REMOTE SENSING AND GIS

PROF. RISHIKESH BHARTI
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IIT Guwahati

INTENDED AUDIENCE : UG, PG and PhD Students

INDUSTRIES APPLICABLE TO : Esri, Rolta India, RMSI Private Limited, ArcGeosystems

COURSE OUTLINE :
This course will introduce the students to the state-of-the-art concepts and practices of remote sensing and GIS. It starts with the fundamentals of remote sensing and GIS and subsequently advanced methods will be covered. This course is designed to give comprehensive understanding on the application of remote sensing and GIS in solving the research problems. Upon completion, the participants should be able to use remote sensing (Satellite images and Field data) and GIS in their future research work.

ABOUT INSTRUCTOR :
Prof. Rishikesh Bharti is a faculty member at the Department of Civil Engineering, Indian Institute of Technology Guwahati. He has been teaching Advanced Remote Sensing, Geohazard Science and Engineering, Advanced Techniques in Geoscience, Engineering Geology to the B.Tech, M.Tech and PhD students at IIT Guwahati. Hydrogeomorphology, Geospatial modelling, Snow and Glacier Studies, Spectroscopy of natural and man-made materials and Advance remote sensing (Hyperspectral and thermal) for the earth and planetary exploration are his major research interests. He hopes participants will enjoy and learn the proposed course. The details of his research can be found at Website: http://www.iitg.ac.in/rbharti/

COURSE PLAN :

 Week 1**:** Remote Sensing Data and Corrections

 Week 2**:** Satellite Image Corrections

 Week 3**:** Digital Image Processing-I

 Week 4**:** Digital Image Processing-II

 Week 5**:** Thermal and Microwave

 Week 6**:** Imaging Spectroscopy-I

 Week 7**:** Imaging Spectroscopy-II & GIS-I

 Week 8**:** GIS-II and Application