Curriculum Vitae

Dr. Priyadarshi Upadhyay
Scientist/Engineer 'SD'
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Profile Summary:

I am a Research/Teaching professional with experience in the area of Image processing, Geo-spatial analysis and Surveying. My research interest is in the area of Image processing and Geospatial analysis of satellite images. Currently, I am focusing on the research problems related to the effect of climate change on Himalayan ecosystem, Spectrometry for the Horticulture fruit crops in North-Western Indian Himalayan Region as well as the modeling of mass balance of glaciers of North Western Indian Himalayan region for climate change.

Professional Experience:

Scientist/Engineer 'SD', USAC, Govt. of Uttarakhand, India	Dec, 2017- continued
Assistant Professor, Shoolini University, Solan, India	July, 2014 – Dec, 2017
Assistant Professor, Himgiri Zee University, Dehradun , India	April, 2014 – June, 2014
Remote Sensing Engineer, IL&FS Pvt. Ltd, New Delhi , India	May, 2008 – July, 2009
JRF, DRDO, New Delhi, India	July, 2007 – Feb, 2008

Subject Taught:

- Surveying, Advance Surveying, Remote Sensing and GIS, Soil Mechanics, Finite element analysis.

Areas of Research/Teaching:

- Remote Sensing, Digital Image Processing, G.I.S., Surveying, Soft Classification, Specific Land Cover Mapping, Microwave Remote Sensing.

Educational Qualification:

- Ph.D. Geomatics Engineering, Civil Engineering, I.I.T. Roorkee, India 2014
- M.Tech. Remote Sensing B.I.T. Mesra Ranchi, India 2007
- M.Sc. Physics, Kumaun University Nainital, India 2004
- B.Sc. Kumaun University Nainital, India 2002

Ph.D. Thesis Topic:"Time series analysis of satellite data for single land cover identification"
M.Tech. Dissertation Topic: "Microwave remote sensing based soil moisture inversion and backscatter modeling for bare and crop covered fields of Amritsar and Batala test site"

Research Paper Publications:

- **Upadhyay, P.**, Ghosh, S. K. and Kumar, A., 2016. Temporal MODIS Data for Identification of Wheat Crop using Noise clustering Soft Classification Approach. *Geocarto International* (***Taylor & Francis***,**Impact Factor: 1.370**), Vol. 36, pp. 278-295.
  http://dx.doi.org/10.1080/10106049.2015.1047415
- **Upadhyay, P.**, Ghosh, S. K., Kumar, A., Krishna Murthy Y.V.N. and Raju P.L.N., 2014.Moist Deciduous Forest Identification using MODIS Temporal Indices Data. *International Journal of Remote Sensing (**Taylor & Francis**)* Vol. 35 (9), pp. 3177-3196,(ISSN 0143-1161 & 1366-5901, **Impact Factor: 1.652**).
  http://www.tandfonline.com/doi/full/10.1080/01431161.2014.903438
- **Upadhyay, P.**, Ghosh, S. K. and Kumar, A., 2014. A Brief Review of Fuzzy Soft Classification and Assessment of Accuracy Methods for Identification of Single Land Cover. *Studies in Surveying and Mapping Science (SSMS), American Society of Science and Engineering*, Vol. 2, pp. 1-13,(ISSN 2328-6245 & 2328-6253).
  http://www.as-se.org/ssms/paperInfo.aspx?ID=13800

- **Upadhyay, P.**, Ghosh, S. K. and Kumar, A., 2013. Moist Deciduous Forest Identification using Temporal MODIS Data- a comparative study using fuzzy based classifiers.*Ecological Informatics* (***Elsevier***), Vol. 18, pp. 117-130, (ISSN 1574-9541, **Impact Factor: 1.980**). http://dx.doi.org/10.1016/j.ecoinf.2013.07.002
- **Upadhyay, P.**, Kumar, A. and Ghosh, S. K., 2013.Fuzzy Based Approach for Moist Deciduous Forest Identification using MODIS Temporal Data. *Journal of Indian Society of Remote Sensing* (***Springer***), Vol. 41, No. 4, pp. 777-786, (ISSN 0255-660X & 0974-3006, **Impact Factor: 0.764**). http://dx.doi.org/10.1007/s12524-013-0267-2
- **Upadhyay, P.**, Kumar, A., Roy, P.S., Ghosh, S. K. and Gilbert, I., 2012. Effect on Specific Crop Mapping Using WorldView-2 Multispectral Add-on Bands: Soft Classification Approach. *Journal of Applied Remote Sens*ing (***SPIE***) 6, 063524, (ISSN 1931-3195, **Impact Factor: 1.183**). http://remotesensing.spiedigitallibrary.org/article.aspx?articleid=1352359
- **Upadhyay, P.,** Ghosh, S. K. and Kumar, A., 2014. Entropy Based Noise Clustering Soft Classification Method for Identification of Wheat Crop using Time Series MODIS Data. Agro-Geoinformatics 2014, **IEEE Xplore database**, Beijing, China, Aug 11- Aug 14, 2014.http://dx.doi.org/10.1109/Agro-Geoinformatics.2014.6910670.
- **Upadhyay, P.**, Ghosh, S. K. and Kumar, A., 2013. High Resolution Temporal Normalized Difference Vegetation Indices for Specific Crop Identification, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XL-1/W1, 351-355,doi: 10.5194/isprsarchives-XL-1-W1-351-2013, 2013. http://www.int-arch-photogramm-remote-sens-spatial-inf-sci.net/XL-1-W1/351/2013/isprsarchives-XL-1-W1-351-2013.pdf
- **Upadhyay, P.**, Kumar, A. and Ghosh, S. K., 2012. Comparative study of MODIS temporal NDVI and EVI data for wheat crop identification using soft classification approach. National Symposium on Space Technology for Food & Environmental Security, New Delhi, India, December 5-7, 2012.
- **Upadhyay, P.**, Kumar, A., Ghosh, S. K., and Roy, P.S., 2011. Comparative study of class based and sensor based indices for specific crop mapping using single source WorldView-2 temporal data. Indian Society of Remote Sensing, Bhopal, India. November 9-10, 2011.
- **Upadhyay, P.**, Joglekar, P.N., and Patel, P., 2009. Microwave Remote Sensing based Soil Moisture Inversion for Bare and Crop Covered Fields. National seminar on Radar Remote Sensing and its Application, Indian Institute of Technology Roorkee, Uttarakhand, India, September, 2009.
- **Upadhyay, P.**, Joglekar, P.N., Pandey A.C. and Patel, P., 2008. Performance of various backscattering model and soil moisture mapping using the RADARSAT data. International conference of Radio Science (ICRS) Jodhpur, February, 2008.

