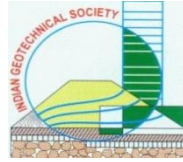




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DEPARTMENT OF CIVIL ENGINEERING







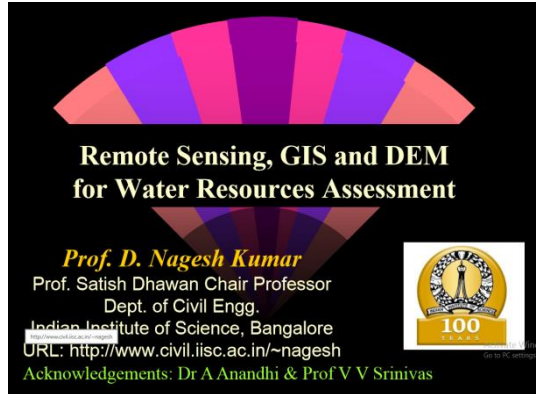

IGS-STUDENT CHAPTER

A Webinar Lecture on **Remote Sensing, GIS and DEM for Water Resources Assessment**

By

Prof. D. Nagesh Kumar
Dept. of Civil Engg.
Indian Institute of Science, Bangalore

Organized by
Department of Civil Engineering

 <p>Organized by IGS Student chapter Department of Civil Engineering KKR & KSR Institute of Technology & Science (KITS), Vinjanampadu, Guntur, A.P.</p>  <p>Live Speaker</p>  <p>Dr. D. Nagesh Kumar Professor Department of Civil Engineering Indian Institute of Science Bangalore, India.</p> <p>Webinar Lecture on "Remote Sensing, GIS & DEM for Water Resources Assessment"</p> <p>Time: 10th June , 2020 @ 06:00 PM India</p>  <p>Join Zoom Meeting Meeting ID: 853 5585 9320 Password : 051157</p>	 <p>Remote Sensing, GIS and DEM for Water Resources Assessment</p> <p>Prof. D. Nagesh Kumar Prof. Satish Dhawan Chair Professor Dept. of Civil Engg. Indian Institute of Science, Bangalore URL: http://www.civil.iisc.ac.in/~nagesh Acknowledgements: Dr A Anandhi & Prof V V Srinivas</p> 
<p>e-POSTER</p>	<p>TOPIC</p>

The IGS- Student Chapter of Department of Civil Engineering has conducted a webinar lecture on "**Remote Sensing, GIS and DEM for Water Resources Assessment**" on 10th June 2020. The lecture was delivered by Dr.D.Nagesh Kumar, Professor, Department of Civil Engineering, Indian Institute of Science, Bangalore.

In this webinar lecture more than 175 participants have attended from various institutes and industry. The participants gained knowledge in assessing water resources using DEM.

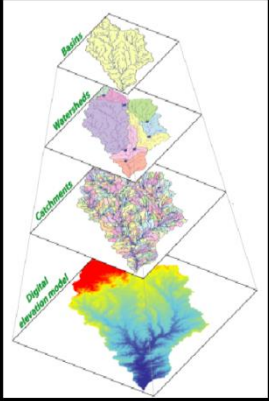
In his lecture Dr.Nagesh demonstrated integration of RS, GIS, DEM and Hydrological Models. He also covered AVSWAT analysis on Malaprabha River Basin.

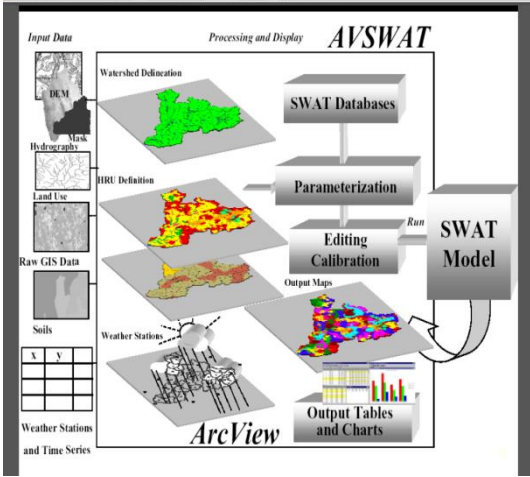
Terrain Attributes from DEM

- Flow direction
- Flow pathways
- Flow accumulation
- Stream network
- Catchment area
- Upstream contributing area for each grid cell
- Slope/ Aspect

Indices calculated

- Wetness indices
- Topographic indices

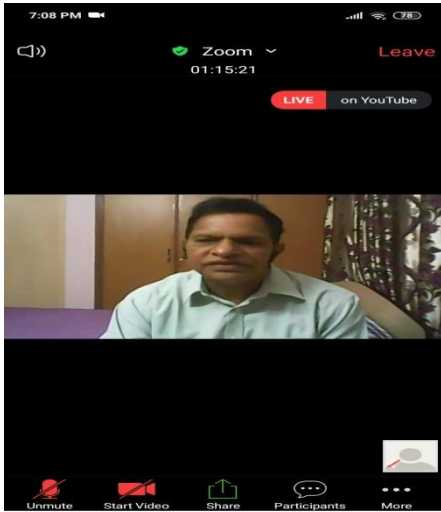




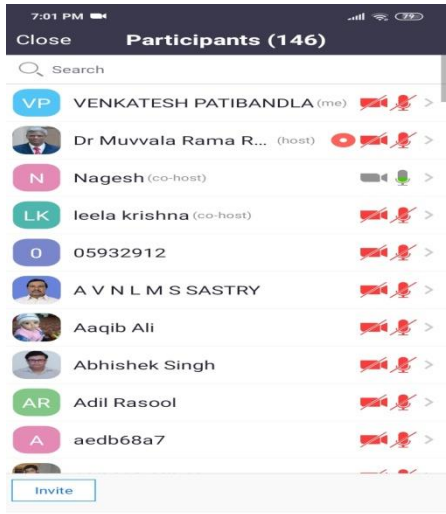
The diagram illustrates the AVSWAT workflow. It starts with 'Input Data' including DEM, Hydrography, Land Use, Raw GIS Data, Soils, and Weather Stations. These feed into 'Processing and Display' steps: Watershed Delineation, HRI Definition, and Weather Stations. The process then moves to 'SWAT Databases', 'Parameterization', 'Editing Calibration', and 'Run SWAT Model'. The final outputs are 'Output Maps' and 'Output Tables and Charts', which are displayed in 'ArcView'.

He concluded that there is a Strong potential for use of RS, GIS & DEM for Modeling water resources planning and management. Also he said, proper image processing of remotely sensed data, DEM and Spatio-temporal analyses with GIS would be very effective for Water Resources Assessment & Management.

The webinar took place in online platform. After the lecture Dr.Nagesh Kumar answered a few questions posted by the participants.



The screenshot shows a Zoom meeting in progress. The top bar displays the time as 7:08 PM, the Zoom logo, and a 'Leave' button. Below the top bar, there is a 'LIVE on YouTube' indicator. The main area shows a video feed of a man in a light blue shirt. At the bottom, there are control buttons for 'Unmute', 'Start Video', 'Share', 'Participants', and 'More'.



The screenshot shows the 'Participants (146)' list in a Zoom application. The list includes the following participants: VENKATESH PATIBANDLA (me), Dr Muvvala Rama R... (host), Nagesh (co-host), leela krishna (co-host), 05932912, A V N L M S SASTRY, Aaqib Ali, Abhishek Singh, Adil Rasool, and aed68a7. Each participant entry has icons for video, audio, and chat. An 'Invite' button is visible at the bottom of the list.