

CURRICULUM – VITAE

Name: Dr. Avtar Singh Jasrotia

Designation & Address: **Head**
Department of Remote Sensing and GIS
University of Jammu
Jammu –180 006. (India)

Professor
Department of Geology

Academic Qualification: M.Sc, Ph.D and P.G.Diploma in Remote Sensing and GIS

Field of Specialization: Remote Sensing & GIS, application in Geosciences

HONOURS AND AWARDS

Best paper presentation Award in the 13th convention IGC Silver Jubilee Awards, organized by the Indian Geological Congress, Roorkee during Dec. 26th -28th, 2003 at Wadia Institute of Himalayan Geology, Dehradun.

Professional Training:

Training Course on Remote Sensing Application in Geology conducted by Centre of Remote Sensing, Bharathidasan University, Tiruchirapalli during 1-27 Dec. 1997.

P.G.Diploma Remote Sensing application in Geology, Hydrology, Environmental Geology (2000) from the Indian Institute of Remote Sensing (IIRS) Dehradun.

Two Months Training course on Remote Sensing and GIS Application in Water Resources conducted by Indian Institute of Remote Sensing, Dehradun, 2001.

Participated in Continuing Education & Quality Improvement Programmes sponsored by Department of Science and Technology, New Delhi, Conducted by the Indian Institute of Technology(IITB) Bombay during Sept. 18-29, 2006.

Special Course on Recent Trends in SAR applications under RISAT-JEP-MW conducted by Indian Institute of Remote Sensing, Dehradun during 9th -12th July, 2007.

Short term training course in RISAT-UP Radar Remote sensing and applications conducted by Space application centre (ISRO), Ahmedabad during Feb. 15th -26th, 2010

International Conference:

Presented a paper “Spectral characterization for base metal mineralization and its probable extension in Udaipur area Rajasthan” in the International conference on Remote

Sensing and GIS/GPS Feb.1-4, 2001-Hyderabad, India, Organized by Centre for spatial information technology Jawaharlal Nehru Technological University, Hyderabad.

Presented a Paper titled “Geochemistry of Groundwater in the Sedimentary Terrain around Devak and Rui Watersheds, Jammu & Kashmir State” in the 2nd AOGS Annual Meeting 2005 during 20-24th, June, at Suntec, **Singapore**.

Presented paper on Geographical Information System based Ground Water quality mapping in Western Doon Valley, Deharudan, Uttaranchal in International Symposium/Conference on “Geospatial Databases for Sustainable Development” at Goa during September 27-30, 2006.

Presented paper on Delineation of Suitable Sites for artificial recharge to groundwater around Devak-Rui watersheds, Jammu District Using Remote Sensing and GIS techniques. International Symposium/Conference on “Geospatial Databases for Sustainable Development” at Goa during September 27-30, 2006.

Presented a paper on Identification of groundwater potential zones and groundwater quality zones suitable for domestic proposes of Western Doon valley using Remote Sensing and GIS techniques in the International Conference on groundwater Dynamics & Global change held at Jaipur during 19th -21st March 2008.

Presented a paper on Groundwater quality mapping based on the geographical information system (GIS) of Devak-Rui watershed area of Jammu region, Jammu and Kashmir state in the International Conference on groundwater Dynamics & Global change held at Jaipur during 19th -21st March 2008

National Conference:

Presented a paper “Landslide Hazard Zonation along the NH-IA between Udhampur to Kud using remote sensing and GIS techniques” in the 13th Convention IGC silver Jubilee Awards organized by Indian Geological Congress, Roorkee held at Wadia Institute of Himalayan Geology, Dec. 26th to 28th, 2003

Presented a paper Rainfall-Runoff and soil erosion modeling of the catchment area along the NH-IA between Udhampur to Kud Using Integrated Remote Sensing and GIS Techniques in the 24th ISRS Annual Convention and National Symposium on converging space technologies for National Development, held at Birla Auditorium, Jaipur from Nov. 3-5, 2004

Presented a paper on Hydrochemistry and classification of groundwater around Devak – Rui watersheds area of Jammu region, J&K State in the 1st J&K state Science Congress held at University of Jammu, Jammu during 7th -9th Feb. 2005

Presented a paper on Water balance assessment and rainwater harvesting structures sites using remote sensing and GIS techniques in Devak-Rui watershed, Jammu Himalaya,

India in the National Conference on Geomatics for Planet Earth & Annual convention of Indian Society of Geomatics at Bhopal during 18th-20th Feb. 2008

Presented a Paper on “Sesmic Microzonation of Jammu City Using MASW and Nakamura Techniques – Preliminary Results” in the Workshop Kashmir Earthquake and After, organized by Dept. of Geology, University of Jammu, on 22nd-23rd March 2008.

