

**Name: Dr. Puneeta Pandey**

**Designation: Assistant Professor**

**Centre: Centre for Environmental Sciences and Technology**

**School: School of Environment and Earth Sciences**

**Central University of Punjab**

**Bathinda- 151001**

**Email Id: Puneeta.pandey@cup.edu.in, puneetapandey@gmail.com**

**Mobile: 9501982035**



### Education

- ✓ **Ph.D. (22 July, 2007 – 14 March, 2012):** *Urban Heat Island formation and its relationship with Aerosols in the Atmospheric Environment of Delhi*, Jawaharlal Nehru University (JNU), New Delhi.
- ✓ **M. Phil (2005-2007):** *Assessment of Organochlorine Pesticide residues in the Yamuna river sediment*, Jawaharlal Nehru University (JNU), CGPA 8.41 out of 9.
- ✓ **M.Sc. - Environmental Sciences (2003-2005),** Jawaharlal Nehru University (JNU), New Delhi, CGPA 8.42 out of 9.
- ✓ **B. Sc. (Botany, Zoology and Anthropology):** University of Allahabad, Allahabad, 2003, 67.41% marks.

### Experience

**Assistant Professor in Centre for Environmental Science and Technology, Central University of Punjab, Bathinda, w.e.f. 16 March, 2011-till date.**

1. **March 16, 2011-March 25, 2013: Assistant Professor (Contractual position)**
2. **March 25, 2013- Till date: Assistant Professor (Regular)**

### Teaching Assignments

- ✓ **M.Sc.- Environmental Sciences**
  - EVS.501 Basic Statistics
  - EVS.504 Ecological Principles
  - EVS.511 Environmental Geosciences
  - EVS.512 Water Pollution and Control Technologies
  - EVS.525 Introduction to Geoinformatics
  - EVS.602 Principles of Geospatial Technology
  - EVS.604 Air and Noise: Pollution and Management
  - EVS.518 EVS- Lab IV (Energy and Geosciences) – Practical
  - EVS.608 EVS- Lab V ( Air and Noise: Pollution and Management)– Practical
  - EVS.609 EVS- Lab VI (Instrumental Methods and Geospatial Techniques)
  - EVS.599 Seminar I
  - EVS.617 Natural Hazards and Disaster Management
- ✓ **M.Phil.- Environmental Sciences**
  - EVS.602 Biostatistics and Computer Applications
  - EVS.652 Biostatistics and Computer Applications – Practical
  - EVS.605 Managing Environment
  - EVS.656 Emerging Techniques in Environmental Research - Practical

EVS.699 Seminar in Environmental Science and Technology

✓ **Ph.D.- Environmental Sciences**

EVS 714: Applications of Remote Sensing and GIS in Environmental Management

**Research Project**

**Ph.D. Ongoing**

S. No.	Name of Student	Project Title
1.	Gh Nabi Najjar	Assessment of Organochlorine Pesticide Residues in the Soils of Bathinda
2.	Naseer Ahmad	Spatial and Temporal Distribution of Heavy metal contaminants in Roadside soil of Bathinda, Punjab

✓ **M.Phil (Completed)**

S. No.	Name of Student	Project Title
1.	Rimzim Gill	Assessment of Organochlorine Pesticide Residues in the Soils of Bathinda
2.	Amit Kumar	Spatial and Temporal Distribution of Heavy metal contaminants in Roadside soil of Bathinda, Punjab
3.	Akanksha Bhardwaj	Assessment of Spatio-Temporal Dynamics of Harike Wetland using Geospatial Technology
4.	Naseer Ahmad	Assessment and Monitoring of Land Degradation using Geo-Spatial Technology in Bathinda District, Punjab.
5.	Deepak Kumar Mishra	Land Suitability Analysis for Urban Green Space using Geospatial Technology in Bathinda City
6.	Sangita Singh	Spatio-Temporal Assessment of Impervious Surfaces and their Impacts on Land Surface Temperature in Bathinda City, Punjab

