



P.G. DEPARTMENT OF GEOGRAPHY **UTKAL UNIVERSITY, BHUBANESWAR**

NATIONAL WORKSHOP **on** **“GEOSPATIAL DATA ANALYSIS FOR** **NATURAL RESOURCE MANAGEMENT”**

17th-18th March, 2023

Organised By:
P.G. Department of Geography

Sponsored by:
World Bank-OHEPEE, Utkal University



THE WORLD BANK



About the Institution:



The Utkal University founded on 27th November 1943 is the mother University of Odisha. Pandit Nilakantha Dash, Maharaja Krushna Chandra Gajapati and Pandit Godavarish Mishra, amongst other doyens of modern Orissa, played a leading role in the establishment of the University. On 27th of Nov 1943, the Utkal University started functioning at Ravenshaw College (now University), Cuttack. Dr. Rajendra Prasad, the first President of India, laid down the foundation of the present 400 acre sprawling campus on 1st January 1958. The University thereafter was singularly honoured when a great educationist Dr. Sarvapalli Radhakrishnan, the second President of India inaugurated the present campus at Vani Vihar on 2nd January 1963. It was originally an affiliating and examining body only.

A number of Post-Graduate Departments and other centres were established in the University Campus. There are more than three hundred general affiliated colleges under the University. The University has 15 Autonomous Colleges under its jurisdiction. It has 27 constituent Post-Graduate Departments, 2 Constituent Law Colleges, a Directorate of Distance & Continuing Education and a number of centres like Population Studies, School of Women's Studies, Ambedkar Study and Social Exclusion and Inclusive Policy Study, an Academic Staff College, a Pre-School and a High School etc. The University offers number of Self-Financing Course. Utkal University is recognized by the UGC. It is a member of the Indian Association of Universities and Commonwealth Association of Universities. Utkal University has been reaccredited by NAAC with A+ Grade in December 2017 for a period of five years and credited No-1 in Government University of Odisha and 88th among 100 Universities of India under University Category in all India ranking of NIRF, Govt. of India

About the Department:

Department of Geography was set up in the Vani Vihar campus on 12th September 1970. It was the first university department to impart post graduate education in Geography in the state. The department started its journey with a vision to be a centre of excellence in geographic education focusing on quality teaching, innovative research and socially relevant outreach activities. Department started with Mrs. Gouri Dutta as the first faculty member followed by Dr. S. N Tripathy, Dr. B.N. Sinha and Dr. D. K. Singh in the beginning. Prof. B.N. Sinha was the founding Professor and Head, who led this to a leading Geography department in Eastern India. Department celebrated its silver jubilee in 1995 and its golden jubilee in 2020.



The department started with 8 students in 1970 which has now increased to 24 in view of the demand of the subject in the state. The department was conferred with DRS (phase-1) by UGC in the year 2007 for its outstanding contributions to the field of research. The department is proud to have its faculties who have been able to take the department to the international arena with their academic contributions through Fulbright Fellowship, Commonwealth Fellowship, Indo-Polish Fellowship, AIT Fellowship, DAAD Fellowship, British Council Fellowship, and Humboldt Fellowship. Department has executed good number of Sponsored projects and Consultancy works. At present department have 5 faculty members with Ph. D degree. The main aim of the department is to equip the students with the knowledge and expertise to grow professionally and contribute significantly to the society.

About the World Bank, OHEPEE, Utkal University:

Utkal University has signed a MoU with the Higher Education Department (HED), Government of Odisha on 31st July, 2018 to implement the World Bank supported Odisha Higher Education Programme for Excellence and Equity (OHEPEE) to improve quality of students' education and equitable access to Higher Education Institutions (HEIs) and improve governance of the higher education system in Odisha. OHEPEE Program focuses on the quality and governance of higher education in Odisha. The OHEPEE has two results areas: (a) improving quality of and students' equitable access to selected institutions and (b) enhancing governance of the higher education system.

About the Workshop:

Due to rise and growth in computer processing power, geospatial tools now have the unique ability to slice and dice terabytes of data in real-time to derive decisive insights into understanding spatial trends and associations. The most significant advantage of geo spatial data is the ability to visualize data with respect to its geographical location, deduce new perspectives and recognize recent trends. Furthermore, the visual component can give decision-makers more intuitive insights on applications than simple data analysis. This growth is attributed mainly to the rising use of location-based services to make natural resource monitoring and management decisions, weather forecasting decisions, resource allocations, environmental assessment and disaster management etc.

Resource Persons

Shri Jayanta Kumar Mishra is working as Scientist-F (Senior Director-IT) in National Informatics Centre (NIC), Ministry of Electronics and Information Technology, Govt. of India. Before joining NIC, New Delhi in 1997 he has worked as Lecturer in Mathematics in Betnoti College and as a Surveying Supervisor in Survey of India, Department of Science and Technology, Govt. of India, Dehradun. He has worked in many of the GIS applications of national importance like National Spatial Database (NSDB), Bharat Maps, Gram Manchitra-the Spatial Planning Application for GPDP, SVAMITVA, Geo-Urban Missions Application, Punjab Roads GIS, PARIMAN-the NCR Geo-portal, Telecom GIS, State GISPortal, etc. He is currently working in Agricultural Assets Mapping, Online Disaster Management Plan and Online Application for Cadastral Maps for Govt. of Odisha.



Jayanta Kumar Mishra
NIC, Government of India

Dr. Manoranjan Mishra is a Professor in the Department of Geography at Fakir Mohan University, where he has been since 2022. From 2010 to 2020 he served in Sikkim Central University, University of Malaysia Putra, Gangdhar Meher University, Khallikote University, Berhampur University and visiting Professor in IISER, Berhampur. His research interests span both geospatial technology and natural resource management. Much of his work has been on improving the understanding of impacts extreme events impacts on coastal environments.



