

Workshop – A Path Finding Workshop for Students Research

Date of Workshop October 28, 2020
Time 11 a.m. – 1.00 p.m.
Location CAE, JNKVV, JABALPUR

1. Workshop Objective

To decide the direction for Students to select their field Research and how to find their work through RS and GIS under NAHEP-CAAST-CSDA Project.

2. Participants

Students-

M. Tech. (Agril. Engg.)

1. Suruchi Vishwakarma (SWE)
2. Vipin Mishra (SWE)

M. Sc. (Agriculture)

1. Govind Madariya (FS)
2. Payal Soni (Soil Science)
3. Vishakha Rai (Soil Science)

Ph.D. (Agril. Engg.)

1. Deepak Patle (SWE)
2. Ayushi Trivedi (SWE)
3. J. Himanshu Rao (SWE)
4. Satyajeet Kar (SWE)

Ph.D. (Agriculture)

1. Manas Mohan Setha (Agronomy)
 2. Anamika Jain Badkul (Agronomy)
 3. Payal Sewakram Rode (Economics)
 4. Shruti Mishra (Economics)
 5. Kumari Pragya (Entomology)
 6. Salil Dwivedi (Entomology)
 7. Shreesty Pal (Horty)
 8. Supriya Debnath (Physiology)
 9. Madhana Keerthana S.(Physiology)
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Technical Staff-

Dr. R.K. Nema - Dean, CAE & PI-NAHEP ,

Dr. M.K. Hardaha – Professor and Co-PI

Dr. M.K. Awasthi - Professor and Co-PI,

Dr. S.K. Sharma - Professor and Co-PI

Dr. A.K. Rai - Professor and Director ,

Dr. Y.K. Tiwari - Professor and DDO

Dr. M.L Sahu - Professor,

Dr. R.N. Shrivastava - Professor,

Dr. S.K. Pyasi - Professor,

Dr. A.K. Bajpai - Professor,

Dr. C.M. Abroal- Professor ,

Dr. (Mrs.) Om Gupta, Professor and DES,

Dr. S.K. Pandey- Professor ,

Dr. P. B. Sharma - Professor,

Dr. Rakesh Bajpai - Professor,

Dr. S.B. Das – Professor and Nodal officer,

Dr. Gyanendra Tiwari – Assistant Professor ,

Dr. Manish Bhan – Assistant Professor,

Dr. Shivramakrishnan – Assistant Professor,

Dr. S.B. Nahatkar, –Professor and Director,

Dr. H.L. Sharma– Professor and HOD,

Dr. G.S. Tagore – Assistant Professor,

Er Manish Patel – Assistant Professor,

Dr. Popat Shivaji Pawar- Research Associate, Dr. Umakant Rawat (RA), Dr. Devendra Vasht (RA), Dr. Sourabh Nema (RA), Dr. Minakshi Meshram- SRF, Pratiman Patel- SRF, Aniket Rajput- SRF, Anjali Patel- YP-II, Rachit Nema- YP-II, Krishna Singh YP-II, Prakash kumar Mishra- YP-I, Mukeshkumar Vishwakarma- YP-I, Pratima Pathak- YP-I.

Statistics of participants	Gender		Number			Total = 18	
	Male		08				
	Female		10				
	Category	General	OBC	SC	ST	Total	
	Number	08	06	02	02	18	

3. Brief description about content discussed during workshop

On the outset the welcome address was given by the Dr. M.K. Awasthi - Co-PI, followed by guidance from Dr. R.K. Nema - PI, NAHEP. He gave insight of agriculture education and opportunity and also assured students to provide all help from institute side whenever needed.

Students were acquainted with technical expertise available at NAHEP Project level. All RAs and SRF introduced themselves and told their capabilities to transfer knowledge. A brief on it presented below.

Having working Knowledge about Ground water research, Simulation optimization modeling, Optimal water resources management, capability on different software tools like MATLAB, Arc/GIS/ERDAS, VISUAL MODFLOW, Arc-SWAT, HYMOS and have a command on different programming language which can be used to develop decision support system and many other numerical modeling in the field of Agriculture and Land and water management engineering shared by Dr. Sourabh Nema.

