


## Curriculum Vitae

<b>Full Name:</b>	Dr. Shivani Uniyal			
<b>Designation:</b>	Assistant Professor			
<b>Department:</b>	Botany			
<b>University:</b>	Hemvati Nandan Bahuguna Garhwal University Srinagar (Garhwal), 246174, Uttarakhand, India			
<b>Mobile:</b>	+91-8340379395			
<b>Email:</b>	<a href="mailto:shivaniuniyalhnb@gmail.com">shivaniuniyalhnb@gmail.com</a>			
<b>Educational Qualification:</b>	<ul style="list-style-type: none"><li>• B.Sc. H.N.B. Garhwal University, Srinagar, India. (2008)</li><li>• M.Sc. G.B. Pant university of agriculture and technology, Pantnagar, India. (2010)</li><li>• Ph.D. G.B. Pant university of agriculture and technology, Pantnagar, India. (2014)</li></ul>			
<b>Teaching Experience:</b>	02 Years	<b>Research Experience:</b> Post Docs	02 Years	
			Department of Botany, Banaras Hindu University, Varanasi, India	
<b>Research interest:</b> <ul style="list-style-type: none"><li>• Environmental Pollution</li><li>• Plant-microbe interactions</li><li>• Bioremediation</li><li>• Waste Management</li><li>• Sustainable Agriculture</li></ul>				
<b>Honors &amp; Awards:</b> <ul style="list-style-type: none"><li>• Qualified CSIR-UGC-NET JRF (AIR-133).</li><li>• Qualified UGC-NET.</li><li>• Qualified ICAR-NET.</li><li>• Qualified U-SET.</li><li>• Awarded <b>INSPIRE Fellowship</b> by Department of science and technology under Ministry of Science and Technology in 2010.</li><li>• Received <b>Merit award</b> for first rank holder in M.Sc. by Jawaharlal Nehru Memorial Fund, New Delhi in 2011</li><li>• <b>Senior Research Fellowship</b> by Department of science and technology under Ministry of Science and Technology in 2012.</li><li>• Awarded <b>National Post-Doctoral Fellowship</b> by Science and Engineering Research Board (SERB) under Ministry of Science and Technology in 2016.</li></ul>				
<b>Projects Completed:</b> 01 <b>Funding Agency:</b> DST-SERB <b>Amount:</b> 19,20000				
<b>Professional affiliations:</b> <ul style="list-style-type: none"><li>• Association of Microbiologist of India</li><li>• Crop and Weed Science Society (CWSS), Kolkata, India</li></ul>				

