

Kumaun University, Nainital

Curriculum Vitae

Name : **Dr. Hem Chandra Joshi**
Designation : Assistant Professor (Contractual)
Department : Botany
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Educational Qualification

Degree	University	Subjects
B.Sc.	Kumaun University	Zoology, Botany, Chemistry
M.Sc.	G.B.P.U.A. & T. Pantnagar	Biophysics, Molecular Biology, Biochemistry, Cell Biology
M.Sc.	Uttarakhand Open University	Botany
Ph.D.	G.B.P.U.A. & T. Pantnagar	Plant Physiology

Work Experience

Position	Department	University/Organization	Year
Teaching Personnel	Biophysics	G.B.P.U.A. & T. Pantnagar	2014-2015
Assistant Professor	Botany	Kumaun University	2022- Conti...

Research Interests

- Ecological Nanoscience:** Exploring the intersection of nanotechnology and environmental conservation to develop innovative solutions for sustainable and eco-friendly practices.
- Botanical Euphony:** Delving into the symphony of Plant Physiology, seeking to comprehend the fascinating mechanisms that govern the life and growth of flora, fostering a deeper connection with nature.
- Elemental Nourishment:** Embarking on a quest in Mineral Nutrition, deciphering the elemental intricacies that enable life's flourishing, enriching our understanding of how essential nutrients sustain all living organisms.

4. **Biosensors:** Crafting ingenious devices that bridge the gap between biology and technology, enhancing the way we perceive and monitor the world around us, opening up new avenues for diagnostics and environmental surveillance.

Publications

Research Papers

Authors name	Title of the paper	Journal Name, vol, page no	Year
Hem C. Joshi , Himanshu Kharkwal, Ajay Kumar, Piyush Kumar Gupta	Development of a quartz crystal microbalance-based immunosensor for the early detection of mesothelin in cancer	Sensors International, Volume 4, 100248	2023
Manoj Kumar Bhatt, KP Raverkar, Ramesh Chandra, Navneet Pareek, Prithwiraj Dey, Biswajit Pramanick, Hem C. Joshi , Mukesh Kumar, Ahmed Gaber, Amnah Mohammed Alsuhaibani, Akbar Hossain	Effects of varied nutrient regimes on soil health and long-term productivity in a rice-wheat system: insights from a 29-year study in the mollisols of the Himalayan Tarai region	Frontiers in Sustainable Food Systems, Vol.7, 1206878	2023
Anjali Rawat, Dinesh Kumar Singh, Subhash Chandra, Hem Ch. Joshi and Manoj Kumar Bhatt	Influence of Establishment Techniques and Foliar Nutrient Spray Timing on Growth, Yield Parameters, Crop Productivity, Quality, and Economic Viability of Soybean (Glycine max L.) in The Tarai Region of Uttarakhand	ENVIS Bulletin Himalayan Ecology, Vol 31, 157-165	2023

Sanchita Bipin Patwardhan, Soumya Pandit, Piyush Kumar Gupta, Niraj Kumar Jha, Jyoti Rawat, Hem C Joshi , Kanu Priya, Meenal Gupta, Dibyajit Lahiri, Moupriya Nag, Vijay Kumar Thakur, Kavindra Kumar Kesari	Recent advances in the application of biochar in microbial electrochemical cells	FuelElsevier, Volume 311, , 122501	2022
Hem C Joshi , M.K Bhatt, S.K Guru, B.S Mahapatra, Mahesha Nand	Chemical Properties of Soil Under Conventionally and Organically Managed System During Production of Basmati rice in Himalayan Foothills of Uttarakhand	ENVIS Bulletin Himalayan Ecology, Vol.28,32-36	2021
M.K Bhatt, R Labanya, Hem C Joshi , Mahesha Nand	Effect of long-term inorganic and organic manure on physical and biological properties of soil in Uttarakhand-A review	ENVIS Bulletin Himalayan Ecology, Vol.27,49-54	2020
Navneet Pareek, K.P Raverkar, M.K Bhatt, Shikhar Kaushik, Subhash Chandra, Gurvinder Singh, Hem C. Joshi	Soil nutrient status of Bhabhar and hill areas of Uttarakhand	ENVIS Bulletin Himalayan Ecology, Vol.27,89-93	2020
Manoj Kumar Bhatt, Rini Labanya, Hem C Joshi	Influence of Long-term Chemical fertilizers and Organic Manures on Soil Fertility - A Review	Universal Journal of Agricultural Research, Volume-7, 177-188	2019
Prinsa, Hem C Joshi , Babita Joshi, S.K Guru	Management of Isoproturon-Resistant Phalaris minor in Wheat by Alternate Herbicides under Tarai Region Conditions	Journal of Agricultural Science and Food Research, Volume-10, 263	2019
Hem C Joshi , Om Prakash, MK Nautiyal, BS	A Comparison between the Grain Quality Parameters of Rice	Universal Journal of Plant Science, Volume-7,19-27	2019

