



Curriculum-vitae

Dr. Manzoor Ahmad Shah

Associate Professor

Department of Botany

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Positions/Assignments held

Position held	Name of Organisation	Period		Nature of work
		From	To	
Associate Professor	Department of Botany, University of Kashmir	16-7-2016	Continuing	Teaching and Research
Coordinator RUSA, SAP, AIU	University of Kashmir	25-11-2019	Continuing	Administration
Director of Internal Quality Assurance	University of Kashmir	04-03-2016	25-11-2019	Administration
Senior Asst. Professor	Department of Botany, University of Kashmir	16-07-2008	16-7-2016	Teaching & research
Visiting Professor	King Saud University, Riyadh	8-2-2015	8-1-2016	Research on mycorrhizas
Faculty Affiliate	Division of Biological Sciences, University of Montana, USA	23-8-2011	25-11-2012	Research on invasion biogeography
Post-Doctoral Fellow	Center for Research, Development & Management, University Laval, Canada.	25-05-2010	15-10-2010	Research on predictive modelling
Research Intern	Center of Forestry & Environmental Genomics, University Laval, Quebec	10-10-2008	31-03-2009	Research in molecular ecology
Assistant Professor	Department of Botany, University of Kashmir	16-07-2003	16-07-2008	Teaching and research

MAJOR RESEARCH FOCI:

Plant Invasions, Plant-Mycorrhiza interactions, Freshwater Ecology

CONTRIBUTIONS AT A GLANCE

Books: 1

Book chapters: 6

Research Papers: 70

Research Projects: 11

(International = 3, National Network = 7, Individual = 4)

Research Supervision: M.Phil: 9 awarded PhD: 6 awarded, 2 submitted, 6 under supervision

Invited lectures delivered: 45

Conferences/workshops organized: 10

Countries visited for different academic assignments

France, Sweden, Canada (twice), USA (twice), Germany, Hungary, Saudi Arabia

Research scholars sent abroad: 6

AWARDS/FELLOWSHIPS

- **Indo-US 21st Century Knowledge Initiative award**, formerly known as Obama-Singh award, 2016.
- Visiting professorship by the King Saud University, **Riyadh** for one year with effect from 8-2-2015 to 8-1-2016.
- **Gold Medal** awarded by the Indian Academy of Environmental Sciences, Haridwar for best paper in a special session during the National Conference on *Status and Conservation of Biodiversity in India with Special Reference to Himalaya*, held at the University of Kashmir, Srinagar on October 4-5, 2013.
- “**Paryavaran Mitra Award**” conferred on 31st August 2013 in recognition of the dedicated and outstanding work in ecology and environmental science.
- The **DBT CREST AWARD** (Cutting-edge Research Enhancement and Scientific Training- Award)-2012, formerly known as Biotechnology Overseas Associateship (BTOA) Award, for working with Prof. R.M. Callaway, University of Montana, **USA**.
- Species Survival Commission’s Citation for Excellence to ISSG of which I am a member in 2017 for the outstanding contribution in delivering the species strategic plan 2017-18.
- Post-Doctoral Research Fellowship by the Canadian Bureau of International Education (CBIE) through the Canadian Commonwealth Exchange Programme (**Asia-Pacific**)–**Canada**, 2009.
- Young Scientist Grant awarded by the Federation of European Microbiological Societies (FEMS) in the 3rd Congress of European Microbiologists, **Gothenburg, Sweden**, June 28-July 2, 2009.
- Young Scientist Congress Grant award by the Organizing Committee of 6th International Conference on Mycorrhizas (ICOM6) from 9-4th August, 2009 in **BeloHorizonte Brazil** (declined).
- Doctoral Internship Award by the Canadian Bureau of International Education (CBIE) through the University of Laval, **Quebec, Canada**. 2008.
- Travel Grant Award by International Foundation of Sciences (IFS), **Stockholm, Sweden**, for the international conference, *Rhizosphere 2*, at **Montpellier, France**, 26-31 August, 2007.
- Joint UGC-CSIR fellowship (+NET) 2001.
- Science Talent Promotion Scholarship at P.G level (1998) by the Department of Science & Technology, Govt. of J&K, India.
- Junior Research Fellowship by S.K University of Agricultural Sciences & Technology, Shalimar, Srinagar, J&K.

SELECTED PUBLICATIONS

BOOK

- **Manzoor A. Shah** (2014) *Mycorrhizal Symbioses: Novel Dimensions in the Changing World*. Springer. ISBN 978-81-322-1864-7