<b>Conference/ seminar/workshop participated:</b>	
<b>Duration</b>	<b>Academic Events</b>
14 <sup>th</sup> to 16 <sup>th</sup> March, 2024	Presented a paper entitled “Exploring the potential of microbe-based approaches for bioremediation of pesticide contaminated soil in soil microcosm” in National conference on Prospects and challenges: Promoting sustainable farming systems in mountain regions of Uttarakhand held at H.N.B. Garhwal University, Srinagar
20 <sup>th</sup> -23 <sup>rd</sup> January, 2017	Presented a paper on “Microbial technologies” in International symposium on Eco-efficiency in agriculture and allied research, organized by Crop and Weed science Society, Bidhan Chandra Krishi Viswavidyalaya, West Bengal
23 <sup>rd</sup> -25 <sup>th</sup> February, 2017	Presented a paper entitled “Occurrence and distribution of chlorpyrifos residues in environment: A global scenario”. In National symposium on Issues and Challenges in Ecological sciences organized by Centre of Advanced study in Botany, Banaras Hindu University
11 <sup>th</sup> February to 13 <sup>th</sup> February 2016	Presented a paper entitled “Environmental fate of Fipronil in <i>Zea mays</i> field Soil, under Sub- Tropical Climatic Conditions of India” in international conference held at I.T.M. University, Gwalior
6 <sup>th</sup> -10 <sup>th</sup> July 2015	Participated in ISPRS Summer school on Open source GIS, conducted by Indian Institute of Remote Sensing, Indian space research organization (ISRO), Dehradun
26 <sup>th</sup> -28 <sup>th</sup> December, 2013	Presented a paper entitled “Cadmium biosorption by <i>Chrysomonas</i> sp.; Kinetics and thermodynamic studies” in 8 <sup>th</sup> Uttarakhand state science and technology congress, at Dehradun
21 <sup>st</sup> May to 22 <sup>nd</sup> May 2013	Presented a poster entitled “Remote sensing: A novel tool for water resource management and conservation” in national workshop held at G.B. Pant University of Agriculture & Technology, Pantnagar.
22 <sup>nd</sup> -24 <sup>th</sup> November 2012	Presented a paper entitled “Biodiversity: Harnessing with sustainable development” in International symposium held from at G.B. Pant University of Agriculture & Technology, Pantnagar
8 <sup>th</sup> -10 <sup>th</sup> November, 2012	Participated in the National workshop on Scientific/Research paper writing organized by the National Academy of Sciences, India, held in the Academy of Allahabad
24 <sup>th</sup> March, 2012	Participated in Awareness cum training program on PPV and FR Act, 2001, organized by department of Genetics and Plant breeding, G.B. Pant university of agriculture and technology
11 <sup>th</sup> -13 <sup>th</sup> November 2011	Participated in the discussions during WCMANU-2011 held at Department of Zoology & Environmental Science, Gurukul Kangri Vishwavidyalaya, Haridwar, Uttarakhand and presented an oral presentation entitled “Microorganisms mediated biosorption of heavy metals from synthetic solutions”.
8 <sup>th</sup> November, 2011	Participated in the National Seminar on “Pesticides, Food Safety and Environment” organized by Departments of Chemistry & Microbiology, G. B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand with poster presentation of research paper entitled “Heavy metal biosorption: Environmental significance and exploitation”.
15 <sup>th</sup> -17 <sup>th</sup> November 2010	Participated in International conference “Cooling the earth: Tactics for restoring climate order and saving the living planet”
<b>Conference/ seminar/workshop organized:</b>	
20 <sup>th</sup> -21 <sup>st</sup> March, 2024	Organized a workshop on forest and Innovation: New solutions for a better world, on the occasion of International Day of Forest, at Department of Botany, B.G.R. Campus, Pauri

### Research Publications:

- Sharma D, **Uniyal S**, Tewari L. Biocatalytic transesterification of algal oil employing a heterogenous methanol tolerant lipase enzyme aggregate from *Bacillus mycoides* strain CV18. *Process Biochemistry*, 2021. 111(2), 43-52. (I.F.-4.885)
- **Uniyal S**, Sharma RK, Kondakal Vishnu. New insights into the biodegradation of chlorpyrifos by a novel bacterial consortium: Process optimization using general factorial experimental design. *Ecotoxicology and Environmental Safety*, 2021, 209, 111799. (I.F.-7.129)
- **Uniyal S**, Sharma RK, Technological advancement in electrochemical biosensor-based detection of Organophosphate pesticide chlorpyrifos in the environment: A review of status and prospects. *Biosensors and Bioelectronics*. 2018, 116, 37-50 (I.F.- 12.545)
- **Uniyal S**, Paliwal R, Verma M, Sharma RK, Rai JPN. Isolation and characterization of fipronil degrading *Acinetobacter calcoaceticus* and *Acinetobacter oleivorans* from rhizospheric zone of *Zea mays*. *Bulletin of Environmental Contamination and Toxicology*. 2016, 96, 833-838. (I.F.-2.807)
- **Uniyal S**, Paliwal R, Sharma RK, Rai JPN. Degradation of fipronil by *Stenotrophomonas acidaminiphila* isolated from rhizospheric soil of *Zea mays*. *3biotech*. 2016. 6:48. (I.F.-2.893)
- Paliwal R, **Uniyal S**, Verma M, Kumar A, Rai JPN. Process optimization for biodegradation of black liquor by immobilized novel bacterial consortium. *Desalination and Water treatment*. 2016, 57, 18915-18926. (I.F.-1.273)
- Paliwal R, **Uniyal S**, Rai JPN. Evaluating the potential of immobilized bacterial consortium for black liquor decolorization and delignification. *Environmental science and pollution research*. 2015. 22(9): 6842-6853. (I.F.-5.190)
- **Uniyal S**, Rawat M, Rai JPN. Cadmium biosorption by *Stenotrophomonas humi* and *Micrococcus luteus*: kinetics, equilibrium and thermodynamic studies. *Desalination and Water treatment*. 2013; 51:1-13. (I.F.-1.273)
- **Uniyal S**, Rai J.P.N. Bioremediation: Molecular tools for microbial community analysis. *Oaks*. 2014; 9:68-70