✓ **M.Sc. (Completed)**

S. No.	Name of Student	Project Title
1.	Sukhjeet Kaur	Analyzing and Mapping Spatio-Temporal Dynamics of Urban Noise Pollution in Bathinda City, Punjab
2.	Nidhi Sharma	Assessment of Urban Heat Island formation in Bathinda District, Punjab

3.	Harneet Kaur	Monitoring of Organochlorine Pesticides in the Soil of Bathinda
4.	Sandeep Singh	Impact of Pervious and Impervious Surfaces on Land Temperature in Bathinda city, Punjab

### Professional Recognition /Awards/Scholarship

- ✓ Women Scientist Award for Best Paper presentation on 'A Study of the Seasonal variation of Urban Heat Island over Delhi using Satellite data' at *National Conference on 'Recent Trends in Environment and Development' (RTED-2011)*, Srinagar, Garhwal, 6-7 August, 2011.
- ✓ UGC-JRF/NET Examination in Environmental Sciences, June, 2005.
- ✓ UGC-NET Examination in Environmental Sciences, December, 2004.

### Peer Recognition

#### MEMBERSHIP OF SCIENTIFIC BODIES

- ✓ Geological Society of America
- ✓ Association of Environmental Analytical Chemistry of India (AEACI), BARC, Mumbai
- ✓ Society for Environment and Development, SEDIndia

#### EDITORIAL BOARD MEMBER

International Journal of Biological and Medical Sciences, Catalyst Publishers

#### REVIEWER

- ✓ Land Degradation and Development, Wiley
- ✓ Atmospheric Research, Elsevier
- ✓ Journal of Energy and Power Engineering, David Publishing
- ✓ Agricultural Science Research Journal (ASRJ), International Research Journals Publications
- ✓ African Journal of Pharmacy and Pharmacology (AJPP), Academic Journals Publications
- ✓ Journal of Research in Environment Science and Technology, Newark, USA

### Area specializations/Research Interest

Urban heat island – aerosols interaction; Wetland dynamics; Land degradation; assessment of heavy metals and organochlorine pesticides in water and soil

### Publications

#### Research Papers

2018

- ✓ Naseer Ahmad, Puneeta Pandey (2018). Assessment and monitoring of land degradation using geospatial technology in Bathinda district, Punjab, India. *Solid Earth*, 9, 75–90.

**2017**

- ✓ Akanksha Bhardwaj, Gh Nabi Najar and Puneeta Pandey (2017). Geospatial technology applied to spatiotemporal assessment of Harike Wetland, Punjab. *Lakes and Reservoirs: Research and Management*, 22: 349–363.
- ✓ Gh Nabi Najar, Akanksha Bhardwaj and Puneeta Pandey (2017). A spatio-temporal water quality assessment of the Beas and Sutlej Rivers at the Harike Wetland: A Ramsar site in Punjab, India. *Lakes and Reservoirs: Research and Management*, 22: 364–376.

**2014**

- ✓ Alok Kumar Pandey, Sachchidanand Singh, Shivesh Berwal, Dinesh Kumar, Puneeta Pandey, Amit Prakash, Neelesh Lodhi, Sandeep Maithani, Vinod Kumar Jain, Krishan Kumar. Spatio – temporal variations of urban heat island over Delhi. *Urban Climate* 10 (2014) 119–133.

**2013**

- ✓ Pandey P. (2013). A Micro-review of the role of GIS in Watershed Management. *International Journal of Information and Computation Technology* (ISSN 0974-2239), Vol. 3,, No. 7, pp. 571-574.
- ✓ Pandey P. (2013). Algal Biofuels: A Potential Source of Renewable Energy. *International Journal of Mechanical Engineering and Research* (ISSN 2249-0019), Vol. 3, No. 6, pp. 467-470

**2012**

- ✓ Puneeta Pandey, Krishan Kumar, Dinesh Kumar, Manoj Singh, (2012). Assessment of Aerosol Optical Depth (AOD) over Delhi using Geospatial Technology. *International Journal of Electronics and Engineering*, 3(4), 297-300.
- ✓ Puneeta Pandey (2012). Application of Geographical Information Systems (GIS) and Remote Sensing for assessing changes in Land use and Land cover. *International Journal of Applied Agricultural Research*, 7(2), 71-74.
- ✓ Puneeta Pandey, Dinesh Kumar, Amit Prakash, Jamson Masih, Manoj Singh, Surendra Kumar, Vinod Kumar Jain and Krishan Kumar (2012). A study of urban heat island and its association with particulate matter during winter months over Delhi. *The Science of Total Environment*, 414, 494-507.