Presented a Paper on Groundwater Scenario of Jammu Region in the two days Regional workshop on Groundwater Scenario & Quality issues in Jammu & Kashmir organized by Central Groundwater Board, North Western Himalayan Region, Jammu on 2nd-3rd Feb. 2009.

Presented a paper on “Suitable Sites for Rainwater Harvesting Structures Using Remote Sensing and GIS Techniques In Devak and Rui Watershed, Jammu Himalaya in Roof Top Rain Water Harvesting and Spring Recharge, workshop Organized by Central Groundwater Board, North Western Himalayan Region, on 10th Feb. 2010.

Presented a paper on “Development and Planning for management of water resources through watershed management of J&K State” regional workshop Organized Indian Institute of Hydrology, Western Himalaya Regional Centre, Jammu on 10th March 2011.

Presented a paper on “Terrain imaging effects on snow cover extraction using LISS-III and AWIFS images of IRS-P6 in Alakhnanda and Bhagirathi Basin of Ganga river” in the 7th J&K Science Congress held at University of Jammu, Jammu during, October 13-15, 2011.

Presented a paper on “Lunar Craters Classification based on Depth/Diameter relationship using Chandrayan-1 TMC Data” in the 7th J&K Science Congress held at University of Jammu, Jammu during, October 13-15, 2011.

Presented a paper on “Impact of the Land use Change Land cover change on hydrological regime and future climate trends of Tawi Catchment” in the International conference organize by the Department of Geography, University of Jammu, Jammu, on Environmental Issue and sustainable Development during 1st -2nd March 2013.

Presented a paper on “Land use land cover change in greater Jammu through Remote Sensing and GIS approach” in the International conference organized by the Department of Geography, University of Jammu, Jammu, on Environmental Issue and sustainable Development during 1st -2nd March 2013.

Presented a paper on “Delineation of Suitable Sites for Artificial Recharge of Groundwater of Jammu District Using Integrated Remote Sensing and GIS Techniques” in the Workshop on Groundwater Management & Development in J&K, organized by the CGWB, NWHR, Jammu on 26th March, 2013.

Presented a paper on Quantification and Management of groundwater Resources in Transboundary Aquifer Across International boundary of Jammu District in 101 Indian Science Congress, 3-7th February, 2014, Jammu.

Presented a paper on Remote sensing and GIS approach for delineation of Groundwater potential zones using Aquifer parameters in Jammu District, Northwestern Himalaya in 101 Indian Science Congress, 3-7th February, 2014, Jammu

RESOURCES PERSON

Resources Person for Establishing the Centre of Excellence for NRDMS of Uttarakhand, Kumaun University, Almora in the 6th Uttarakhand State Science & Technology Congress, Organized Uttarakhand Council for Science and Technology at Kumaun University SSJ Campus Almora, 14th -16th Nov., 2011.

Presentation on “Web Based Spatial Database Infrastructure (SDIs) Information of Jammu and Kashmir at Department of Geology, Ravenshaw University Cuttack, Odisha *Organized on improved management of geological data at the state level for development of Geosources at Cuttack 16-17, 2013 April with support of DST, New Delhi Under NRDMS Programme.*

Lectures were delivered during Refreshers Course on 28th & 29th November, 2013 Kumaun University, SSJ Campus, Almora, Uttarakhand

Web Based Geo-Spatial Information on Socio-Economic and Natural Resources of Jammu Region of Jammu and Kashmir State. (28th November, 2013)

Open Source Web Based Geographical Information System (WBGIS) of Jammu and Kashmir State (29th November, 2013)

Key Note address was Delivered on **GIScience Education National and International Status** on National seminar on GIS Education: National and International Status on 30th November, 2013 at Kumaun University, SSJ Campus, Almora, Uttarakhand

Workshop/ Symposium

Participated in the 11th Users interaction meet conducted by the National remote sensing Agency (NRSA) Balanagar, Hyderabad during 30-31st Jan. 2001.

