

Name of Faculty: Sunil Kumar  
 Designation: Associate Professor  
 Department: Environmental Sciences  
 Institute/University: M.D.U Rohtak  
 Date of Birth: 09/01/1977  
 Gender: Male  
 Mobile Number: 9466256869



### Educational Qualifications

| Degree | Year of Passing | University/Institute | Field of Study                                     |
|--------|-----------------|----------------------|--|
| Ph.D   | 2012            | M.D.U Rohtak         | Study on Environmental Status of Bhindawas Wetland |
| PG     | 2001            | G.J.U.S&T Hisar      | Spectral analysis of Noise Pollution in Hisar city |
| UG     | 1998            | M.D.U Rohtak         |  |
| M.Tech | 2003            | G.J.U.S&T Hisar      | Defluoridation by Low cost Adsorbents              |

### Career Profile

| Designation          | Institution Served                           | Duration    |            |
|----------------------|--|-------------|------------|
|                      |  | From        | To         |
| Associate Professor  | Deptt. of Environmental Sciences, MDU Rohtak | 15/01/2021  | Till date  |
| Assistant Professor  | Deptt. of Environmental Sciences, MDU Rohtak | 15-01-2009  | 14/01/2021 |
| Scientific Assistant | Central Pollution Control Board (CPCB)       | 10-07- 2008 | 14-01-2009 |

|               |  |             |             |
|---------------|--|-------------|-------------|
| Analyst A     | Shri Ram Institute for Industrial Research                     | 20-10-2005  | 09-07- 2008 |
| Guest faculty | Janta Vidya Mandir Ganpat Rai Rasiwasia College, Charkhi Dadri | 01-07- 2004 | 19-10- 2005 |

#### Training

| Session | Title of Programm   | Duration   |            |
|---------|---|------------|------------|
|         |   | From       | to         |
| 2015-16 | National Level Winter School Training Programme in Geospatial Technologies organised by Deptt. of Geography, M.D.U Rohtak | 08/12/2015 | 28/12/2015 |

#### Projects Undertaken

| Title of the Project  | Duration | Funding Agency      | Status                                      |          |
|---|----------|---------------------|---|----------|
|   |          |                     | Completed                                   | Progress |
| Assessment of Environmental status of Bhindawas Wetland, Haryana                        | 2 years  | UGC                 | Completed<br>Date: 01/02/2010 to 01/02/2012 |          |
| Assessment of Heavy Metals Contamination in Ground Water and Soil at Gurgoan Urban Area | 1 year   | RK Fund, MDU Rohtak | Completed<br>Date: March,2020 to March 2021 |          |

#### Research Papers

**Published in Refereed/Peer reviewed Journals**

| Title of Paper   | Authors   | Reference of Journal   | Year of Publication |
|--|---|--|---------------------|
| Pollution and dental fluorosis in Matanhail block of Jhajjar District, Haryana, India.   | Yadav, J. P., Lata S. and <b>Kumar S.</b>                   | <i>Intl. J.of Med. Toxicol. &amp; Legal Medicine.</i> 6 (1): 37-42.  | 2003                |
| Fluoride removal by mixtures of activated carbon prepared from Neem ( <i>Azadirachta indica</i> ) and Kikar ( <i>Acacia arabica</i> ) leaves.  | <b>Kumar, S.</b> , Gupta, A. and Yadav, J. P.               | <i>Ind. J. Chemical Technology</i> , 14: 355-361.<br><b>I.F 0.5</b>  | 2007                |
| Removal of fluoride by thermally activated carbon prepared from neem ( <i>Azadirachta indica</i> ) and kikar ( <i>Acacia arabica</i> ) leaves. | <b>Kumar, Sunil</b> ; Gupta, A. and Yadav, J.P.             | <i>J. Environ. Biol.</i> 29(2):227-232<br><b>I.F 0.67</b>  | 2008                |
| Fluoride distribution in underground drinking water sources of Jhajjar district, Haryana, India.   | Yadav, J. P., Lata S. and <b>Kumar S.</b>                   | <i>Environment Geochemistry and Health.</i> 31:431-438.<br>Published online DOI 10.1007/s10653-008-9196-3.<br><b>I.F 5.1</b> | 2008                |
| Indigenous Knowledge of Medicinal plants used by Saperas Community of Khetawas Jhajjat District, Hayana,                                       | Panghal M., Arya V., Yadav S., <b>Kumar S.</b> , Yadav J.P. | <i>J. Ethnobiology and Ethnomedicine</i> , 6:4.<br><b>I.F 3.41</b>   | 2010                |
| Trophic State Index and Assessment of Water Quality for Domestic and Agriculture Purpose of Bhindawas Wetland, Jhajjar, Haryana (India).       | <b>Kumar S.</b> and Dhankhar R.                             | <i>Annals of Biology</i> , 28(2): 144-151.   | 2012                |
| Isonymic Electrophoretic Patterns of <i>Salvadora persica</i> .  | Saini S., Yadav J.P. and <b>Kumar S.</b>                    | <i>Biojournal</i> , 8 (1): 70-75.  | 2013                |