**2011**

- ✓ Manoj Singh, Dinesh Kumar, Puneeta Pandey, Krishan Kumar, Vinod Kumar Jain, (2011). Ambient noise levels due to dawn chorus at different habitats in Delhi. *Environment and We: An International Journal of Science and Technology*, 6,123-134.
- ✓ Puneeta Pandey, P.S. Khillare, Krishan Kumar (2011). Assessment of Organochlorine Pesticide Residues in the Surface Sediments of River Yamuna in Delhi, India. *Journal of Environmental Protection*, 2, 511-524.

**2010**

- ✓ Puneeta Pandey and Brij Gopal (2010). Effect of detergents on the growth of two aquatic plants: *Azolla pinnata* and *Hydrilla verticillata*. *Environment and We: An International Journal of Science and Technology*. 5 (2010) 107-114.

**2009**

- ✓ P. Pandey, D. Kumar, A. Prakash, K. Kumar and V. K. Jain (2009). A study of the summertime urban heat island over Delhi. *International Journal of Sustainability Science and Studies*, Volume 1, No.1, Special Journal Issue, 27-34.

## **Workshop/Conferences**

### **Organised**

Coordinator for the following IIRS Outreach Programme sponsored by National Natural Resources Management System (NNRMS), Department of Space, Government of India, August 4- November 14, 2014 at Central University of Punjab, Bathinda.

- ✓ 13<sup>th</sup> Outreach Programme on 'Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System', August 4- November 14, 2014.
- ✓ 14<sup>th</sup> Outreach Program on "Applications of Remote Sensing and GIS for Natural Resources" from January 27- March 27, 2015.
- ✓ 15<sup>th</sup> Outreach Programme on 'Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System', August 10- November 27, 2015.
- ✓ 16<sup>th</sup> Outreach Programme on 'Geospatial Technologies for Urban Planning', February 11- March 15, 2016.
- ✓ 17<sup>th</sup> Outreach Programme on 'Geoweb Services and Geoportal Applications', 28 June-15 July, 2016.
- ✓ 18<sup>th</sup> Outreach Programme on 'Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System', August 22- November 25, 2014.
- ✓ 19<sup>th</sup> Outreach Programme on "Remote Sensing and GIS Applications in Carbon Forestry" during 16 February - 10 March, 2017.

### **Attended**

**2018**

- ✓ Akanksha Bhardwaj, Shilpa Nag, Puneeta Pandey and J. Nagendra Babu (2018). Adsorptive Removal of Methylene Blue Using 'Biochar'- A Renewable, Low Cost Adsorbent Produced from Agriculture Waste. International Conference on Bio and Nano Technologies for Sustainable Agriculture, Food Health, Energy and Industry' held at Guru Jambheshwar University of Science and Technology during February 21-23, 2018.
- ✓ Akanksha Bhardwaj, Shilpa Nag, Puneeta Pandey and Nagendra Babu (2018). "Adsorption of methylene blue from aqueous solution using rice straw biochar as

adsorbent". 10<sup>th</sup> National Conference on "CHEMICAL AND ENVIRONMENTAL SCIENCES: INNOVATIONS AND ADVANCES-2018, CES: IA-2018" during February 15-16, 2018 at Punjabi University Patiala, Patiala