Participated in the 12th Users interaction meet conducted by the National remote sensing Agency (NRSA) Balanagar, Hyderabad during 30-31st Jan. 2002.

Presented a report in the ISRO-Academic Interaction meeting organized by ISRO Chairman to review the project in the ISRO -Academic Interaction, ISRO HQ. Bangalore on 30th August, 2002.

Attended the GIS Seminar Cum Workshop and Annual General Meeting, Geological Society of India, Chandigarh during October 23rd to 25th, 2002.

Participated in National Seminar on Geohazards in North Western Himalaya organized by Department of Geology and CAS in Geology Punjab University Chandigarh, 2003 at University of Jammu.

Participated in the Inter GIS International cooperation for GIScience Education Co-funded by European Commission, Train-the-Trainer workshop Status of GIS in European Union and south Asia during 7th to 9th November, 2003 at Jawaharlal Nehru University, New Delhi, India

Participated second EDUSAT Workshop and distance Learning Programme, Sponsored by NNRMS, dept. of Space, Govt of India, Organized by Indian Institute of Remote Sensing, Dehradun on March 20th 2009.

Participated in ISRO Respond meeting coordinate by Space Application Centre (SAC) Ahmedabad at Kashmir University, Srinagar on 18th August, 2009.

Participated Third EDUSAT Workshop of Distance Learning Program on Basic of RS, GIS and GPS at Indian Institute of Remote Sensing (IIRS), Dehradun on 7th May, 2010.

Attended a National Seminar on “Management of Water Resources in north India with special reference to Jammu and Kashmir State, University of Jammu, Jammu, 10th January, 2012.

National Workshop Strengthening capacity building in Geospatial Education 7-8 November, 2013 conducted jointly by Institute of Environmental Education and Research, Bharati Vidyapeeth University, Pune and NRDMS, Department of Science and Technology, Government of India New Delhi at Pune.

RESEARCH PUBLICATION

1. Jasrotia, A.S., Dhiman, S.D., and Aggarwal, S.P., (2002) Rainfall-Runoff and Soil Erosion Modeling Using Remote sensing and GIS Techniques A case study of Tons Watershed. Journal of Indian Society of Remote Sensing, 30(3), 167-180.

2. Jasrotia, A.S., and Singh, R., (2005) Groundwater Pollution vulnerability using DRASTIC model in the GIS Environment around Devak- Rui watersheds, Jammu region, J & K State, India Journal of Environmental Hydrology, The Electronic Journal of International Association of Environmental Hydrology, V.13, Paper 11.

3 .Jasrotia, A.S., and Singh, R., (2006) Modeling Runoff and Soil Erosion in a Catchments Using GIS, in Himalayan region. Environmental Geology, International Journal of Geosciences, Springer-Verlag V. 51 (1) pp.29-37