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|---|--|--|------|
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| Ground water suitability for domestic and irrigation purpose at villages of Meham block, ohtak, India.                            | Amarjeet, Kumar S., Arya S.S. and <b>Kumar S.</b>                          | <i>International Journal of Research</i> , 2(2):666-680.                 | 2015 |
| Effect of salinity on plant water status, solute accumulation and distribution in wheat ( <i>Triticum aestivum</i> L.) genotypes. | Meenakshi, Anuradha, Shashi, Dhankar S., Kanupriya, Kumar S. and Arya S.S. | <i>International Journal of Research</i> , 2(3):96-109.                  | 2015 |
| Variation in physico-chemical characteristics of water quality of Bhindawas Wetland, Jhajjar, Haryana (India).                    | <b>Kumar S.</b> and Dhankhar R.  | Research Journal Chemical Science , (7):29-34.                           | 2015 |
| Monitoring of Noise Levels at Various Sites during Winter Season at Bhindawas Wetland, Haryana, India.                            | <b>Kumar S.</b> and Dhankhar R.  | Current World Environment , 10(3): 807-812.                              | 2015 |
| Economic value assessment of Bhindawas wetland, Jhajjar Haryana (India).  | <b>Kumar S.</b> and Dhankhar R.  | Indian Journal of Environmental Sciences , 19(1&2):5-10.                 | 2015 |
| Assessment of floristic and avian faunal diversity of Bhindawas wetland, Jhajjar Haryana (India).                                 | <b>Kumar S.</b> and Dhankhar R.  | Plant Archives , 15(2): 733-740  | 2015 |
| Ground water quality assessment of rural habitation at Meham block, Rohtak, Haryana (India): Focused on fluoride and nitrate.     | Amarjeet, Poonam, Kumar S and <b>Kumar S.</b>                              | International Journal of Pharma and Bio Sciences, 7(2): (B) 568-574.     | 2016 |
| Relationship between water, urine and serum fluoride and fluorosis in school children of Jhajjar District, Haryana, India.        | <b>Kumar S.</b> Lata S., Yadav J. and Yadav J. P.                          | Applied Water Science, DIO 10.1007/s 13201-016-0492-2.<br><b>IF 5.41</b> | 2017 |

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| Analysis of water, sediment quality and total metals accumulation in aquatic vegetation at Bhindawas wetland, Jhajjar Haryana, India.    | <b>Kumar S.</b> , Dhankhar R. And Singh S.                       | Plant Archives, 17(2): 1139-1145   | 2017 |
| Occurrence of Fluoride in Aqueous Environment : A Review   | Yadav S., Bansal S.K and <b>Kumar S</b>                          | The Konkan Geographer, 17: 113-115   | 2018 |
| Prevalence of Fluorosis among school going children in district Mahendergarh, Haryana, India   | Yadav S., Bansal S. K., <b>Kumar S.</b> and Yadav S.             | International Journal of Basic and Applied Research, 8(9): 1349-1363             | 2018 |
| Fluoride distribution in underground water of district Mahendergarh Haryana, India   | Yadav S., Bansal S. K., Yadav S. and <b>Kumar S.</b>             | Applied Water Science, 9:62<br>DOI: 10.1007/s13201-019-0935-7<br><b>I.F 5.41</b> | 2019 |
| Utilization of unwanted terrestrial weeds for removal of dyes  | Singh A., Kumar S., Panghal V., Arya S.S. and <b>Kumar S.</b>    | Rasayan Journal of Chemistry, 12(4): 1956-1963                                   | 2019 |
| Assessment of change in soil properties before and after flooding due to the rainy season in Bhindawas wetland, Jhajjar, Haryana (India) | <b>Kumar S.</b> and Dhankhar R.                                  | Indian Journal of Science and Technology, 13(20): 2057-2064                      | 2020 |
| Heavy metals toxicity and their remediation through phytotechnology: A review.   | Kumar S., Singh A., Vishal, Singh B., Mor V. and <b>Kumar S.</b> | Plant Archives, 20(1): 3174-3186   | 2020 |

