

RAJA SHRIPATRAO BHAGAWANTRAO MAHAVIDYALAYA, AUNDH, SATARA
Indian Institute of Remote Sensing, ISRO, Govt. of India, Dehradun
Summary report of the Program



Date: 30/07/2021

To,
The Principal,
Raja Shripatrao Bhagwantrao Mahavidyalaya,
Aundh, Satara

I am sending summary report of the Outreach Programme on "Geospatial Technology for Hydrological Modelling". Please accept it.

1. Name of the programme: "Geospatial Technology for Hydrological Modelling"

2. Duration: 19/07/2021 to 30/07/2021

3. Number of enrolled students: 01

4. Name of the Coordinator: Dr. Telore Namdev Vasant

5. Name of the Resource Persons:

- Dr. S. P. Aggarwal, Group Head, WRD, IIRS
- Dr. Bhaskar R. Nikam, Sci./Eng. 'SF', WRD, IIRS
- Dr. Praveen K. Thakur, Sci./Eng. 'SF', WRD, IIRS

6. Objective of the programme:

- To know advanced concepts of Geospatial Technology for Hydrological Modelling.

7. Outcome of the programme:

- Participants became aware about the Geospatial Technology and its use in the Hydrological Modelling

Course Coordinator

Dr. Namdev V. Telore
Co-ordinator

IIRS Outreach Programme, Dehradun
Centre: R.S.B. Mahavidyalaya, Aundh, Dist. Satara

Principal

Raja Shripatrao Bhagwantrao
Mahavidyalaya, Aundh (Satara)

IIRS Outreach Programme

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 2800 . The beneficiaries of the programme may include:

- Water Resource Professionals
- State Water Resources / Irrigation Departments / Training Academies
- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Research Institutes
- Geospatial Industries
- NGOs

Feedback Mechanism

IIRS has conducted workshops and sessions during IIRS User Interaction Meet to take feedback from participating institutions to improve the quality of future courses.



Feedback session during IIRS Academia Meet (IAM)-2020

Awards of Appreciation

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1st National Symposium on Excellence in Training conducted during April 11-12, 2015 in New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



About IIRS

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space, Govt. of India is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geoinformatics and GNSS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPI), founded in 1966, the Institute boasts to be the first of its kind in entire South-East Asia. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals, the Institute has enhanced its capability and evolved many training and education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS also conducts e-learning programme on Remote Sensing and Geo-information Science (<http://elearning.iirs.gov.in>).

Contact Details

Dr. S.P. Aggarwal
Group Head, WRD & Course Director

Dr. Bhaskar R. Nikam
Course Coordinator

IIRS DLP Team

Dr. Harish Karnatak
Head, GIT & DL Dept.

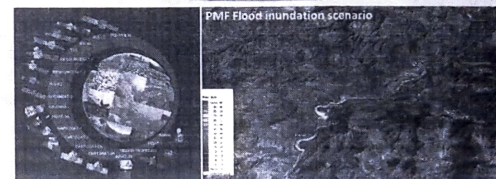
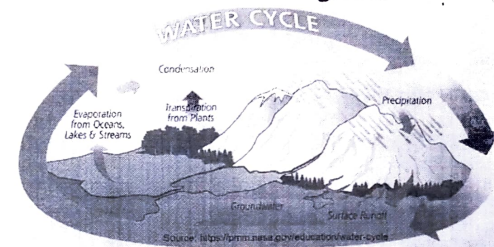
Dr. Poonam S Tiwari
Programme Coordinator
IIRS Outreach Programme

Mr. Janardan Vishwakarma

Mr. Ashok Ghildiyal
Tel: 0135-2524130; email- dlp@iirs.gov.in

Indian Institute of Remote Sensing,
Indian Space Research Organisation
Department of Space, Govt. of India,
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IIRS Outreach Programme