2017

- ✓ Naseer Ahmad, Puneeta Pandey (2017). Tourism in Jammu and Kashmir: Economic Growth and Environmental Consequences. Two days National Conference on 'Growth Strategies of Tourism in India: Opportunities and Challenges' held on November 29-30, 2017 at Central University of Punjab, Bathinda.
- ✓ Gh Nabi Najar, Puneeta Pandey (2017). Estimation of Land use/Land cover Change of Harike Wetland- A Ramsar Site in India, using Remote Sensing and GIS Approach. 8<sup>th</sup> International Conference on Engineering Technology, Science and Management Innovation (ICETSMI-2017) held at The Institution of Electronics and Telecommunication Engineers (IETE), Janakpuri, New Delhi on 17<sup>th</sup> September, 2017.
- ✓ Naseer Ahmad, Puneeta Pandey (2017). A Mini-Review On Land Conversion Dynamics With Special Reference To Quantification Of Land Transformation Using Remote Sensing And GIS In Srinagar City Of Kashmir. International Conference on Urban Geoinformatics to be held on February 22-23, 2017 at TERI University, Delhi.

2016

- ✓ Naseer Ahmad, Puneeta Pandey (2016). Study of Land Degradation Status in Bathinda District, Punjab. International Conference on Nanotechnology for Better Living-2016, National Institute of Technology, Srinagar, May 25-29, 2016; Vol. 3, No. 1, pp- 322.

2015

- ✓ Nidhi Sharma, Puneeta Pandey (2015). Study of Urban Heat Island in Bathinda City, Punjab. 16<sup>th</sup> ESRI India User Conference, Kempinski Ambience Hotel, New Delhi, December 3-4, 2015.
- ✓ Sukhjeet Kaur, Puneeta Pandey (2015). Assessment of Noise Pollution in the City of Bathinda, Punjab. 5th International Conference on Plants and Environmental Pollution (ICPEP-5), CSIR-NBRI, Lucknow, February 24 – 27, 2015, pp. 269.
- ✓ Akanksha Bhardwaj, Puneeta Pandey (2015). Temporal Assessment of Harike Wetland using Remote Sensing and GIS. National Workshop on 'Training the Trainers -Water Quality and Health', Centre for Environmental Sciences & Technology, Central University of Punjab, Bathinda, February 11, 2015.
- ✓ Naseer Ahmad, Puneeta Pandey (2015). Assessment of Health Status of Water Bodies by Monitoring Water Quality using Planktons as Bioindicators. National Workshop on 'Training the Trainers -Water Quality and Health', Centre for Environmental Sciences & Technology, Central University of Punjab, Bathinda,

February 11, 2015.

- ✓ Akanksha Bhardwaj, Puneeta Pandey (2015). Change detection in Harike Wetland using Geospatial Technology. 18th Punjab Science Congress on Innovative Trends of Science & Technology in Current Scenario', Punjab Academy of Sciences (Patiala), Desh Bhagat University, Mandi Gobindgarh ; February 7-9, 2015, pp. 118-119.

2014

- ✓ Puneeta Pandey (2014). Assessment of Variability of Aerosol Optical Depth (AOD) using MODIS Data in Bathinda, a North-Western District of India. 15<sup>th</sup> ESRI India User Conference, Kempinski Ambience Hotel, New Delhi, December 9-11, 2014.
- ✓ Puneeta Pandey (2014). A Multi-temporal remote sensing approach for detecting Spatio-temporal Changes of Harike Wetland, Punjab. *Proceedings of the International Conference on Lakes and Wetlands*, Environmental Planning and Coordination Organization, Government of Madhya Pradesh, Bhopal, February 14-16, 2014, pp. 16-17.