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|---|---|--|------|
| Column studies of adsorption by using dead biomass of <i>Eichhornia crassipes</i> for Hexavalent Chromium   | <b>Kumar S.</b> and Dhankhar R.                               | Research Journal of Chemistry and Environment, 24(10): 31-38   | 2020 |
| Assessment of heavy metals contamination in drains water and aquatic plants of Rohtak and Bahadurgarh (Haryana), india  | Kumar S., Singh A., Panghal V. and <b>Kumar S.</b>            | Plant Archives, 20(2): 6421-6427   | 2020 |
| Lead (Pb) phytoremediation potential assessment of <i>Brachiaria mutica</i> I (para grass) and <i>Cyperus rotundus</i> I (nut grass) from aqueous solution  | <b>Kumar S.</b> , Kumar J., Singh S., Kumar S. and Arya S. S. | Plant Archives, 20(2):6051-6056  | 2020 |
| Optimization of experimental factors for Hexavalent Chromium removal by dead biomass of water Hyacinth  | <b>Kumar S.</b> and Dhankhar R.                               | Rasayan Journal of Chemistry, 13(4):2376-2384  | 2020 |
| Isotherm, Kinetics and Thermodynamic Studies of Hexavalent Chromium Adsorption by Using Dead Biomass of <i>Eichhornia crassipes</i>   | <b>Kumar S.</b> and Dhankhar R.                               | Oriental Journal of Chemistry 36( ):915-922  | 2020 |
| Adsorption of chromium (Cr <sup>6+</sup> ) on the dead biomass of <i>Salvinia molesta</i> (Kariba weed) and <i>Typha latifolia</i> ( broadleaf cattail) isotherm, kinetic and thermodynamic study | Singh A, <b>Kumar S</b> , Panghal V                           | Applied Water Science, 11, 149.<br><a href="https://doi.org/10.1007/s13201-021-01481-7">https://doi.org/10.1007/s13201-021-01481-7</a> | 2021 |
|   |   | <b>I.F 5.41</b>  |      |

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|--|---|---|------|
| Soil heavy metals contamination and ecological risk assessment in Rohtak urban area, Haryana (India)   | Panghal V, Singh A, Kumar R, Kumari G, Kumar P, <b>Kumar S.</b> | Environmental Earth Science, <b>80</b> , 731-735.<br><a href="https://doi.org/10.1007/s12665-021-10028-7">https://doi.org/10.1007/s12665-021-10028-7</a>          | 2021 |
| Application of Aquatic Plants Dead Biomass in Remediation of Heavy Metals Pollution By Adsorption: A Review,   | Singh A, <b>Kumar S.</b>  | Indian Journal of Science and Technology, 15(16): 729-735   | 2022 |
| Usability of <i>Brachiaria mutica</i> (para grass) and <i>Cyperus rotundus</i> (nut grass) as bioadsorbents for the removal of methylene blue from aqueous solution: isotherms, kinetics, and thermodynamics studies | Arora, D, Arora, A, Singh, Agarwal R, <b>Kumar S.</b>           | Sustainable Water Resource Management, <b>8</b> , 139-148.<br><a href="https://doi.org/10.1007/s40899-022-00734-w">https://doi.org/10.1007/s40899-022-00734-w</a> | 2022 |
| Assessment of Groundwater and Surface Soil using Multivariate Statistical Techniques and Contamination Indices: A Case Study of Gurugram Millennium City, Haryana, India   | Panghal V, Bhatia R, Kumar R, Arya SS, Kumar S.                 | Journal of Geological Society of India  | 2023 |