Prof. Manoranjan Mishra
Fakir Mohan University, Balasore

Mr. Umasankar Das is currently working as a meteorologist at IMD Bhubaneswar. His major work involves Cyclone monitoring, Tracking, Aviation forecasting and short range and medium range forecasting. He was selected & undergone summer research fellowship program through Indian Academy of Sciences. Also selected for Centre for Advance Training program in meteorology as Scientist-B under MoES program, IITM, Pune. In 2012 he was awarded 'Jeromy Grantham fellowship' by Divecha Centre for Climate change. He was selected & attended International Summer School on 'Fundamentals of Ocean Climate Modelling at Global & regional scales organized by ICTP, Italy at Hyderabad. In 2014 he got selected for MEXT-2014, Japanese Government fellowship and through UPSE he was selected for Scientist-B, in IMD with Air-4.



Umasankar Das
IMD, Bhubaneswar

Dr. Dipak R. Samal is an Assistant Professor at the School of Public Policy and Governance, Tata Institute of Social Sciences, Hyderabad. He was working as an Assistant Professor and program coordinator (M.Tech Geomatics) at the Centre of Environmental Planning and Technology (CEPT) University, Ahmedabad. As a post-doctoral fellow at Ashoka Trust for Research in Ecology and Environment (ATREE), He has worked on Upscaling Catchment Processes for Sustainable Water Management in Peninsular India (UPSCAPE) project which is one of the three projects in India initiated under the ambitious Newton-Bhabha Sustaining Water Resources Programme. He has also worked on a project "Adapting to Climate Change in Urbanizing Watersheds"(ACCUWa) project. His area of interest includes programming, quantitative methods, statistics, data science, geospatial analysis as well open-source tools and techniques in teaching and research.



Dr. Dipak Ranjan Samal
TISS, Hyderabad

Dr. Prafulla Kumar Panda working as an Associate professor and H.O.D in department of civil engineering at Centurion University of Technology and Management. He previously worked at IIT Kanpur as Research Associate (2009-2011) and worked for various agencies like ONGC, OCL. As a professor of Civil Engineering Prof. Panda has been a person of research acumen who consistently demonstrates excellence in the efficiency, productivity, and quality of his research work. He has Patents on Identification of hydrocarbon locales of an unexplored basin using space inputs and GIS, Disease control and Combat mapping for tribal fortification using Geospatial Approach, IOT for agricultural practices, Food waste recycling machine using IOT. His area of interest in Surveying, Remote Sensing and GIS, Applied Geology, Water resource Engineering, Disaster Mitigation & Management.



Dr. Prafulla Kumar Panda,
Centurion University of Technology and Management, Paralakhemundi

Dr. Santiswarup Sahoo is currently working as an Assistant Professor in Department of Geology, Utkal University. Prior to teaching, he was a project scientist at IIT Kanpur. He has expertise on Active faults and Pleistoseismology, Remote sensing and GIS, Ground Penetrating Radar and OSL dating. He was also a visiting researcher at University of Tokyo. He visited Kathmandu after 2015 Gorkha Earthquake to survey the earthquake affected area and submitted a report to MoES, Govt. of India. Currently he is teaching Remote Sensing, Structural Geology, and Geomorphology.



Dr. Santiswarup Sahoo
Utkal University, Bhubaneswar

Chief Patron

Prof. Sabita Acharya

Honourable Vice-Chancellor, Utkal University, Bhubaneswar



Patrons

Prof. Durga Shankar Pattanaik

Chairman, P.G Council, Utkal University, Bhubaneswar



Dr. Avaya Kumar Nayak

Registrar, Utkal University, Bhubaneswar



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Prof. Krishana Chandra Rath

Co- Convenor

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Dr. Ashis Chandra Pathy



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Mr. Pramod Kumar Parida, ORSAC, Bhubaneswar
Mr. Manoj Kumar Sanabada, ORSAC, Bhubaneswar

Workshop Content:

- Basic concept of Satellite Remote sensing and GIS
- LULC dynamics- mapping, monitoring & modelling
- Ecosystem approach for Mitigation of Flood risks
- Shoreline monitoring, extreme event, and Disaster Impact
- Cloud Computing, Future trends of Geo-Spatial Technology
- Role of Organisation in Natural Resource Management
- Impact based weather forecasting
- Application of DEM, Stereoscopic 3D generation from CARTOSAT-I
Overview of ENVI software
- Remote sensing application in Hydrocarbon exploration
- Hyper Spectral data processing and its application in iron ore extraction

Workshop Outcomes:

- Provide a good understanding on basic concepts of Satellite Remote Sensing and GIS
- Study the most popular GIS and Remote Sensing software's
- Obtain satellite data from different sources and apply image pre-processing techniques
- Understanding various methods, techniques and tools for geospatial data analysis in natural resource management
- Develop the technical skills and competence in data management and analysis, spatial and statistical data modelling, mapping and visualization

Target Participants:

Research Scholars, Students, Industry professionals, Government, NGOs, Faculty members from Geography, Geology, Environmental Science, Botany, Geoinformatics, Computer Science, Civil Engineering, Planning, Architecture and so on.

Registration:

No registration fee.

Certificate:

Participants will get a Certificate upon completion of the Workshop.

Note:

1. Registration is mandatory for attending the workshop.
2. Participants required to bring their laptop for practical session.

Contact Details:

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