Research Papers

1. Wani, G.A., Reshi, Z., Khasa. D.P., **Shah M.A.** (2020) Phenotypic trait variation in invasive and non-invasive alien species of Potamogeton in Kashmir Himalayan lakes of varying trophic status. *Acta Physiologiae Plantarum*, 42:73 **I.F 1.9**
2. Dar, M.A., Wani, G.A., Reshi, Z., Alqarawi, A.A., Abdellah E.F., **Shah M.A.** (2020) Stage-specific ploidy level variations in invasive species in comparison to rare endemics in Kashmir Himalaya. *Flora*, 262, 151525, doi.org/10.1016/j.flora.2019.151525, **I.F 1.4**
3. Rehman, S.; Farooq, R.; Jermy, R.; Asiri, S.M.; Ravinayagam, V.; Jindan, R.A.; Alsalem, Z.; **Shah, M.A.**; Reshi, Z.; Sabit, H.; Khan, F.A (2020) A Wild *Fomes fomentarius* for Biomediation of One Pot Synthesis of Titanium Oxide and Silver Nanoparticles for Antibacterial and Anticancer Application. *Biomolecules* 10, 622. **I.F 4.6**
4. Gaser A., Afreen A., Scott M., Marcus T., **Shah M.A.**, Damase K., Ruth M., Albert Ko., Jie Chen (2020) DNA aptamer-based non-faradaic impedance biosensor for detecting *E. coli*. *Analytica Chimica Acta* 1107, 135e144. **I.F 5.2**
5. Rosche, C., Hensen, I., Schaar, A., Zehra U.,**Shah, M.A** (2019) Climate, not native vs. non-native ranges, controls genetic structure and common garden performance of a cosmopolitan weed. *Ecological Monographs*, DOI: 10.1002/ecm.1386. **I.F 8.7**
6. Pandith S. A., Ramazan, S., Khan M, I., Reshi ZA, **Shah, M.A** (2019). Chalcone synthases (CHSs): The symbolic Type III polyketide synthases. *Planta*, 251, 15. **I.F. 3.37**
7. Khan, M.I., Pandit, S.A., Ramzan, S., **Shah. M.A.**, Reshi, ZA (2019) *Rheum moorcroftianum* (Polygonaceae) in Kashmir Himalaya. *Phytotaxa*, 405 (5), 269-275. **I.F. 1.18**
8. Lian C. T., Afreen Anwar, Scott M, Gaser N. A., Donghai L, Zhimin Y., Anh H. N., Mark T. M., **Shah, M. A.**, Jian Yang, Jie Chen & Xiujie S. Li (2018) Immuno-impedimetric Biosensor for Onsite Monitoring of Ascospores and Forecasting of *Sclerotinia* Stem Rot of Canola. *Nature Scientific Reports*, 8:12396 | DOI:10.1038/s41598-018-30167-5 **I.F. 4.48**
9. GA Wani, **Shah M.A.**, ZA Reshi, MA Dar (2018) Polyploidy determines the stage of invasion: clues from Kashmir Himalayan aquatic flora. *Acta Physiologiae Plantarum* 40 (3), 58 **I.F. 1.48**
10. D Adhikari, Z Reshi, BK Datta, SS Samant, A Chettri, K Upadhaya, **Shah M.A.** et al. (2018) Inventory and characterization of new populations through ecological niche modelling improve threat assessment. *Current Science*, 114 (3), 519-531 **I.F. 0.756**
11. Ahmad S. S., Reshi, Z. A., **Shah, M. A.**, Rashid, I. (2018) Phytoremediation of Heavy Metals by *Salvinia natans* in a Kashmir Himalayan RAMSAR Site. *Wetland Science and Practice*, 35 (2) 81-85.

12. Shafi, S., Kamili, A. N., **Shah, M. A.**, Parray, J. A., & Bandh, S. A. (2017). Aquatic bacterial diversity: Magnitude, dynamics, and controlling factors. *Microbial Pathogenesis*. **I.F: 1.30**
13. Shafi, S., Kamili, A. N., **Shah, M. A.**, Bandh, S. A., & Dar, R. (2017). Dynamics of bacterial class Bacilli in the deepest valley lake of Kashmir-the Manasbal Lake. *Microbial Pathogenesis*. **I.F: 1.30**
14. Pandith, S.A., Dhar, N., Rana, S., Bhat, W.W., Kushwaha, M., Gupta, A.P., **Shah, M.A.**, Vishwakarma, R. and Lattoo, S.K. (2016). Characterization and functional promiscuity of two divergent paralogs of Type III plant polyketide synthases from *Rheum emodi* Wall ex. Meissn. *Plant physiology*, pp.pp-00003. **I.F: 8.030**.
15. Ahmad S. S., Reshi, Z. A., **Shah, M. A.**, Rashid, I., Ara, R., & Andrabi, S. M (2016) Heavy metal accumulation in the leaves of *Potamogeton natans* and *Ceratophyllum demersum* in a Himalayan RAMSAR site: management implications. *Wetlands Ecology and Management*, 24:469–475. **I.F: 1.62**
16. Shafi, S., Kamili, A. N., **Shah, M. A.** & Bandh, S. A. (2015). Isolation, Identification and Distribution of Culturable Bacteria in Manasbal Lake, Kashmir Himalaya. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, 1-6.DOI: 10.1007/s40011-015-0582-1, Springer, **I.F: 0.40**.
17. **Shah, M. A.**, Beaulieu, M. E., Reshi, Z. A., Qureshi, S., & Khasa, D. P. (2015). A cross-city molecular biogeographic investigation of arbuscular mycorrhizas in *Conyza canadensis* rhizosphere across native and non-native regions. *Ecological Processes*, 4(1), 1-9. Springer.
18. Dar, P, Zafar Reshi and **Shah, M. A.** (2015). Roads act as corridors for the spread of alien plant species in the mountainous regions: A case study of Kashmir Valley, India. *Tropical Ecology*, 56(2), 183-190. **I.F: 0.7**
19. Andrabi, S.M., Reshi, Z.A., **Shah, M.A.**, & Qureshi, S. (2015). Studying the patterns of alien and native floras of some habitats in Srinagar city, Kashmir, India. *Ecological Processes*, 4(1), 1-12. Springer.
20. Varma, V., Ratnam, J., Viswanathan, V., Osuri, A. M., Biesmeijer, J. C., Madhusudan, M. D., ... **Shah M.A.**, & Sundaram, B. (2015). Perceptions of priority issues in the conservation of biodiversity and ecosystems in India. *Biological Conservation*, 187, 201-211. Elsevier, **I.F: 4.52**.
21. **Shah, M. A.**, Callaway, R. M., Shah, T., Houseman, G. R., Pal, R. W., Xiao, Rosche, C., Reshi, Z., Khasa, D.P., & Chen, S. (2014). *Conyza canadensis* suppresses plant diversity in its nonnative ranges but not at home: a transcontinental comparison. *New Phytologist*, 202(4), 1286-1296. **I.F: 7.672**. Wiley Publishers
22. Claude Lavoie, **Shah, M. A.**, Alexandre Bergeron & Paul Villeneuve (2013) Explaining invasiveness from the extent of native range: new insights from plant atlases and herbarium specimens. *Diversity and Distributions* 19, 98–105. **I.F: 6.2**
23. **Shah, M. A.**, & Shaanker, R. U. (2014). Invasive species: reality or myth?. *Biodiversity and conservation*, 23(6), 1425-1426. **I.F: 2.26**, Springer.
24. Wani, G. A., **Shah, M. A.**, Reshi, Z. A., Atangana, A. R., & Khasa, D. P. (2014). cpDNA microsatellite markers for *Lemna minor* (Araceae): Phylogeographic implications. *Applications in plant sciences*, 2(7). (American Botanical Society) **I.F: 1.4**
25. Bashir Shah, A., Reshi, Z. A., & **Shah, M. A.** (2014). Clonal trait diversity in relation to invasiveness of alien macrophytes in two Himalayan Ramsar sites. *Journal of Vegetation Science*, 25(3), 839-847, **I.F: 3.709**