### Book Chapter

1. Kumar S. (2017). Air Pollution Monitoring, Modeling and Control. In B.R Gurjar and P. Kumar (Ed). Environmental Science and Engineering Vol.3: Air and Noise Pollution (pp 1-31) Studium Press LLC. ISBN 1-62699-091-3
2. Arya S. S., Devi S., Ram K., **Kumar S.**, Kumar N., Mann A., Kumar A., Chand G. (2019). Responses and Utilization of Halophytes. In M. Hasanuzzaman et al. (Eds.) Ecophysiology, Abiotic Stress Responses, 271-287, Springer Nature Singapore Pvt Ltd.
3. Mamta, Kumar A., Kumar N., **Kumar S.**, Monika, Heena, Arya S. S. (2020) Salinity: Distribution and Impacts on Plants. In S. Gurumurthy and S.S. Jinus (Eds.) Management of Abiotic Stress in Crop Plants, 41-73, IP Innovative Publication Pvt. Ltd
4. Yadav, N. [Monika](#), [Kumar A.](#), [Kumar N.](#), [Mamta](#), [Heena](#), [Kumar S.](#), Arya S..S (2022). Impacts on Plant Growth and Development Under Stress. In: Vaishnav, A., Arya, S., Choudhary, D.K. (eds) Plant Stress Mitigators. Springer, Singapore. [https://doi.org/10.1007/978-981-16-7759-5\\_4](https://doi.org/10.1007/978-981-16-7759-5_4)
5. Monika, Yadav N. [Monika](#), [Kumar A.](#), [Kumar N.](#), [Mamta](#), [Heena](#), [Kumar S.](#), Arya

- S..S (2022). Arbuscular Mycorrhizal Fungi: A Potential Candidate for Nitrogen Fixation. In: Vaishnav, A., Arya, S., Choudhary, D.K. (eds) Plant Stress Mitigators. Springer, Singapore. [https://doi.org/10.1007/978-981-16-7759-5\\_11](https://doi.org/10.1007/978-981-16-7759-5_11)
6. Singh A., **Kumar S.** (2023)Utilization of Aquatic Plants Dead Biomass in Adsorption of Heavy Metals from Wastewater, In Grace A.N., Sonar p., Bhardwaj P., Chakravorty A.(eds) Handbook of Porous Carbon Materials, 655-668, Springer Nature Singapore Pvt Ltd.

## E modules

1. Kumar S. (2020) Climate Change and Rain Fall Pattern, SWAYAM, Environmental Education in Teachers Training Institutes (Course ID-5284) Module No. 48 (d)
2. Kumar S. (2020) Minor Forest Produce and Economic Growth, SWAYAM, Environmental Education in Teachers Training Institutes (Course ID-5284) Module No. 48 (f)

## Published in Conferences/Seminar Proceedings

1. **Kumar S.**, Kumar K. and Bishnoi M. Spectral Distribution of noise level at various traffic sites of Hisar city, Haryana. Proceeding of National Seminar on Environmental Challenges:Sustainable Development p. 185-191:2010, organized byDepartment of Environmental Sc. M D U Rohtak.
2. **Kumar, S.** and Gupta, A. Defluoridation by thermally activated carbon prepared from Neem Removal of fluoride by thermally activated carbon prepared from neem (*Azadirachta indica* ) and kikar ( *Acacia arabica* ) leaves though column process. Proceeding of National Conference on Multidisciplinary Approach in Frontier Area of Environmental Science and Engineering. p. 236-234: 2011 organized by Department of Environmental Sc. & Engg G.J.U.S.& T Hisar on 3-4 March.
3. Kumar S. and **Kumar S.**, Constructed wetlands an alternative technology for wastewater treatment: A Review: In Proceeding of National Seminar on Next Generation Sciences: Vision 2020 and Beyond. P. 377-389:2014. Organized by Department of Zoology, M.D.U. Rohtak on March 08, 2014.
4. **Kumar S.**, Fluoride problems and its health effects: A Review: In Proceeding of National Seminar on Next Generation Sciences: Vision 2020 and Beyond. P. 464-475:2014. Organized by Department of Zoology, M.D.U. Rohtak on March 08, 2014.