Geospatial Technology for Hydrological Modelling

July 19-30, 2021



Organised by

Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India
Dehradun

Dr. Namdev V. Telore
Co-ordinator

IIRS Outreach Programme, Dehradun
Centre: R.S.B. Mahavidyalaya, Aundh, Dist. Satara

www.iirs.gov.in

Raja Shripatrao Bhagwantrao
Mahavidyalaya, Aundh (Satara)

About the Course

Hydrological modeling is an effective and essential tool for assessment, prediction and management of water resources, hydrological parameters and water movement/demand/use scenarios. The advancements in geospatial technology and data have opened a new avenues of research and operational applications of hydrological modelling. The hydrological models requires basic geo-referenced data such as, land use land cover (LULC), soil maps, and digital elevation models etc., for capturing the spatio-temporal variations of these thematic layers. Most of these datasets can be easily derived from remote sensing images and limited ground truth. The hydro-meteorological data such as precipitation, air and land surface temperature, solar radiation, evapotranspiration, soil moisture, river and lakes water levels, river discharge, and terrestrial water storage can be also be derived from remote sensing as well as from point based ground instruments. The GIS based platforms, both commercial and open source, provides an excellent interface for integration of all such geospatial and hydro-meteorological data to accomplish the hydrological modeling. Such modeling studies can be done at various spatio-temporal scales, ranging from city, watershed to basin level and at time scale of few hours to daily/annual time steps.

Detailed lectures on overview and sources of various satellite based hydrological parameters; integration of geospatial data in various hydrological models; practical applicability and basic knowledge of widely used hydrological models; would be a part of this training

Pre-requisites:

- Graduate Degree in Science/Technology
- Understanding of Basic concepts of Remote Sensing, GIS and Hydrology

Curriculum

- Geospatial technology applications for Water Resources: An Overview
- Type of hydrological models and Spatial, Non-spatial Data Inputs for Hydrological Modelling
- Digital Elevation Model and its Derivatives for hydrological Modelling
- Rainfall-Runoff Modelling
- Snow/Glacier melt-Runoff Modelling
- Soil Erosion and Sediment Yield Modelling
- Flood peak Estimation using Hydrological Modelling
- River Flow Modelling using 1D Hydrodynamic
- Impact Climate Change on Hydrological Regime

Target Participants


- The course is designed for professionals from Central / Sate Govt. / Private Organizations / NGO engaged in water resources management and planning, regional and national water resources projects; students and researchers aligned to research in water resources.

Course Study Material

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through e-class. Video lectures will also be uploaded on e-class (<https://www.eclass.iirs.gov.in/login>).

Course Fee

There is no course fee.


Dr. Namdev V. Telore
Co-ordinator
IIRS Outreach Programme, Dehradun
Ganwan, S.B.Mahavidyalaya, Aundh, Dist.Satara

Course Registration

- Course updates and other details will be available on URL- <http://www.iirs.gov.in/Eduusat-News/>. All the participants has to register online through registration page available on above web page

Course Funding & Technical Support


The programme is sponsored by IIRS, Indian Space Research Organisation, Department of Space, Government of India, Dehradun

Programme Reception

- Individuals can attend the course live via any web browser through the e-lass portal of IIRS Dehradun i.e. <https://eclass.iirs.gov.in>
- The participants can also attend the live workshop via the YouTube channel of IIRS i.e. <https://www.youtube.com/user/edusat2004>
- The content of the workshop will be available offline after 24 hours in the e-class portal.

Award of Certificate

- All the participants who attend 70% sessions of the course live via e-class portal.
- The participants who attend the course sessions via IIRS youtube channel should mark their attendance via offline session available after 24 hrs


Raja Shripatrao Bhagwantrao
Mahavidyalaya, Aundh(Satara)



Lecture Topics for Outreach Programme on “Geospatial Technology for Hydrological Modelling”