2013

- ✓ Puneeta Pandey (2013). Variability of Aerosol Optical Depth (AOD) over the state of Punjab using MODIS data. *National Symposium on Emerging Trends in Physics for Ionizing Radiations, Aerosols and Material Science (ETPRAM-13)*, Physics Department, Punjabi University, Patiala, December 13-14, 2013, pp. 54.
- ✓ Tarandeep Kaur, Puneeta Pandey (2013). Groundwater Pollution by Pesticides in Punjab: A Mini-Review. *National Symposium on Emerging Trends in Physics for Ionizing Radiations, Aerosols and Material Science (ETPRAM-13)*, Physics Department, Punjabi University, Patiala, December 13-14, 2013, pp. 58.
- ✓ Amit Kumar, Puneeta Pandey, P. Pant (2013). Diurnal variation of atmospheric aerosols concentration at high altitude location: an example of Nainital, Uttarakhand. *National Symposium on Emerging Trends in Physics for Ionizing Radiations, Aerosols and Material Science (ETPRAM-13)*, Physics Department, Punjabi University, Patiala, December 13-14, 2013, pp. 50.
- ✓ Amit Kumar and Puneeta Pandey (2013). Assessing Spatial and Temporal Changes Using Remote Sensing and GIS in Harike Wetland, Punjab, India. *Proceedings of the HYDRO 2013 International; XVIII Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering*, Indian Institute of Technology Madras, Chennai, December 4-6, 2013, pp. 878-882.
- ✓ Manoj Singh, Dinesh Kumar, Krishan Kumar, Puneeta Pandey (2013). Spectral Characteristics of Birds' Chorus in the Urban Habitats of Delhi Region. *Ecosystem Services and Functions of Birds*, *Proceedings of the Second International Conference on Indian Ornithology (ICIO-2013)*, Salim Ali Centre for Ornithology and Natural History, Coimbatore, November 19-23, 2013, pp. 34-36.

- ✓ Puneeta Pandey. A Micro-review of the role of GIS in Watershed Management. International Congress on *Innovative Trends in Information Technologies and Computing Sciences for Competitive World Order (ITITCSCWO– 2013)*, Jawaharlal Nehru University, New Delhi, 2-3 March 2013, pp. 571-574.

## 2012

- ✓ Puneeta Pandey. A Study of the Role of Aerosols in Local Climate Change using Remote Sensing and GIS. *International Conference on Emerging Trends in Physics for Environmental Monitoring and Management (ETPEMM-2012)*, December 17-19, 2012, Punjabi University, Patiala, pp.29.
- ✓ Navneet Kaur, Yogalakshmi K.N., Puneeta Pandey. Prospects of Biohydrogen Generation from Wastewater- A Review. *International Conference on Emerging Trends in Physics for Environmental Monitoring and Management (ETPEMM-2012)*, December 17-19, 2012, Punjabi University, Patiala, pp.90.
- ✓ Puneeta Pandey. Application of Geographical Information Systems (GIS) and Remote Sensing for assessing changes in Land use and Land cover. *International Conference on Agriculture, Foods Sciences & Environmental Technology for Sustainable Global Development (AFSET-2012)*, Jawaharlal Nehru University, New Delhi October 28-29, 2012, pp. .
- ✓ Puneeta Pandey, Krishan Kumar, Dinesh Kumar, Manoj Singh. Assessment of Aerosol Optical Depth (AOD) over Delhi using Geospatial Technology. *Proceedings of International Conference on Recent Trends in Electrical and Electronic Communication Engineering (RTEECE – 2012)*, Jawaharlal Nehru University, New Delhi September 29-30, 2012.
- ✓ Puneeta Pandey, Dinesh Kumar, Amit Prakash, Neelesh Lodhi, Manoj Singh, Sachchidanand Singh, V.K. Jain, Krishan Kumar. Temporal Dynamics of Urban Heat Island Formation over Delhi. *Proceedings of 8<sup>th</sup> International Conference on Urban Climates*, 6<sup>th</sup> -10<sup>th</sup> August, 2012, UCD, Dublin Ireland.
- ✓ Puneeta Pandey, Yogalakshmi K.N. Predicting biomass burning using geospatial technology as a tool. *National Seminar on Strategies for Mitigation of Environmental Degradation and Climate Change*, Guru Jambheshwar University of Science & Technology, Hisar, March 2-3, 2012, pp. 159 .
- ✓ Yogalakshmi K.N., Puneeta Pandey. Quorum Quenching - A Potential tool to control membrane fouling. *National Seminar on Strategies for Mitigation of Environmental Degradation and Climate Change*, Guru Jambheshwar University of Science & Technology, Hisar, India, March 2-3, 2012, pp. 152.