26. **Shah, M. A.**, Reshi, Z. (2014). Characterization of alien aquatic flora of Kashmir Himalaya: implications for invasion management. *Tropical Ecology*, 55(2): 143-157. **I.F: 0.7**
27. **Shah, M. A.**, Ali, M. A., Al-Hemaid, F. M., & Reshi, Z. A. (2014). Delimiting invasive *Myriophyllum aquaticum* in Kashmir Himalaya using a molecular phylogenetic approach. *Genetics and Molecular Research*, 13(3), 7564-7570, **I.F: 1.1**
28. Rasool, N., Reshi, Z. A., Khasa, D. P., Roshan, M., & **Shah, M. A.** (2016). Invasion by *Coryza sumatrensis* alters soil microbial community structure in urban ecosystems. *Ecological Processes*, 5: 10. DOI 10.1186/s13717-016-0054-4, Springer.
29. Ganie, A.H., Bashir, B.A., Khuroo, A., Tali, B.A., Reshi, Z.A., **Shah, M. A.** & B. A. Wafai (2016) A New Record of an Invasive Aquatic Plant *Hydrocharis morsus-ranae* (Hydrocharitaceae), Reaching to the Kashmir Himalaya. *The Journal of Japanese Botany*, 91: 100–104.
30. Abeer Hashem, E. F. Abd_Allah, A. A. Alqarawi, A. A. Al-Huqail, and **Shah, M. A.** (2016) Induction of Osmoregulation and Modulation of Salt Stress in *Acacia gerrardii* Benth. by Arbuscular Mycorrhizal Fungi and *Bacillus subtilis* (BERA 71), *BioMed Research International*, 11 pages doi:10.1155/2016/6294098, **I.F: 2.134**
31. S. A. Pandith, A. Hussain, W W Bhat, N. Dhar, A. K. Qazi, S. Rana, S. Razdana, T A. Wani **Shah, M. A.** et al. (2014). Evaluation of anthraquinones from Himalayan rhubarb (*Rheum emodi* Wall. ex Meissn.) as antiproliferative agents. *South African Journal of Botany* 95, 1–8., **I.F: 1.676**
32. Andrabi, S.S., Reshi, Z., **Shah, M. A.**, et al. (2013) Phytoremediation potential of *Phragmites australis* in Hokersar wetland – a Ramsar site of Kashmir Himalaya. *International Journal of Phytoremediation*, 16(7-12): 1183-91. **I.F: 1.466**
33. Shah, T, **Shah, M. A.**, Reshi, Z. (2014). Positive feedback from soil microbes promotes invasion by *Coryza canadensis*. *J. Himalayan Ecol. Sustain. Dev.* 9, 17-22.
34. Rasool, N., Reshi, Z. A., & **Shah, M. A.** (2014). Effect of butachlor (G) on soil enzyme activity. *European Journal of Soil Biology*, 61, 94-100. **I.F: 2.0**, Elsevier.
35. **Shah, M. A.**, Zafar Reshi & Damase Khasa (2009). Arbuscular mycorrhizas: drivers or passengers of alien plant invasion, *Botanical Review*, 75:397–417. **I.F 2.208**
36. **Shah, M. A.**, Zafar Reshi & Damase Khasa (2009) Mycorrhizal status of some alien invasive plants of the Kashmir Himalaya, India. *Mycorrhiza*, 20, 67-72. **I.F: 2.985**
37. **Shah, M. A.**, Zafar Reshi & Irfan Rashid (2008) Mycorrhizal source and neighbour identity differently influence *Anthemis cotula* L. invasion in the Kashmir Himalaya, India. *Applied Soil Ecology*, 40: 330-337. **I.F: 2.952**
38. **Shah, M. A.**, Zafar Reshi & Irfan Rashid (2008) Mycorrhizosphere mediated Chamomile invasion in the Kashmir Himalaya, India. *Plant and Soil*, 312: 219-225. **I.F: 2.773**
39. Zafar Reshi, **Shah, M. A.**, Irfan Rashid & Anzar A. Khuroo (2008) Alien plant invasions: Threat to wetland health and public wealth. *ENVIS Newsletter Sarovar Saurabh* 4: 2-5.
40. **Shah, M. A.**, & Zafar Reshi (2007) Invasion by alien *Anthemis cotula* L. in a biodiversity hotspot. Release from native foes or relief from alien friends. *Current Science* 92: 21-22. **I.F: 0.905**