4. Jasrotia, A.S., (2007) Landslide Hazard Zonation along the NH-1A Between Udhampur to Kud using remote sensing and GIS techniques. "Natural Hazard" Spl. Vol. of IGC. Ind. Geol. Cong. pp 129-144.
5. Jasrotia, A.S. and Singh, R. (2007) Hydrochemistry and Groundwater quality, around Devak and Rui watersheds of Jammu region, Jammu and Kashmir. Journal of Geological Society of India. V.69 (5). pp. 1042-1051
6. Jasrotia, A.S., Kumar, R. and Saraf, A.K. (2007) Delineation of groundwater recharge sites using integrated remote sensing and GIS in Jammu district, India. International Journal of Remote Sensing. Vol. 28 (22), pp.5019–5036.
7. Jasrotia, A.S., and Singh, R., (2007). Multivariate analysis techniques for Groundwater quality in Devak-Rui watersheds of Jammu region, Jammu and Kashmir, India. Ind. Jour. Geochem. Vol.22 (2): 299-314
8. Jasrotia A. S., Majhi Abinash, Singh Sunil (2009) Water balance approach for rainwater harvesting using remote sensing and GIS techniques, Jammu Himalaya, India. International Journal of Water Resources Management. Vol. 23, pp.3035–3055.
9. Mahajan A. K., Mundepi, A.K., Chauhan Neetu, Jasrotia A.S., Rai Nitesh and Gachhayat Tapas Kumar (2012). Active seismic and passive micrometer HVSR for assessing site effects in Jammu City NW Himalaya, India-A case Study. Journal of Applied Geophysics. Vol.77, pp 51-62
10. Jasrotia A. S., Kumar Ajay and Bhat Asim (2012) Morphometric analysis and hydrogeomorphology for delineating groundwater potential zones of Western Doon Valley, Uttarakhand, In International Journal of Geomatics and Geosciences Vol. 2(4)pp. 1078-1096.
11. Jasrotia, A. S., Bhagat, B. D., Kumar Ajay and Kumar Rajesh (2013). Remote Sensing and GIS Approach for Delineation of Groundwater Potential Zones and Groundwater Quality Zones of Western Doon Valley, Uttarakhand, India. Journal of Indian Society of Remote Sensing 41(2):365–377.
12. Jasrotia. A.S., Baru D. & Nishat D. (2013). Dynamic Modeling for Assessing the Impact of Climate Change on the Hydrological Regime of Chenab Basin, North Western Himalayas, International Association of Hydrological Sciences (IAHS) H01, IAHS-IAPSO-IASPEI Assembly, Gothenburg, Sweden, July 2013 (IAHS Publ. 359, 2013)118-123.
13. Jasrotia, A. S., Kumar Ajay (2014). Groundwater Quality Mapping Based on the Geographical Information System (GIS) of Jammu District, Jammu and Kashmir India. Journal of Spatial Hydrology 12(1):1-21

Proceeding Publication

Jasrotia, A.S., Das, I.C., 2001. Spectral characterization for base metal mineralization and its probable extension in Udaipur area Rajasthan. Proc. International Conference on Remote Sensing and GIS/GPS, Hyderabad v.11 pp-199.

Jasrotia, A.S., Bhagat, B.D., 2006. Geographical Information System based GROUND WATER QUALITY MAPPING in Western Doon Valley, Deharudan, Uttaranchal. (Proceeding ISRS- ISPRS TS-IV, pp 102-112.

Jasrotia, A.S., Rajinder Singh, Ajay K Taloor and Sunil Singh., 2010. Suitable Sites for Rainwater Harvesting Structures Using Remote Sensing and GIS Techniques In Devak and Rui Watershed, Jammu Himalaya. (Proc: Roof Top Rain Water Harvesting and Spring Recharge, Central Groundwater Board, North Western Himalayan Region, Jammu) pp 34-53.

Jasrotia, A.S., Rajinder Singh, Ajay K Taloor (2010) Groundwater Quality around Devak and Rui Watersheds of Jammu Himalaya (Proc: Central Groundwater Board, North, Western Himalaya Region, Jammu) pp 50-65.

RESEARCH PROJECT COMPLETED

“Evaluation of groundwater Potential Zones Using Remote Sensing and GIS Techniques in the Hilly Terrain of Devak-Rui Watershed area, Jammu district, J&K State” In the capacity of **Principal Investigator** Funded by the Department to Space, Govt of India ISRO HQ, Banaglore (11.69 Lakhs).

“Establishing the Natural Resources Digital Database District Centre at Jammu and Creation of an integrated database for Development Planning” In the capacity of **Principal Investigator** funded by Ministry of Science and Technology, Department of Science and Technology, Govt. of India. New Delhi (31.57 Lakhs)

Groundwater Prospect Mapping Work of Rajiv Gandhi Drinking Water Mission (RGNDWM) Phase –III of Jammu district. In the capacity of **Principal Investigator** funded by Ministry of Rural Development and Sanctioned by National Remote Sensing Agency, Hyderabad (4.15 lakhs).

CONSULTANCY PROJECT COMPLETED

Preparation of a State Perspective and Strategic Plan of Watershed Development for the State” Under the “Integrated Watershed Management Programme (IWMP) Funded By Rural Development Department, Civil Secretariat, Srinagar, Jammu and Kashmir (26 lakhs).