### Book Chapters:

- **Uniyal S**, Sharma D., Bijalwan P.K. "Agro-waste Empowerment: Technologies and Opportunities for Green Energy Production" In *Sustainable Agricultural Waste Management: Advantages, Challenges, and Further Improvements*. Elsevier Press. 2025.
- **Uniyal S**, Bijalwan P.K. "Scaling Up Bioreactor Systems for Sustainable Bio-Refinery: A Crucial Step in Advancing the Green Economy" In *Biotechnological Advances in Biorefinery*. Springer Nature. 2024.
- **Uniyal S**, Rai JPN. The Current Scenario in Chitosan Nanocomposite Application in Wastewater Treatment. In: *Nano-biotechnology for wastewater treatment: Theory, Avenues and Practices*. Rai and Saraswat (Eds). Pp. 315-330. 2022. Springer nature.
- Verma M, Sati M, **Uniyal S**. Impact of Renewable Energy in Reducing Greenhouse Gas Emissions. In: *Renewable Energy and Green Technology*. pp. 1-13. 2021, CRC Press. 10.1201/9781003175926-11.
- **Uniyal S**, Verma M, & Parmar S. Fungi mediated pollutant degradation and bioelectricity generation: An overview of current status. In book: *Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-technology*. Editor(s): V.K. Sharma, M. P. Shah, S. Parmar, A. Kumar, 2021. Academic Press. (pp.101-119). ISBN 9780128219256
- **Uniyal S**, Kumar I, Singh P, Sharma R. Genetic engineering: an emerging approach for fostering bioremediation, current status, challenges and outlook. In: *Innovations in Life Science Research*. Nandita Ghoshal (Editor), Rajeshwar P. Sinha, PhD (Editor), Shashi Pandey-Rei (Editor). (2019). Nova science. ISBN: 978-1-53615-868-7
- Sharma RK, Pandey B, **Uniyal S**. Phytotoxicity: An essential tool in Ecological risk assessment. In: *Phytoremediation of Environmental Pollutants*, 2016, (Chandra, R, Dubey, N. K., Kumar, V Eds.) CRC Press.
- **Uniyal S**, Paliwal R, Kaphaliya B, Sharma RK. Human Overpopulation: Impact on Environment. In: *Environmental Issues Surrounding Human Overpopulation*. 2016. (Singh et al. Eds.), Hershey, Pennsylvania, IGI Global.
- **Uniyal S**, Biodiversity harnessing with sustainable development. In: *Environment, Agriculture and*

Sustainable Development. 2014. (Negi et al. Eds.), New Delhi. S.K. pp 116-121.

- **Uniyal S**, Pesticides: Environmental problems and degradation. In: Ecology, Environment and agriculture. 2015. (Negi et al. Eds.), pp. 3.3.1–3.3.11. Biotech Books. ISBN No. 978-81-7622-339-3
- Kaphaliya B, Paliwal R, Tariyal K, **Uniyal S**. Saline water problem in India: Its impact and management. In: Aquatic Science: The present Scenario. In; Water biology. 2018. (Khanna, D.R., Bhutiani R., Eds.) Discovery Publishing House Pvt. Ltd., New Delhi
- Paliwal R, Gusain P, Kaphaliya B, **Uniyal S**. Algal Potential for Inorganic and Organic Pollutants Decontamination. In: Aquatic Science: The present Scenario. In; Water biology. 2018. (Khanna, D.R., Bhutiani R., Eds.) Discovery Publishing House Pvt. Ltd., New Delhi.