

ISNET Webinar on Big Data in Space Sciences; 14 February 2024

The Inter-Islamic Network on Space Sciences and Technology (ISNET) successfully organized an online webinar titled “Big Data in Space Sciences” on 14 February 2024, bringing together experts and practitioners to discuss emerging trends in space data accessibility, analytics, and applications. The webinar commenced with opening remarks by the ISNET Secretariat and attracted wide participation from academia, space agencies, and research institutions across ISNET Member States.

The first technical session featured Jeanne Holm, Vice President, Board of Trustees, Claremont Graduate University and Distinguished Instructor at UCLA, who delivered a talk on “*Opening Up Space Data for All.*” Her presentation highlighted the importance of open data policies, collaborative platforms, and inclusive access to space-derived datasets to accelerate innovation and capacity building, particularly in developing countries.

Subsequent presentations focused on advanced analytical approaches and infrastructure supporting space data exploitation. Dr. Muhammad Ali Ismail, Professor and Chairman at NED University of Engineering and Technology, Pakistan, discussed “*Big Data and Machine Learning Applications in Space Sciences,*” outlining practical use cases and challenges. This was followed by Mr. Mostafa Azadi Aghdam, Aerospace Engineer from the Iranian Space Agency, who presented on “*Space-based Cloud Data Storage Network,*” emphasizing future-ready data architectures. The final session by Mr. Ayyaz Ameen, General Manager, SUPARCO, covered “*Ionospheric Modelling Using Big Data,*” demonstrating the role of large datasets in improving space weather understanding.

The webinar concluded with interactive Q&A sessions, enabling participants to engage directly with the speakers. Overall, the event reinforced ISNET’s commitment to promoting knowledge exchange and strengthening technical capacity in the use of big data and advanced analytics for space science applications among its Member States.

The screenshot shows a Zoom webinar interface. The main screen displays a presentation titled "Mapping Was the Key" with a blue background. The presentation includes several maps and a "Clean Streets Index" graphic. The index shows three categories: 1 = Clean (green), 2 = Somewhat Clean (yellow), and 3 = Not Clean (red). The right sidebar shows a list of participants: Jeanne Holm, Muhammad Ayyaz Ameen, and Muhammad Ali Ismail. The bottom toolbar includes various Zoom controls like Unmute, Start Video, Security, Participants, Chat, Share Screen, Summary, AI Companion, Pause/Stop Recording, Show Captions, Reactions, Apps, Whiteboards, Notes, and More.

Recording... You are viewing Muhammad Ali Ismail's screen View Options

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TECHNICAL SPECS

- CPU CORES: 384 (INTEL XEON GOLD)
- NVIDIA TESOR CORES: 3840
- GPU CUDA CORES: 30,720
- MEMORY: 3.768TB
- HYBRID STORAGE: 50 TB.
- OS: LINUX + WINDOWS
- COMPUTATIONAL POWER: 670 TFLOPS

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Jeanne Holm

Muhammad Ayyaz Ameen

Muhammad Ali Ismail

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SHOW TASKBAR DISPLAY SETTINGS END SLIDE SHOW

0:13:11 15:26 Next slide

Complexity of Science

2021 Map of the Complexity Sciences
Brian Cavesani & Lauer Gentsch

Ionosphere and Big data

No Notes.

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Jeanne Holm

Muhammad Ali Ismail

Mostafa

Muhammad Ayyaz Ameen