EIA& EMP of Aerial Passenger Ropeway, Patnitop, Funded By Patnitop Development Authority, Jammu and Kashmir (3,72,500)

COLLABORATION RESEARCH

Microzonation of Jammu City, GIS based study had carried out in collaboration with Wadia Institute of Himalayan Geology (WIHG), Dehradun

TRAINING/WORKSHOP ORGANISED

Two days Workshop on Information Needs Assessment of the Line Departments of Jammu District, J&K State Sponsored by Department of Science and Technology, Government of India, New Delhi, Organized by Dr. A.S.Jasrotia, Coordinator, Department of Geology, University of Jammu, Jammu on 6th -7th of June, 2006 in the Environmental Science Hall University of Jammu

Organized Second EDUSAT based distance learning programme on basic Remote Sensing, GIS and GPS during September 19th – December 3rd, 2007 Sponsored by Natural Resources Management System (NNRMS) Conducted by Indian Institute of Remote Sensing (National Remote Sensing Agency) Dehradun through Hub.

Organized Fourth EDUSAT based distance learning programme on basic Remote Sensing, GIS and GPS during August 12th –October 30th, 2009 Sponsored by Natural Resources Management System (NNRMS) conducted by Indian Institute of Remote Sensing (National Remote Sensing Agency) Dehradun through Hub.

One day workshop on Digital Database Information of Socio- Economic & Natural Resources of Old Jammu District on Remote Sensing and GIS microsite of Jammu University Website, Organized by Dr. A.S.Jasrotia, Department of Geology, University of Jammu, Jammu on 10th Nov. 2010

Organized Fifth EDUSAT based distance learning programme on basic Remote Sensing, GIS and GPS during 4th October -9th, December 2010, Sponsored by Natural Resources Management System (NNRMS) conducted by Indian Institute of Remote Sensing (National Remote Sensing Agency) Dehradun through Hub.

Organized First EDUSAT based distance learning programme on “Advanced in Geoinformatic” during 14th Feb-7th, March 2011, Sponsored by Natural Resources Management System (NNRMS) conducted by Indian Institute of Remote Sensing (National Remote Sensing Agency) Dehradun through Hub.

Organized Seven EDUSAT based distance learning programme on basic Remote Sensing, GIS and GPS during 1st August-8th, October 2011, Sponsored by Natural Resources Management System (NNRMS) conducted by Indian Institute of Remote Sensing (National Remote Sensing Agency) Dehradun through Hub.

Organized Tenth Satellite based distance learning programme on “GEOWEB Services-technology & applications” during 11th February 2013 –15th March 2013 Sponsored by Natural Resources Management System (NNRMS) conducted by Indian Institute of Remote Sensing (National Remote Sensing Agency) Dehradun through Hub.

21 days **Winter School Training Programme for Capacity building in Geospatial Technologies** under NRDMS (DST) Programme, Ministry of Science and Technology, Govt. of India, New Delhi w.e.f 25th Feb. - 17th March, 2014 for College and University teachers.

FOUR STUDENTS AWARDED Ph.D DEGREE

1. Evaluation of groundwater Potential Zones Using Remote Sensing and GIS techniques in the Hilly Terrains of Devak –Rui watersheds Jammu District, J&K State. India
2. Remote Sensing and GIS based hydromorphological studies for groundwater and allied pollution hazard Western Doon Valley, Uttaranchal. India.
3. A study of Terrain and Aquifer characterization for groundwater potential evaluation using Remote Sensing and GIS Techniques in Jammu District.
4. Delineation of Suitable Sites for Artificial Recharge to groundwater around of Jammu District–Using integrate Remote Sensing and GIS Techniques.

TWO STUDENTS AWARDED M.PHIL DEGREE

1. Delineation of Suitable Sites for Artificial Recharge to groundwater around Devak and Rui Watersheds, Jammu District–Using Remote Sensing and GIS Techniques.
2. Water balance approach for rainwater harvesting structures sites using remote sensing and GIS techniques in Devak-Rui watershed, Jammu Himalaya, India.