Achievements:

- Chaired a session in an International Conference, Agro-Geoinformatics 2014, Beijing, China 2014.
- Awarded travel grant from the DST to attend Agro-Geoinformatics 2014 held in Beijing, China 2014.
- Qualified National Eligibility Test (NET) in Physics conducted by Council of Scientific and Industrial Research (CSIR) India in 2006.
- Qualified Graduate Aptitude Test in Engineering (GATE) in Physics in 2006 with all India rank 182.
- Qualified GATE in Physics in 2005 with all India rank 300.
- Awarded Ministry of Human Resources and Development (MHRD) and University Grant Commission (UGC), Govt. of India, fellowships in Ph.D. and M.Tech. respectively.
- Awarded junior research fellowship by Defence Research and Development Organization (DRDO), Ministry of Defence, Govt. of India, India.

Industrial Training, Short Term Courses and Workshops Conducted:

- Co-ordinated 15 days 21st IIRS outreach program on RS and GIS Applications in Water Resources Management from May 22 2017 to June 10, 2017, organized by Indian Space Research Organization (ISRO), Dehradun, Govt. of India.
- Teaching assistantship under the supervision of Prof. S.K. Ghosh for training of the Indian Defence Estate Service Officer batch 2009 during the Ph.D. in I.I.T. Roorkee.
- Teaching/Practical assistantship under the supervision of Prof. S.K. Ghosh for the training of Defence S.D.O. during the Ph.D. in I.I.T. Roorkee.
- Teaching/Practical assistantship under the supervision of Prof. S.K. Ghosh in Surveying, Total Station, GPS, Image Processing and GIS for the practicals of B.Tech. and M.Tech. Civil Engineering students of I.I.T. Roorkee.

Technical Skills/Software Packages:

- Computer Languages: C, Matlab and Pascal.
- Digital Image Processing: ERDAS, Geomatica, ENVI and LPS etc.
- Geographic Information System (G.I.S.): ArcGIS, Auto-CAD, Map Info and Q-GIS etc.
- Global Positioning Systems (G.P.S.): Handheld, Differential G.P.S (R3, R7 and robotic).
- Surveying: Total Station, Dumpy Level, Auto Level, Digital Level, Plane Table Survey and Theodolite.
- Others: Field Spectra Radiometer, Spectral Library, Photogrammetric Experiments.

Research Guidance

- Number of M.Tech. Students guided: 4

Memberships:

- The Institute of Engineers (India).

Reviewer:

- Geocarto International (Taylor & Francis).
- IEEE Geosciences and Remote Sensing Letters
- Science Engineering and Research Board (SERB), Department of Science and Technology, Govt. of India.

Others Responsibilities:

- Co-ordinator of Civil Engg. Department, Shoolini University Solan from Jul 2017 to Dec 2017
- Superintendent of End Term Examinations, Shoolini University Solan in Dec 2016 and June 2017.
- Co-ordinator of Examination Evaluation Centre, Shoolini University, Solan in Dec 2015 and June 2016

References:

- **Prof. S.K. Ghosh**
  Professor, Department of Civil Engineering,
  Indian Institute of Technology Roorkee,
  Roorkee, IN 247667
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- **Dr. Anil Kumar**
  Scientist/Engineer 'SF', Indian Institute of Remote Sensing,
  Indian Space Research Organization,
  4-Kalidas Road, Dehradun,
  Uttrakhand – IN 248001
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- **Er. Manish Kala**
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  Snow&Avalanche Study Estt (SASE)
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- **Prof. Neelanchal Patel**
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