## 2011

- ✓ Puneeta Pandey, Krishan Kumar, Dinesh Kumar, Amit Prakash, Manoj Singh, Jamson Masih. A Study of the Seasonal variation of Aerosol Optical Depth (AOD)



over the National Capital Region of Delhi. *National Seminar on 'Environmental Pollution and Bioremediation'*, Jawaharlal Nehru University, New Delhi, December 28-29, 2011.

- ✓ Puneeta Pandey. Assessing the Summer-time Urban Heat Island over Delhi: A case study of micro-level Climate Change. *Second National Research Conference on Climate Change*, IIT Delhi, New Delhi, November 5-6, 2011 Organized by IIT Delhi, IIT Madras and Centre for Science and Environment.
- ✓ Puneeta Pandey, Dinesh Kumar, Krishan Kumar, Amit Prakash, Manoj Singh, Jamson Masih. A Study of the Seasonal variation of Urban Heat Island over Delhi using Satellite data. *National Conference on 'Recent Trends in Environment and Development' (RTED-2011)*, Srinagar, Garhwal, 6-7 August, 2011.

2009

- ✓ Pandey P., Kumar D., Prakash A., Kumar K., Jain V.K. (2009) A study of the summertime urban heat island over Delhi. International Conference on Sustainability, Human Geography and Environmental Studies, Italy, 2009.

#### PARTICIPATION WITHOUT PAPER PRESENTATION

- ✓ National Symposium on 'Searching Missing links of Conservation and Management for Sustainable Development of the Environment', Jawaharlal Nehru University, New Delhi, Feb, 2007.
- ✓ National Seminar on 'Environment and Health' held on September 27, 2011 at Central University of Punjab, Bathinda.

#### TRAINING PROGRAMMES

2016

- ✓ One day GIS training program on Introduction to Remote Sensing with ENVI by ESRI, India at Central University of Punjab, Bathinda on September 09, 2016.

2013

- ✓ One -week training programme on GIS (ArcGIS 10.1) by ESRI, India at Central University of Punjab, Bathinda (28 Oct- 1 Nov, 2013).
- ✓ Participated in BRNS-AEACI Sixth School on Analytical Chemistry (SAC-6) held at Analytical Chemistry Division, BARC, Mumbai, during May13-20, 2013.

2010

- ✓ One - week training programme on GIS (ArcGIS 9.2) by ESRI, India at NIIT GIS Ltd., New Delhi (4-8 Feb, 2010)

2009

- ✓ One-week Summer-training programme on Digital Image Processing, July, 2009, conducted by TERI University, New Delhi.

2008

- ✓ Completed a 6-week Comprehensive Online Training Course on Disaster Management, by the National Institute of Disaster Management, New Delhi, 2008.
- ✓ Post Graduate Diploma in Geo-informatics from GIS Development Institute, Noida, affiliated to Salzburg University, Austria (Session Nov 2007 to May 2008).

#### Research Grants

- ✓ PI for Research Seed Money Project on 'Assessment of Urban Heat Island formation and its relationship with Aerosols in Bathinda district, Punjab' funded by Central University of Punjab, Bathinda (Amount 3 lakhs).
- ✓ UGC Start-Up Grant for Newly Recruited Faculty for 'Assessment of Organochlorine Pesticide Residues in Groundwater and Soil of Bathinda district, Punjab' funded by UGC (Amount 6 lakhs).
- ✓ Co-PI for project 'Conservation strategies for *Taxus wallichiana* and *Ulmus wallichiana* by DNA markers and geospatial technology' funded by MoEF & CC under National Mission for Himalayan Studies (Amount Rs. 34,94,600/-).

#### Other Achievements

- ✓ UGC-JRF/NET Examination in Environmental Sciences, June, 2005.
- ✓ UGC-NET Examination in Environmental Sciences, December, 2004.