41. **Shah, M. A.**, Zafar Reshi & Irfan Rashid (2012) Synergistic effect of herbivory and mycorrhizal interactions on plant invasiveness. *African Journal of Microbiology Research* 6(19), 4107-4112. **I.F: 0.5**
42. **Shah, M. A.**, Zafar Reshi & C. Lavoie (2012). Predicting plant invasiveness from native range size: clues from Kashmir Himalaya. *Journal of Plant Ecology*, 5, 2, 167–173 (Oxford University Press). **I.F: 2.284**
43. **Shah, M. A.**, Zafar Reshi & N. Rasool (2010). Plant invasion induces shift in Glomalean spore diversity. *Tropical Ecology*, **51**(2S): 317-323 **I.F: 0.7**
44. **Shah, M. A.**, Zafar Reshi (2010). Phosphorus application in relation to mycorrhizal association of *Anthemis cotula* L., an invasive species in the Kashmir Himalaya, India. *Mycorrhiza News* **22** (2), 8-12.
45. **Shah, M. A.**, & Zafar Reshi (2005) Arbuscular mycorrhizal symbiosis: Need for an eco-centric approach. *Applied Botany Abstracts* **25**: 231-240.
46. **Shah, M. A.**, & Zafar Reshi (2005) Incidence of arbuscular mycorrhizae in *Pinus wallichiana* A.B. Jackson of Kashmir Himalaya. *Mycorrhiza News*, **17**: 11-14.
47. Shafi S., Kamili A.N., **Shah, M. A.**, Bandh S.A. (2013) Coliform bacterial estimation: A tool for assessing water quality of Manasbal Lake of Kashmir, Himalaya. *African Journal of Microbiology Research* 7(31), 3996-400, ISSN: 1996-0808; **I.F: 0.5**
48. Khan M A & **Shah, M. A.**, (2010) Studies on biomass changes and nutrient lock-up efficiency in a Kashmir Himalayan wetland ecosystem, India. *Journal of Ecology and the Natural Environment*, **2** (8): 147-153.
49. Parray, S.Y., Aleem, A., Nigam, G & **Shah, M. A.**, (2009). Land-use pattern in the catchment and its impact on the ecology of a suburban wetland (Chatlam), Kashmir Himalaya, India. *Indian Journal of Applied and Pure Biology*, 24 (2) 521-527.
50. Khan M A, **Shah, M. A.**, Mir S S & Suzana Bashir (2004) The environmental status of a Kashmir Himalayan wetland game reserve: Aquatic plant communities and eco-restoration measures. *Lakes & Reservoirs: Research and Management* (Blackwell) **9**:2, 125-132. **I.F: 1.1**
51. Khan M A & **Shah, M. A.**, (2004) Hydrology and sediment loading of Hokersar wetland sanctuary in the Kashmir Himalaya, India. *The Indian Forester*, **130**: 899-910.
52. Khan M A & **Shah, M. A.**, (2003) Phosphorus load concentration in a Kashmir Himalayan game reserve-Hokersar wetland. *Indian Jr. of Soil Conservation*.**31**:3, 243-247

BOOK CHAPTERS

1. **Shah M.A**, Bashir A, Reshi Z.A (2020). Aquatic ecosystems of Jammu & Kashmir State. In: Dar G., Khuroo A. (eds) Biodiversity of the Himalaya: Jammu and Kashmir State. Topics in Biodiversity and Conservation, vol 18. Springer, Singapore
2. Reshi Z.A., Dar P.A., Bhat M.S., **Shah M.A.**, Andrabi S.M. (2020) Urbanization and its Impact on Biodiversity in the Kashmir Himalaya. In: Dar G., Khuroo A. (eds) Biodiversity of the Himalaya: Jammu and Kashmir State. Topics in Biodiversity and Conservation, vol 18. Springer, Singapore

3. Abeer Hashem, Abdul Aziz Alqarawi, **Shah M.A.**, ...Elsayed Fathi Abd Allah (2018) Desert truffles in Saudi Arabia: Diversity, ecology and conservation, Conventional to Modern Approaches. In book: Microbial Resource Conservation,. DOI: 10.1007/978-3-319-96971-8_13.
4. Ahmad S.S., Reshi Z.A., **Shah M.A.**, Rashid I. (2016) Constructed Wetlands: Role in Phytoremediation of Heavy Metals. In: Ansari A., Gill S., Gill R., Lanza G., Newman L. (eds) Phytoremediation, pp 291-304.. Springer, ISBN: 978-3-319-40146-1
5. Zafar A. Reshi, Nazima Rasool, Pervaiz A. Dar, Waheeda Rehman, and **Shah, M. A.**, (2013) Impact of invasive alien plant species on aboveground and belowground diversity in the Kashmir Himalaya, India. In: *Invasive Plant Ecology* Editor(s): Shibu Jose, H. Pal Singh, Daizy Rani Batish, Ravinder Kumar Kohli, CRC Press - 302 Pages.
6. Z. Reshi, **Shah, M. A.**, Rashid, I., Rasool, N. (2012) *Anthemist cotula*, a flagship invasive species of Kashmir Himalaya. *Invasive Alien Plants: An Ecological Appraisal for the Indian Subcontinent* (eds J.R. Bhatt *et al.*), CAB International.
7. Khan M A & **Shah, M. A.**, (2008) Studies on nitrogen sequestration in Hokersar wetland of Kashmir Himalaya. In: *Water Resources Management and Sustainable Agriculture* (eds) Khan M A. APH Publ. Corp, New Delhi, India, pp281-288.
8. **Shah, M. A.**, & Zafar Reshi. (2008) Arbuscular Mycorrhizal Biotechnology: Approaches, Challenges and Prospects. In: *Biofertilizers*. (Ed.) P.C. Trivedi. pp 258-273. Pointer Publishers, Jaipur, India.
9. Khan M A & **Shah, M. A.**, (2004) Land-use patterns in the catchment and its impact on the ecology of a sub-urban wetland (Hokersar), Kashmir Himalaya. In: *Agriculture and Environment* (eds) Khan M A & Zargar M Y. APH Publ. Corp, New Delhi, India, pp281-288.

