Presentation (6 mins) 2021-2030 Joint Action on Geographical Indications Environment & Sustainability
10:20 - 10:26	LIU Chuang, Editor-in-Chief of Global Change Research Data Publishing & Repository, World Data System - WDS, Professor of Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, China
10:26 - 10:32	Presentation (6 mins) - The implementation of big data in the use of clean energy within the framework of the United States – Mexico – Canada Agreement or USMCA Ricardo Israel Robles Pelayo, Professor of Universidad Anahuac online, Mexico
10:32 - 10:38	Presentation (6 mins) - Big data analysis on Ecology and Environment & Green Development ZHOU Xiang, Co-chair of CODATA Task Group in/for/with Developing Countries, Professor of Aerospace Information Research Institute, the Chinese Academy of Sciences, China
10:38 - 11:03	Open Discussion (25 mins)
11:03 - 11:09	Presentation (6 mins) - Challenges, Risks and Gaps in Environmental Data Management Horst Kremers, General Secretary of CODATA-Germany, Germany
11:09 – 11:15	Presentation (6 mins) - Positioning of Data Management in university libraries Daisy Selematsela, Executive Director of Library & Information Services, University of South Africa, South Africa
11:15 - 11:40	Open Discussion (25mins)
11:40 - 11:45	Concluding Remark (5 mins)

Registration for attending this session (virtual or on-site)

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Presentation

The implementation of big data in the use of clean energy within the framework of the United States – Mexico – Canada Agreement or USMCA

Prof. Ricardo Israel Robles Pelayo (Mexico)

Abstract

In 1994, Mexico, the United States, and Canada created the North American Free Trade Agreement (NAFTA). The main topic was the regulation of free trade, and the sequencing topics were the protection of intellectual property, labor rights, and the environment.

In 2020, the name of the treaty was modified by the United States - Mexico - Canada Agreement (USMCA), which established the promotion of clean energy as a commitment between the three countries.

At IGF 2021, an analysis and proposals on environmental big data will be presented to meet the objectives of the USMCA and the Sustainable Development Agenda.

Biography



Mr. Ricardo I. Robles Pelayo is a university professor and lecturer in many universities and tutor in master's degrees in the university Anahuac On-Line. He got two master's degrees: LLM in Commercial Law from the University of Birmingham England, and a master's degree in Law with a diploma in Corporate Law from the Technological University of Mexico. He is currently studying for a Ph.D. in education learning and knowledge technologies (LKT) in virtual environments. In the professional field, he has worked in different areas and positions in the public and private sector as a legal advisor in the corporate area and in everything related to international contracts.

He received the following awards: The first one was granted by the Government of the Federal District Mexico in July 2012. "In the merit of his outstanding academic and professional career". The second one was granted by the Mexican Institute of Victimology in October 2013. "2013 National Award for Academic, Teaching and Professional Merit".

Big data analysis on Ecology and Environment & Green Development

Prof. ZHOU Xiang (China)

Abstract

In terms of ecosystem monitoring and environmental protection, the popularization and application of technical tools such as the Internet is making it possible to obtain and analyze a large amount of information; Big data is bringing more rich application scenarios for ecosystem and environment monitoring, which allow emerging ICT technologies to integrate various resources and accelerate the sharing, opening and circulation of environmental data. Environmental Internet of Things (EIoT), big data management and big data application services are the core components to promote balanced development for urban and rural areas in developing countries; Establishing an integrated analysis and application solution on environmental information by connecting all resources with support of the Internet, helps the stakeholders to perform timely perception of pollution, monitoring of environmental quality, management of environmental business, prevention of environmental risks, disposal of environmental emergency accidents. Big data finds new knowledge, creates new value and improves new capabilities, and is conducive to realizing the potential of ecological environmental data resources, promoting green development for human production and life, and supporting the implementation of SDGs

Biography



Dr. Zhou Xiang is a professor of Aerospace Information Research Institute (AIR), the Chinese Academy of Sciences (CAS), and head of Science and Technology Division. His research interests focus on geospatial information sciences and open EO data. He is Co-chair of CODATA Task Group in Preservation of and Access to Scientific Data in/for/with Developing Countries, and Member of Group on Earth Observations (GEO) Programme Board, Member of AOGEO Coordination Board.