Mahapatra, S. K Guru	Grown under Organic and Inorganic Production System		
Hem.C Joshi, Prashant Singh, S.K Guru, B.S Mahapatra	Changes in the chemical properties of soil during conversion period from conventional system to organic system	ENVIS Bulletin Himayalan Ecology, Volume-26,46-50	2018
Himanshu Kharkwal, HC Joshi, KP Singh	Fabrication and Characterization of Layered Graphene Oxide Biocompatible Nano-Film by Various Methods	Journal of Biochemistry and Biophysics, Volume-6,1-19	2018
Hem C Joshi, Alok Sukla, S.K Guru, K.P Singh, Prashant Singh	Nanotechnology: application in the field of agriculture	Journal of Plant Development Sciences, Volume-9, 731-737	2017
M.K Bhatt, Rini Labanya, Hem C Joshi, Navneet Pareek, Ramesh Chandra, K.P Raverkar	Long-term effects of inorganic fertilizers and FYM on soil chemical properties and yield of wheat under rice-wheat cropping system	ENVIS Bulletin Himayalan Ecology, Volume-25,28	2017
HC Joshi, KP Singh, A Tomar, P Singh	Application of nanopore of solid membrane for recognition of fluorescent Pseudomonas	Journal of Biochemistry and Biophysics 5, 53-64	2017
HC Joshi, B Joshi, SK Guru, SC Shankdhar, A Kumar, BS Mahapatra,	Consequences of integrated use of organic and inorganic fertilizers on yield and yield elements of rice	Journal of Agricultural Science and Research Volume-7 , 163- 166	2017
M Pant, H Kharkwal, KP Singh, HC Joshi	Detection of Rota Virus with the Help of Nanomaterial Based Field Effect Transistor (BIO-FET)	Biosensors journal 6 (2), 149	2017

a) Patents

Authors name	Title of the patent	Patent no (Granted or filed)	Year
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Piyush Kumar Gupta, Soumya Pandit, Shaily Chauhan, Rekha Gahtori, Siva Chander Chabattula, Hem C. Joshi , S Shankara Narayanan, Mohit Sahni, R. Ranjith Kumar, P. Senthil Kumar	Anti-Microbial Chitosan Based Nanoparticles Composition and Method for Fabrication Thereof	202111040350(Published)	2021
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b) Book chapters

Authors name	Title of the book	Publisher	Volume/Page no.	Year
Hem C. Joshi , Prabha Pant, Harsh K. Chauhan	Challenges and opportunities in scaling up plant functional trait based approaches	Nature Springer (Springer International Publishing).		2024
Om Prakash, Abhishek Pathak, Ajay Kumar, Vijay Kumar Juyal, Hem C. Joshi , SaurabhGangola, Kiran Patni, Geeta Bhandari, Deep Chandra Suyaland Viveka Nand	Spectroscopy and its Advancements for Environmental Sustainability	Nature Springer (Springer International Publishing).	VIII, 396.	2022
Hem C. Joshi , Yashpal Singh, M.K. Bhatt and Om Prakash	Domestic wastewater treatment using floating raft techniques.	Elsevier International Publishing.		2022

c) Conference Publications/Proceedings

Authors name	Title of the paper	Conference name	Year
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<u>Hem. C. Joshi</u> S. K. Guru, B. S. Mahapatra	Effects of Farmyard Manure and Inorganic Fertilizer Application on Soil Physico-Chemical Properties and Nutrient balance in Rice field	National agronomy congress	2018
K P Singh , <u>H C Joshi</u>	Selective sleuthing of <i>fluorescent Pseudomonas</i> through ion trafficking across gold-polycarbonate composite nano porous membrane	Journal of Nanomedition & Nanotechnology	2014

Teaching details

Name of the course/paper	Department	University	Year
Principles of Plant Physiology(BPY 602)	Plant Physiology	G.B.P.U.A. & T. Pantnagar	2014-15
Climate Change and Crop Growth (BPY 705)	Plant Physiology	G.B.P.U.A. & T. Pantnagar	2014-15
An Introduction to Environmental Science(BBE 201)	Environmental Sciences	G.B.P.U.A. & T. Pantnagar	2014-15
Plant Physiology & Biochemistry	Botany	Kumaun University	2022-24
Cell Biology & Molecular Biology	Botany	Kumaun University	2022-24
Global Climate Change	Botany	Kumaun University	2022-24

Professional Memberships

Organization	Position	Year
Defence materials and stores research and development and establishment (DMSRDE)	Life Membership	2010
Academy of Microscope Science & Technology (AMST)	Life Membership	2010

Honours and Awards

Award	Awarding Organization	Year
University Gold Medallist (M.Sc.)	Uttarakhand Open University	2021
Young Scientist Award 14thUSSTC	Uttarakhand Council for Science & Technology (UCOST)	2020

Conference Presentations (add row if required)

Title of presentation	Conference name	Name of the institution	Year
Comparison between the grain quality parameter of Rice grown under organic and inorganic production system	14thUSSTC	Uttarakhand Council for Science & Technology (UCOST)	2020
Effects of Farmyard Manure and Inorganic Fertilizer Application on Soil Physico-Chemical Properties and Nutrient balance in Rice field	National agronomy congress	Department Of Agronomy, G.B.P.U.A. & T. Pantnagar Uttarakhand	2018
Application of nanopore of solid membrane for recognition of <i>fluorescent Pseudomonas</i>	12thUSSTC	Uttarakhand Council for Science & Technology (UCOST)	2018
Application of nanopore of solid membrane for recognition of cancer Antigen	Indo-US Symposium on "Recent trends on Nanobiotechnology"	Uttarakhand Council for Biotechnology, Haldi, U.S. Nagar, Uttarakhand	2015
Application of nanopore of solid membrane for recognition of some analytes	9thUSSTC	Uttarakhand Council for Science & Technology (UCOST)	2014
Development ofImmunosensor for the detection of mesothelin antigen	National Conference on Science of Omics for Agriculture Productivity: Future Prospective	Dept. of Molecular Biology and Genetic Engineering, College of Basic Sciences & Humanities, G. B. Pant University of Agriculture and Technology, Pantnagar	2014



Signature of the faculty member