REVIEWING EXPERIENCE

Reviewer for Journals

- Journal of Biogeography, PLOS ONE; Ecology, Applied Soil Ecology; Bioremediation Journal; Tropical Ecology; Brazilian Journal of Botany; Current Science, Nutrient Cycling in Agroecosystems, International Journal of Phytoremediation

Book Review

- **Shah, M. A.**, (2007) Detritus and Decomposition in Ecosystems. By Reshi Z and S. Tyub, New India Publishers. *Current Science*, **92**(2), 246

Reviewer for Grants

- Texas Sea Grant Research Proposal, USA on mycorrhizal inhibition and allelopathy behind the successful invasion
- DBT proposals

EDITORIAL EXPERIENCE

- Editor in Chief – Annual Report of University of Kashmir, for 2015, 2016.

- Editor – Golden Jubilee Issue (Botanical Society Bulletin 2011-2012, University of Kashmir, Srinagar.
- Associate Editor, Botanical Society Bulletin-2009-2010, University of Kashmir.
- Editorial board member - *European Journal of Science and Theology*
- Assistant Editor, ‘*Department of Botany: A Profile*’. University of Kashmir, Srinagar.
- Associate Editor – *Journal of Current Sciences*

EXTRAMURALLY FUNDED RESEARCH PROJECTS

Title of the project	Funding agency	Outlay (INR)	Status
International Projects			
Proactive management models for the effects of climate change on the range expansion of invasive species	Indo-US project (UGC)	1,25,00,000	Underway
Biomonitoring of water quality in relation to human Health using biosensors and improvements through nanoparticle based purification systems (PI & Coordinator)	DBT & IC-IMPACTS (Indo-Canadian)	1,48,00,000	Completed
Towards a better mechanistic understanding of colonization: Biogeographic analysis and population genetics of two highly invasive Asteraceae species (PI)	Indo-German (DST-DAAD) collaborative project	7,23,000	Completed
National Network Projects			
Preventing extinction and improving conservation status of threatened plants through application of biotechnological tools (Co-PI)	DBT (All India Network project)	62,50,000	Completed
Characterization of microflora of rhizosphere associated with saffron with a target to develop consortia of beneficial microbes (Co-PI)	Coordinated DBT Project	32,50,000	Completed
Search for novel anticancer bioactives from Kashmir Himalayan mushrooms (PI & Coordinator)	DBT National Network Project	31,23,000	Completed
Strategy and action plan for strengthening the ecological integrity of the Dal Lake (Coordinator)	UNDP (in collaboration with ATREE)	35,00,000	Completed
Estimating Economic Values and Analyzing Institutional & Legal Frameworks for claiming REDD+ and Ecotourism benefits for Protected Area – Ramsar Wetlands: Exploration through Loktak and Hokersar Wetlands. (PI)	MoEF (In collaboration with IIFM, Bhopal)	75,000	Completed
Invasive Alien Plants in Himalayas: Status, Ecological Impact and Management (co-partner)	Commissioned Coordinated Project by MoEF & CC under NMHS	62,20,000	Underway
Ecology, monitoring, recovery and bio-prospection of some threatened plant species of Jammu, Kashmir and Ladakh in relation to regional socio-	Medium grant MoEF & CC under NMHS	61,94,200	Underway

economic development (P.I)			
Other projects			
Characterization of alien aquatic flora in Kashmir Himalaya for prediction and management of plant invasions (PI)	UGC (Major Project)	7,32,000	Completed
Vegetation mapping of Dal lake	LAWDA, Govt. of J&K	1,15,000	Completed
Mapping, Modelling, Monitoring and Managing Invasive Species in some Protected Areas of Kashmir Himalaya, India (PI)	DBT, New Delhi	68,91,400	Underway

INVITED SPEAKING

1. *Institutional accreditation: challenges under changing frameworks* in workshop organized Govt. Degree College, Baramulla under UGC's CPE on 04-03-2020.
2. *Ecosystem disservices and plant invasion* in the Refresher Course by the UGC-Human Resource Development Centre, University of Kashmir on 19-12-2019.
3. *Be it horseweed or common reed: invasion sucks indeed* – an invited talk in a special lecture series at Montana Tech, Butte, **USA** on 16-07-2019
4. *Connecting the dots in invasion science for a way forward* in the National seminar on Plant & Fungal Diversity: Status and Challenges and symposium on Ecology, University of Jammu on March 18-19, 2019.
5. *Biological invasions in the context of Disaster Management* in the Refresher Course on 'Disaster Management' organized by the UGC-Human Resource Development Centre, University of Kashmir on 03-02-2019.
6. *Team science is dream science* in the Research Methodology workshop organized by the UGC-Human Resource Development Centre, University of Kashmir on 25-01-2019.
7. Delivered an invited talk on "*Creating quality culture: importance and challenges*" in the Islamic University of Science & Technology (IUST), Awantipora on August 2, 2018.
8. Delivered an invited expert talk on "*Digital learning: promises and challenges for Botany*" in the workshop on Digital Learning in the State University of Performing & Visual Art, Haryana on 23-08-2018.
9. Chaired a session on "*Sustainable Energy Development*" with Prof. Daniel Coleman as co-chair in international conference on "Engaging India and Canada: challenges of sustainable development" from June 8-9, 2018 at India International Centre, New Delhi.
10. Keynote lecture on *Plant invasions: insights from eco-physiological studies* in National Workshop on "**RECENT TRENDS IN PLANT ECOPHYSIOLOGY**" sponsored by DST-PURSE-II from February 27 to March 7, 2018.
11. *Plant invasions: need for multifaceted approaches and multi-purpose toolkits for better understanding and management* in National Conference on Status of alien invasive species in India jointly organized by the Botanical and Zoological Survey of India, Ministry of Environment, Forests & Climate Change, Govt. of India from December 14-15, 2017.