Challenges, Risks and Gaps in Environmental Data Management

Horst Kremers (Germany)

Abstract

The challenges in designing information systems for Environmental Sustainability starts with phases of requirements engineering for systems, functions, analysis, visualization and products analysis. Detailed steps include: collect information, describe (semantic model), negotiate for standardized ontology representation, store, communicate, enable findability, establish interoperability, mathematical (analytical, statistical, artificial intelligence) models, alternatives, consequences, goalreaching control. Sustainable Development information system support is directly connected to many other UN Global Programs and Conventions. One of the most essential fields of mutual coherence and synergies is Disaster Risk Reduction (UN SENDAI Framework), especially taking into account long-term effects of short-term decisions (or the lack of those).

Gaps in information management become more obvious when checking current practice and corresponding R&D with demands from holistic information management that comprises Textual / Legal / Policy Coherence, Administrative Coherence, Management and Technical Coherence (full semiotic interoperability), Cross-Border Coherence, as well as Coherence with state-of-the-art Professional Management Practices (interdisciplinary) and Standards.

R&D as well as operational implementation of long-term observatories as well as decision support for law enforcement agencies / institutions includes the following aspects:

- Big Data model reliability, scenario reliability, and proof of independent results verifications
- systemic interactions, conflicting goals, synergies - cross-scale and cross-domain implications
- Sustainable Development Information Management and the role of Law Enforcement Agencies
- Sustainable Development Information Management in Areas Beyond National Jurisdiction

Kremers, Horst: Global Programs and Conventions: Coherence and Mutual Synergies from Holistic Information Management. LNIS Lecture Notes in Information Sciences. Selected Papers. Geoinformation and Sustainable Development 9 (2020) 90-100, CODATA-Germany, ISBN 978-3-00-062981-5

http://www.susgis.net/LNIS_9_Geoinformation_for_Sustainable_Development_Berlin_2020.pdf#page=93

Biography



Horst Kremers (Berlin) is an engineer and information scientist. He is particularly interested in applied digital semiotics in the context of comprehensive management aspects of designing and controlling complex information systems.

Horst Kremers is General Secretary of CODATA-Germany and has continuously participated actively in the definition of strategies and technical innovations in several professional associations and organizations. For many years he has also been involved in discussions around the implementation of UN instruments at global, national, regional and urban levels, mainly in the areas of sustainable development (UN SDGs) and information management for disaster risk reduction (UN DRR).

<http://Horst-Kremers.de>

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Positioning of Data Management in University Libraries

Dr. Daisy Selematsela (South Africa)

Abstract

Research data management is receiving traction and academic libraries are instrumental in the positioning of data management. As researchers are not interested in the perceived burden of managing and ensuring their research data is deposited in trusted repositories; librarians find themselves not only as gate keepers but championing the data management processes. A review of the systemic processes in the adoption and implementation of data management and perceived challenges in the adoption and implementation will be addressed. n (BC), and plastics pollution.

Keywords

Research Data Management, SDGs, academic libraries, researchers, data policy, open data, repositories

Biography



Daisy Selematsela (PhD) is the Executive Director Library & Information Services at the University of South Africa (UNISA). A Professor of Practice of Knowledge Management of the University of Johannesburg.

She is involved in knowledge management, records management, open scholarship, Research Data Management, preservation of and access to data and material of national heritage. Her role in academic citizenship involves being a member of the Board of Directors of COAR (Confederation of Open Access Repositories), CODATA (Committee on Data of the International Science Council) and ORCID. On the national level she is on the Board of Directors of ITOCA (Information Training and Outreach Centre for Africa),

SANLiC (South African National Licensing Consortium) and the Chairperson Elect of CHELSA (Committee for Higher Education Librarians of South Africa). She previously served on the Board of the National Library of South Africa, Council for Library and Information Services (NCLIS) and Council of the National Archives of South Africa.

She served on the Editorial Board of Committee on Data for Science and Technology (CODATA) Data Science Journal (DSJ). Currently on the Editorial Board of both Global Change Research Data Publishing and Repository and Preservation, Digital Technology & Culture (PDT&C) Journal.

Daisy is the recipient of the 2016 and 2019 Knowledge Management Leadership Award by the Global Knowledge Management Congress & Awards in association with World Education Congress; and the 1st International Conference on Knowledge and Innovation Management (ICKIM) Babcock University.

2021-2030 Joint Action on Geographical Indications Environment & Sustainability

Prof. LIU Chuang (China)

Abstract

(To be updated)

Biography

(To be updated)