Lecture Time : 4PM to 5.30 PM

Time: Two Weeks

Start: July 19, 2021

Lecture/Date	Title	Faculty
L-1 19/07/2021	Geospatial technology applications for Water Resources: An Overview	SPA
L-2 20/07/2021	Type of hydrological models and Spatial, Non-spatial Data Inputs for Hydrological Modelling	VG
L-3 22/07/2021	Digital Elevation Model and its Derivatives for hydrological Modelling	AC
L-4 23/07/2021	Hydrological Modelling-1: Rainfall-Runoff Modelling	VG
L-5 26/07/2021	Hydrological Modelling-2: Snow/Glacier melt-Runoff Modelling	PKT
L-6 27/07/2021	Hydrological Modelling-3: Soil Erosion and Sediment Yield Modelling	BRN
L-7 28/07/2021	Hydrological Modelling-4: Flood peak Estimation using Hydrological Modelling	PKT
L-8 29/07/2021	Hydrological Modelling-5: River Flow Modelling using 1D Hydrodynamic Models	PRD
L-9 30/07/2021	Impact Climate Change on Hydrological Regime (In Hindi language)	SPA
30/07/2021	Panel Discussion	

Faculty

SPA: Dr. S. P. Aggarwal, Group Head, WRD, IIRS

PKT: Dr. Praveen K. Thakur, Sci./Eng. ‘SF’, WRD, IIRS

BRN: Dr. Bhaskar R. Nikam, Sci./Eng. ‘SF’, WRD, IIRS

VG: Dr. Vaibhav Garg, Sci./Eng. ‘SF’, WRD, IIRS

AC: Mr. Arpit Chouksey, Sci./Eng. ‘SE’, WRD, IIRS

PRD: Mr. Pankaj R. Dhote, Sci./Eng. ‘SD’, WRD, IIRS


PRINCIPAL

Rajawade S. Pawar
Mahavidyalaya, Aundh (Satara)



Dr. Namdev V. Telore
Co-ordinator

IIRS Outreach Programme, Dehradun
Centre: R.S.B. Mahavidyalaya, Aundh, Dist. Satara



INDIAN INSTITUTE OF REMOTE SENSING
Indian Space Research Organisation
 Department of Space, Govt. of India



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Students Record

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entries

Search

S.No.	RegNo.	Name	Email ID	Profession	Qualification	Subjects	Passing Year	ID Proof	Status
1	2021831139012	Prachi Sameer Sathe	vaidya.prachi24@gmail.com	Student	Post Graduation	Geoinformatics	2009	View	Approved



Dr. Namdev Vasant Telore

Ongoing Courses

Live Lecture

Offline Session

Past Courses

Future Courses

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 PRINCIPAL
 Raja Shripatrao Bhagwantrao
 Mahavidyalaya, Aundh(Satara)

Dr. Namdev V. Telore
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Dr. Namdev Vasant Telore

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Past Courses

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Search:

S.No.	Registration Number	Name	email	Certificate
1	2021831139012	Mrs. Prachi Sameer Sathe	vaidya.prachi24@gmail.com	

Shrawan
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Raja Shripatrao Bhagwantrao
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N. V. Telore
Dr. Namdev V. Telore
Co-ordinator
IIRS Outreach Programme, Dehradun
R.S.B. Mahavidyalaya, Aundh, Dist. Satara



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



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बहिः परिसर संपर्क/विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

संस्थान की सहभागिता का प्रमाण पत्र
CERTIFICATE OF PARTICIPATION OF INSTITUTE

यह प्रमाणित किया जाता है कि राजा श्रीपतराव भगवंतराव महाविद्यालय, औंध, सतारा, महाराष्ट्र ने भारतीय सुदूर संवेदन संस्थान, इसरो देहारादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम जियो-स्पेशियल तकनीक का हाइड्रोलॉजिकल मॉडलिंग में उपयोग में भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 19 जुलाई, 2021 से 30 जुलाई, 2021 तक किया गया।

This is to certify that **Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh, Satara, Maharashtra**, has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehradun on **Geospatial technology for hydrological modelling**. This online programme was conducted during July 19, 2021 to July 30, 2021

दिनांक/ Date: 10-08-2021
देहारादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS,

समूह प्रमुख,
भूस्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS

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