12. *Impact of changing regulations on academic discourse in higher education* in the Orientation Course organized by the UGC-Human Resource Development Centre, University of Kashmir on 06-06-2017.
13. *Revisiting Research Methodology (I & II)* in the Orientation Course organized by the UGC-Human Resource Development Centre, University of Kashmir on 08-01-2018.
14. *Ecological crisis and challenges for legal researchers* in the Workshop on Research Methodology organized by the Department of Law, University of Kashmir on 10-01-2018.
15. *Benchmarks of quality research* in the Orientation Course organized by the UGC-Human Resource Development Centre, University of Kashmir on 06-06-2017.
16. *Connecting people to nature* on the eve of the World Environment Day observed on 5-6-2017 in the Institute of Engineers, Srinagar as a Special Speaker.
17. *Crowd of plants vs. Crowd of people* in the refresher course in Biosciences organized by the UGC-Human Resource Development Centre, University of Kashmir on 19-3-2017.
18. *Phenotypic trait variation in Phragmites australis in native and non-native regions* in the International conference on “Engaging India and Canada: Perspectives on Sustainability” organized by the Shatri Indo-Canadian Institute, New Delhi from May 11-12, 2017 at India Habitat Centre, New Delhi.
19. *Quality research: assessment and assurances* in a National Workshop on Scholarly Writing organized by the Allama Iqbal Library on 22-23 March, 2017.
20. *Linking science with Citizen Science to make restoration sense* in the Restoration Seminar series at Montana Tech, USA on 22-2-2017.
21. *Getting the concealed out of the closet: joy of creative research* in the orientation course organized by the UGC-Human Resource Development Centre, University of Kashmir on 08-12-2016.
22. *API assessment under 4th amendment to UGC regulations* in the orientation course organized by the UGC-Human Resource Development Centre, University of Kashmir on 08-12-2016.
23. *Grant writing: turning an idea into a project* in the orientation course organized by the UGC-Human Resource Development Centre, University of Kashmir on 15-3-2016.
24. *A random walk on the research street* in the Summer School organized by the UGC-Human Resource Development Centre, University of Kashmir on 13-02-2016.
25. *A random walk in the invaded paradise* in the Institute of Geobotany, Martin Luther University, Halle, Germany on 17-08-2015.
26. *Coordinated Biogeographic Studies: the way forward to invasion biology* in a workshop on Biological Invasions at a Biogeographic Scale at the Faculty of Natural Sciences, University of Pecs, Hungary on 06-08-2015.
27. *Tragedy of commons and participatory solutions* in the special Summer School Refresher Course organized by the UGC-Human Resource Development Centre, University of Kashmir on 30-07-2015.
28. *Transition from macro-ecology to molecular ecology*, Refresher Course in Biology, Human Resource Development Centre, University of Kashmir, April 28, 2015.

29. *'A decade of being Young Investigator in India, 7th Young Investigators Meeting at Gualalga, from March 27-April 1, 2015.*
30. *'INSPIRE: blooming buds of science'* in the DST-sponsored INSPIRE Organizers National Meet at KIIT University, Bhubaneswar from May 29-30, 2014.
31. *'Fun of discovering a scientist in you'* in the State Council of Science & Technology sponsored programme at Govt. N.M. Higher Secondary, Bandipore on 03-04-2-14.
32. *'Go back to move forward: revisiting Sheikhul-Alam's ecological wisdom'* in the seminar on Sheikhul-Alam: the icon of Kashmir, jointly organized by the UGC Academic Staff College and Sheikhul-Alam Chair. University of Kashmir on 11-12 March, 2014.
33. Attended as invited guest in the special programme on Doordarshan Kendra Srinagar in the popular show *'Good Morning J&K'* to talk on Dal lake problems and management.
34. *Global challenges and local solutions: 64th Orientation Course, UGC Academic Staff College, University of Kashmir, Srinagar on 20-02-2014.*
35. *Create, track and mind your footprint: 63rd Orientation Course, UGC Academic Staff College, University of Kashmir, Srinagar on 27-12-2013.*
36. *Plant Invasions: Lessons from coordinated distribute experiments*, as a resource person in the workshop on "Understanding Invasives" in the Students Conference on Conservation Science on September 25, 2013 in the Centre for Ecological Sciences (CES), Indian Institute of Science (IISc), Bangalore.
37. *Insights into plant Invasions from biogeographic studies*, in the Ashoka Trust for Research in Ecology and the Environment(ATREE), Bangalore on September 26, 2013.
38. *Biodiversity Status and Bioresource Potential of Jammu & Kashmir State*, as a resource person in: Brainstorming session on "prioritizing research areas on nano-bio-information technology for development of north-western Himalayan states" from July 12-13, 2013 at Pantnagar University, Pantnagar.
39. *Do good science and have fun too: 62nd Orientation Course, UGC Academic Staff College, University of Kashmir, Srinagar on 28-6-2013.*
40. *Life in extreme environments: 61st Orientation Course, UGC Academic Staff College, University of Kashmir, Srinagar on 20-3-2013.*
41. *'Understanding plant invasion biogeography through molecular routes'* a plenary lecture in PLANT 2013: National conference on innovations in plant research in 21st century held on 30-31st, January, 2013, in JMJ, College, Tenali, A.P. Chaired also a session in this conference.
42. *Novel applications of extremophiles: 61st Orientation Course, UGC Academic Staff College, University of Kashmir, Srinagar on 20-3-2013.*
43. *"Monitoring wetlands in an era of global climate change"* - in a special meeting for developing Science Plan for Indian National Network on Long Term Ecological Observatories (LTEO), held at the Centre for Ecological Sciences (CES), Indian Institute of Science (IISc), Bangalore from 28-29 May, 2012.
44. *"Cold Arid Desert of Ladakh: a worth exploring novel niche"* in 3rd partners' meeting of Cold Arid Network, held in Central Arid Zone Research Institute (CAZRI), Jodhpur, on 13th June, 2012.