Knowledge of MATLAB, R2012a and R software, QGIS and Computer Programming Language shared by Dr. P.S. Pawar.

Eight year experience in the fields of Remote sensing and GIS. Experience on Time series mapping of Rabi and Khariff crop in Haryana, Preparation of map such as Flood hazard, Flood vulnerability maps and also prepare land use land cover of Mahoba district, and Prepared LULC map using Rapid Eye Satellite Image (5m) using Image Processing with the help of ERDAS Imagine Software. Land Use Land Cover Change Detection Using Remote Sensing & GIS Chitrakoot Districts of Bundelkhand Region, UP, India by Dr. Umakant Rawat.

Having research Work “Evaluation of physiological efficiency, growth and Productivity of soybean (*Glycine max* (L.) Merrill) genotypes” in M.Sc. and Growth, physiological efficiency, reproductive development and productivity of promising lines of chickpea (*Cicerarietinum* L.) under late sown conditions. In Ph.D. and Recent work as Senior Research at Plant Phenomicscentre, IARI, ICAR, New Delhi shared by Dr. Devendra Vasht.

Research experience “A Study on Impact of System of Rice Intensification (SRI) Method of Paddy Cultivation on Production Level in Balaghat Block of District Balaghat (M.P.)” in M.Sc. and “Integrated Farming System for Sustainable Livelihood Security of the Small and Marginal tribal farmers of Mandla District of M.P.” In Ph.D. shared by Dr. Minakshi Meshram.

Hydrological and Flood Modeling and Remote Sensing and GIS. He has also shared his knowledge on Numerical Weather Prediction Model and Land Surface Feedback. Familiar with GIS software ArcGIS, ERDAS, QGIS, SAGA GIS, Flood modeling models (HEC-HMS, HEC-RAS, MIKE), Programming Languages Python and R and about LaTeX and Bash shared the knowledge by Mr. Pratiman Patel.

Work experiences with Remote Sensing and GIS software ArcGIS, QGIS, and Erdas Imagine for Soil Mapping, Geo-referencing, Erosion Estimation, Watershed delineation, digitization, Map Production Image Processing, LULC Making, Mosaicing, etc. along with working on HEC-HMS Model shared by Mr. Aniket Rajpoot.

Post-Graduate Diploma on Remote Sensing and GIS field to process various types of satellite data sets and software. She also shared her academic experience to work on Numerical computing for Geo data processing using programming in R and Python shared by Miss. Anjali Patel.

Work experience as DATABASE ENGINEER in Indian railway. He also shared work experience as web developer in Fomax information technologies PVT LTD at Pune shared by Mr. Krishna Singh.

With M. Tech. thesis on “Signal Integrity Analysis of FPGA based High-Speed PCB”. It includes working with “Analysis of quality of signal between DDR2 controller & DDR2 SDRAM Peripheral component interconnect express using Hyperlynx SI.” and “Developing FSM based Verilog HDL code for serial communication protocol with different data rates (100 kbps, 50 kbps, 25 kbps & 12.5kbps)”. He has also shared his knowledge about hardware description languages Verilog, Basic VHDL and S/W Language Basics of C shared knowledge by Mr. Rachit Nema.

An Opportunity was given to three students who have found their path for their research work. It helped a lot other students to decide their own path. A brief of presentation of all three students is given below.

Er Deepak Patle (Ph.D. Scholar) shared the presentation on the topic of Ground water Potential Zoning Using Remote Sensing And GIS. And

Er Himanshu Rao(Ph.D. Scholar) shared the presentation on the topic of Sub-watershed prioritization for management strategy based on quantified morphological characteristics: A GIS based perspective

Er Ayushi Trivedi(Ph.D. Scholar) shared the presentation on the topic of River Revival: Assessment of Recharge Requirement using Spatial Data.

Students were also introduced to training opportunities available at national and international level introduced by Dr. Minakshi Meshram.

At the end, the interaction with staff and students was held all the queries were answered.

Output of the workshop - Total 18 students were benefitted from the workshop and have shown interested in using spatial data for research work. Possible advisor and team member were also identified.