

About Visva-Bharati

Founded by the Nobel Laureate Rabindranath Tagore in 1921, Visva-Bharati was declared to be a central university and an institution of national importance by an Act of Parliament in 1951. The President of India is the Paridarsaka (Visitor) of the University, the Governor of West Bengal is the Pradhana (Rector), and the Prime Minister of India acts as the Acharya (Chancellor).

Palli-Siksha Bhavana (Institute of Agriculture) was established on September 1, 1963, at Sriniketan.

About the Workshop

2nd One week workshop on “Geoinformatics in Agriculture and Environment” has been contemplated to improve the skill of the participants and delegates on Geoinformatics techniques and its application in the areas of agriculture, environment, forestry, urban planning, rural development, water supply and drainage system etc. There is huge demand of new technologies in agriculture sector to reduce risk and enhance profit margin to the farmers. It is high time for professionals and students in agriculture to have basic and advanced knowledge of GIS, Remote sensing, precision agriculture technologies to attract educated mass towards agriculture. Understanding weather information, analyzing soil health card, protecting crops against emergent threats will be facilitated with knowledge of Geoinformatics. The environmental issues also need to be analyzed in a faster rate with greater accuracy. The 5-day(One week) workshop which includes software like QGIS, ARCGIS, GEE etc. will be beneficial for both the beginners and professionals in the relevant disciplines. There will be lecture on Open source data retrieval, cloud computing, AI tools.

Scope of Workshop

It will explore the scope on Geoinformatics for agricultural application through hands on session with free/commercial software and techniques of data storage and manipulation with AI and cloud computing

2nd One Week Workshop

On “Geoinformatics in Agriculture and Environment”

11-15 March 2024



Organized by:
Department of Agricultural Engineering,
Institute of Agriculture,
Visva-Bharati (A Central University),
Sriniketan, West Bengal, India
in Association with
IQAC, Visva-Bharati, Santiniketan

Workshop leading area(s):

A. Basics of Geoinformatics:

Understand Map concepts; how GIS works; Technical terms and common task in GIS; Thematic, maps in planning and decision making; Vector and raster data type; Scale and generalization; coordinate system; projection and datum; Map elements and map composition; Type of analysis in GIS functions and their input, outputs.

B. Geoinformatics application Agriculture and Environment:

Precision farming and application in Agriculture; Understand Digital Image Processing Techniques in Agriculture Resource Management; Understand Precision farming using GPS, GIS and RS for Crop management; GIS and RS applications in Water resource management. Understand specific environmental issues; Cases studies: environmental issues.

C. Image processing with QGIS:

Scope of QGIS; Different image file formats, Image input, Layout, True/ false color image, NDVI calculation, change detection, classification, mosaic, Geo-processing operation, basic digitization, Geometric transformations/ Georeferencing technique, Watershed model, Multispectral transforms: scatter plot; Limitations and future of digital image processing Technique.

D. Image processing in Arc GIS/ ERDAS Imagine:

Scope of Arc GIS/ ERDAS; Different image file formats, Image input, Layout, True/ false color image, NDVI, Geo-processing operation, change detection.

E. Machine learning and Deep learning:

Scope of machine learning in agriculture, various machine learning models, Cloud computing, programming with R/GEE etc., introduction to deep learning

F. AI tools for Research work

Scope of cloud computing, Open source data retrieval. Various artificial Intelligence tools for research publication.

Mode of Workshop

Offline mode

(*Note: Few lectures may be online mode)

Resource Persons

- ❖ **Dr. Joydeep Mukherjee, Principal Scientist,**
Division of Agricultural Physics,
IARI, Pusa, New Delhi
- ❖ **Prof. Manoj Kumar Nanda, Professor**
Department of Agricultural Meteorology &
Physics, Faculty of Agriculture, BCKV,
Mohanpur, West Bengal
- ❖ **Prof. Parthasarathi Mukhopadhyay,**
Professor & Head,
Department of Library and Information
Science, Kalyani University, Kalyani, West
Bengal
- ❖ **Dr. Nimai Chand Saha, Librarian, Visva-Bharati**
Member, IQAC, Visva-Bharati, Santiniketan
- ❖ **Dr. Bikash Ranjan Parida, Associate Professor,**
Head, Department of Geoinformatics, Central
University of Jharkhand, Jharkhand
- ❖ **Ms. Malyn Hansepi, GIS trainer and analyst**
GIS Vision India, Guwahati, Assam
- ❖ **Dr. Sayan Choudhary, Assistant Professor,**
Directorate of Open and Distance Learning
(DODL), Kalyani University, Kalyani, West
Bengal
- ❖ **Mr. Sk. Mithun, Assistant Professor**

Department of Geography, Haldia Government
College, Haldia, West Bengal

Organizing Committee

Patron

Professor Sanjoy Kumar Mallik
Hon'ble Vice-Chancellor
Visva-Bharati, Santiniketan

Director

Professor Arun Kumar Barik
Head, Department of Agricultural Engineering
& Principal, Palli Siksha Bhavana, Visva-Bharati,
Sriniketan

Coordinator

Dr. Kishore Chandra Swain,
Department of Agricultural Engineering
Palli Siksha Bhavana, Visva-Bharati, Sriniketan
Email: kishore.swain@visva-bharati.ac.in

Phone: 9800458469

Weblink: <http://visvabharati.ac.in/index.html>

or <https://www.psbvb.in/>

Co-coordinator(s):

The Director, IQAC, Visva-Bharati

Dr. Lamneithem Hangshing, Dept. of Agricultural
Engineering, Palli Siksha Bhavana, Visva-Bharati,
Sriniketan; Phone: 8787738742

Dr. Pulak K. Patra, Dept of Environmental Studies,
Siksha Bhavana, Visva-Bharati, Santiniketan,
Phone: 9474833047.

Asst. Coordinator

Dr. Saran Ishika Maiti, Member, IQAC, Visva-
Bharati; Department of Statistics, Siksha Bhavan,
Visva-Bharati

Treasurer

Dr. Shrilekha Das
Dept. of Agricultural Engineering, Palli Siksha
Bhavana, Visva-Bharati, Sriniketan;
Phone: 9382007043

Participants:

Nearly 30-50 professionals, research scholars and students of relevant fields can participate in the training programme. Selection will be first come first served basis.

Workshop Proceedings

Workshop proceedings will include papers from the participants which will be published as edited volume with ISBN number. The full paper should be limited to 10-12 pages (Times new roman, 12 fonts).

Registration fees

Registration fee for each participant is Rs. 3000/-, which includes working lunch and workshop materials etc. Accommodation may be arranged on payment basis. Registration link: <https://forms.gle/ifhq2GvbHfDV7kiq8> **or email:** webinarswain@gmail.com.

Registration Payment details

Account Name: Visva-Bharati University Project
Account No.: 50100195564478
Bank Name: HDFC Bank
Branch: Shivam Complex 1st Floor Sriniketan
Road, Bolpur, Birbhum, W.B.

(*Note: On-spot registration available)

Weather at Visva-Bharati

The weather in March is warmer compared to the winter season, but pleasant and comfortable. The average temperature in March is around 30^oC.