45. “*Fungal mutualists: culprits or victims of alien plant invasion*” an invited lecture delivered in the International Conference on Mycology & Plant Pathology: Biotechnological Approaches, organized by the Centre of Advanced Studies in Botany, Banaras Hindu University (BHU), from February 27-29, 2012.
46. “*Horizon Scan India*” - meeting jointly organized by the Nature Conservation Foundation (NCF), Mysore, the National Centre for Biological Sciences (NCBS), Bangalore, and the University of Leeds, UK, for prioritization of research areas in India's biodiversity, ecosystems and natural resources, at National Centre for Biological Sciences (NCBS), Bangalore, from January 11-12, 2012.
47. “*Sustainability: reality or myth?*” In: Orientation course organized by UGC Academic Staff College, University of Kashmir, on 14-12-2011.
48. “*Mycorrhizal symbioses and alien plant invasion*” at the Center of Forests and Environmental Genomics, University Laval, Quebec, **Canada**) September 8, 2010.
49. “*Ecological impacts of invasive species*”. In a DBT-sponsored workshop “*Animal Physiology*” Faculty of Veterinary Sciences, Alustang, Shuhama, J&K on 30-03-2011.
50. “*Sufism versus environmentalism: Need for an alliance*”. In seminar “Sufism and its relevance today” IMPA, Srinagar, India, on 18-5-2006.
51. “*War against nature: causes and consequences*” In: *World Environment Day*, Department of Environmental Science, University of Kashmir, Srinagar, J&K, India, on 5-06-2004.

NATIONAL LEVEL CONSULTATIONS

- National Policy consultation on Ramsar wetlands (virtual) organized by ATREE, Bangalore via DST sponsored programme on 14-05-2020
- Developing the DPR for the National Mission on Biodiversity and Human Well-being by Ministry of Environment, Forests & Climate Change (MoEF&CC), Govt. of India through National Biodiversity Authority (2019)
- Developing the science plan for the establishment of Long-term Ecological Observatories at national scale in India by MoEF & CC, Govt. of India through CES, IISC, Bangalore (2012)

EXTENSION ACTIVITIES

- Attended as invited guest on popular TV show “*Good Morning J&K*” at Doordarshan Srinagar in 2019.
- Delivered a radio talk on *Wetlands of Kashmir: issues, threats and management* at Radio Kashmir Srinagar FM channel (FM 3.5) on 25-4-2018.
- Delivered a radio talk on *Visual Pollution* at Radio Kashmir Srinagar FM channel (FM 3.5) on 9-5-2018.

- Acted as judge for a debate in the Department of Law, University of Kashmir, Srinagar on 03-10-2018.
- Attended as invited guest on popular TV show “*Good Morning J&K*” at Doordarshan Srinagar in 2014.

ADMINISTRATIVE ASSIGNMENTS

- Nodal Officer for Association of Indian Universities
- Coordinator RUSA, SAP University of Kashmir since Nov. 25, 2019
- Director, Directorate of Internal Quality Assurance, University of Kashmir since Jan 22–Nov 25, 2019.
- Chief Coordinator, Internal Quality Assurance Cell, University of Kashmir from March 2016 to Jan 22, 2019.
- Nodal Officer MHRD’s All India Survey for Higher Education (AISHE).
- University representative for Shastri Indo-Canadian Institute Executive Member Council
- Coordinator Centre for Potential of Excellence in Himalayan Biodiversity
- Member Central Screening Committee of the University for faculty recruitment and promotion
- Team lead for presenting University of Kashmir for ranking by MHRD under NIRF and securing 47th rank in top 50 universities of the country.

PROGRAMMES ORGANIZED/COORDINATED

- Co-organized two week Summer School on Himalayan Biodiversity in the context of climate change jointly with ATREE, Bangalore from June 24 to July 6, 2019.
- Organized a workshop on threatened species monitoring at University of Kashmir under the aegis of NMHS project on 16-03-2019.
- Organized 7th Young Investigators Meeting (YIM) 2015 from March 27-31, 2015 at Gulmarg, Kashmir, India.
- Organized as Convener two days National Symposium “Biodiversity, Biology and Bio-prospecting” from April 1-2, 2015 at the University of Kashmir, Srinagar.
- Organized a special interaction session “Meet the leaders of Science” including Nobel laureate with school kids (11th and 12th standard) on April 1, 2015 as Coordinator.
- Organized as coordinator three day Science Academy workshop on “*Himalayan Biodiversity and Bioresources: mapping, utilization and conservation*” jointly sponsored by three Science Academies of India from May 8-10, 2014.
- Organized as coordinator one day inception workshop for the UNDP-sponsored scoping study titled “*Strategy and action plan for strengthening the ecological integrity of the Dal Lake*” undertaken by ATREE, Bangalore in collaboration with University of Kashmir on 08-03-2014.
- Coordinated a special meeting on 14-02-2014 under the chairmanship of Vice-Chancellor KU, Prof. Talat Ahmad, with Prof. Damase Khosa, University Laval, Quebec, Canada to discuss the MOU between KU and University Laval, and follow-up visit of Prof. Talat to Laval to take the discussions further.
- Five day Innovation in Science Pursuit for Inspired Research (INSPIRE) programme, sponsored by the Department of Science and Technology (DST), Ministry of Science & Technology, Govt. of India at University of Kashmir from September 7-11, 2013.
- A special meeting on 19-10-2013 under the chairmanship of Vice-Chancellor KU, Prof. Talat Ahmad, with the Director of The *Ashoka Trust for Research in Ecology and the Environment* (ATREE) and a cross section of natural and social scientists from various institutions to form an interdisciplinary team of natural and social scientists to review the proximal and ultimate

causes of deterioration of Dal lake in order to evolve a deliverable strategy and action plan for restoration and effective management of Dal lake.

- Organizing Secretary of one day brainstorming session on “Management and sustainable development of dal lake through scientific intervention and stakeholders participation” organized by University of Kashmir in collaboration with the Lakes and Waterways Development Authority (LAWDA) and Indian Phycological Society on 30-11-2013.

DSTINGUISHED MEMBERSHIPS

- Member of Task Force on **Basic Plant Biology, Agriculture and Frontier Areas** Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India.
- Member, Scientific Advisory Committee, Lakes and Waterways Development Authority (LAWDA), Govt. of J&K.
- Member of Species Survival Commission (SSC), the largest of the six commissions of IUCN - the International Union for Conservation of Nature for the quadrennial 2013-2019, and a member of Invasive Species Specialist Group (ISSG).
- Representative of University of Kashmir for Shastri Indo-Canadian Institute

MEMBERSHIPS OF OTHER ACADEMIC/PROFESSIONAL SOCIETIES

- Founder for the group - Spotting Alien Invasive Species that aims to map the occurrences of a set of widespread invasive species in India.
- Member India Biodiversity Portal (IBP), an exciting initiative to facilitate participation and enable open access for all citizens in contributing information on Indian biodiversity for the benefit of science and society.
- Mountain Invasion Research Network (MIREN), Switzerland.
- International Society for Ecological Economics (ISEE).
- International Association for Ecology (INTECOL).
- International Union of Environmental Ethics (IUEE).
- International Directory of Mycorrhizologists (IDM).

COURSES TEACHING (at M. Sc. level)

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|--------------------------------|-----------------|----------------|
| • Microbiology | Core course | (I Sem.) |
| • Ecology | Core course | (II Sem.) |
| • Applied Ecology | Core course | (III Sem.) |
| • Molecular Ecology-I& II | Optional course | (III& IV Sem.) |
| • Invasion Biology | Optional course | (IV Sem.) |
| • Aquatic Ecosystem Management | Elective Course | (I Sem.) |

RESEARCH SUPERVISION/GUIDANCE

S. No.	Student Name	Title	Program	Status
1	Gowhar A Wani	Comparative trait analysis of some invasive and non-invasive alien macrophytes in the Kashmir Himalayan aquatic habitats	Ph. D	Awarded
2	Tabssum Habib (NET)	Biogeographical differences in competitive effects of native and non-native neighbours of <i>Conyza canadensis</i>	M. Phil	Awarded
3	Ayaz Bashir Shah	Clonal trait diversity in relation to invasiveness in aquatic angiosperms of Kashmir Valley	M. Phil	Awarded

4	Mudasir Ahmad Dar (NET-CSIR)	Ploidy status of alien and endemic flora of Kashmir Himalaya	M. Phil	Awarded
5	Aashaq Hussain Sheikh	Mycorrhizal Symbiosis in relation to plant invasion along altitudinal gradient in Kashmir Himalaya	M. Phil	Awarded
6	Nadeem Salam	Ecological Niche Modelling for predicting the distribution of some rare and endemic plant species in Kashmir Himalaya	M. Phil	Awarded
7	Naiera Bhat NET	Phylogenetic relatedness and invasiveness of <i>Comyza canadensis</i> across different spatial scales	M. Phil	Awarded
8	Afreen Jan Loolu (NET)	Carbon Sequestration by Macrophytes in Hokersar Wetland(Kashmir) in relation to Carbon Credit Assessment	M. Phil	Awarded
9	Sanna Shafi	Bacterial flora of Manasbal lake, a freshwater ecosystem of Kashmir Himalaya	M. Phil	Awarded
10	Shahzad A Pandith (CSIR-NET)	Molecular Cloning, Characterisation and Expression Profiling of Some Strategic Genes of Polyketide Pathway from <i>Rheum emodi</i> Wall. Ex. Meissn	Ph. D	Awarded
11	Rifat Wani	Phytoremediation of heavy metals by free floating macrophytes	PhD	Awarded
12	Sanna Shafi	Microbial diversity dynamics in Manasbal lake	Ph. D	Awarded
13	Uzma Zehra	Role of mycorrhizal symbiosis at different stages of plant invasions	M. Phil	Awarded
14	Bashir Ahmad Khan	Dispersal strategies of alien invasive plants of Kashmir valley.	Ph. D	Awarded
15	Shazia Mushtaq (FIP, UGC)	Predicting range expansion of some invasive alien plant species in response to climate change using ecological niche modelling	Ph. D	Underway
16.	Mudasir Roshan (INSPIRE Fellow)	Eco-physiological studies on alien invasive vs alien non-invasive species	Ph. D	Underway
17.	Saima Farooq (NET)	Studies on phytoremediation potential and heavy metal stress of some aquatic invasive species	Ph.D	Underway
18.	Romana Farooq (CSIR-NET)	Molecular characterization of some Kashmir Himalayan mushrooms	Ph.D	Underway
19.	Mudasir A Dar (NET)	Biogeographic patterns of the impact of invasive species	PhD	Underway
20	Suzana Bashir	Studies on macrophytes as habitats for avifaunal biodiversity	PhD	Underway
21	Asghar Khan (CSIR-NET)	Impact of plant invasion on ecosystem services	PhD	Underway
22	Irfan A Sofi (CSIR-NET)	Conservation and bioprospection of some threatened species	PhD	Underway
23	Samina Wani	Mycorrhizal association and micropropagation of some endemic species in Kashmir Himalaya	PhD	Awarded
24	Ayaz Bashir Shah	DNA barcoding of alien invasive aquatic plants of Kashmir Himalaya	PhD	Awarded