

Curriculum Vitae

Prof. (Dr) N. K. Agarwal

Senior Professor & Head, Department of Zoology

Dean, School of Life Science

Course coordinator, Environment Science

HNB Garhwal University (A Central University)

SRT Campus Badshahithaul

Tehri Garhwal-249 199, Uttarakhand INDIA

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Web Links:

University Website: <http://www.hnbgu.ac.in>

Google Scholar : <https://scholar.google.com/citations?user=yMrCxqsAAAAJ&hl=en>

Research Gate : <https://www.researchgate.net/profile/N-Agarwal-2>


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Web of Science Researcher ID: AAJ-3176-2020 ; Vidwan-ID: 247095; Scopus- ID: 57188957744



Experience	
35 years	Teaching Experience
Jan. 01, 2009 to till date	Professor, Department of Zoology, HNB Garhwal Central University
Jan. 2006 to Dec. 2008	Associate Professor, Department of Zoology, HNB Garhwal University
Aug 19, 2001 to Dec 2005	Reader, Department of Zoology, HNB Garhwal University
Oct. 1991- Aug 18, 2001	Lecturer, Department of Zoology, HNB Garhwal University
39 years	Research Experience
Research Interest	Fish biology, Reproductive Biology, Limnology, Aquatic Biodiversity
Google scholar Citation- 1365; H-Index 17; i10 index 38; ResearchGate Reads- 3,47,877	
Research Publication	
Books Published	Authored 02; Edited 02
Book Authored (02)	1. The Ganga in the Himalayas: Fish Diversity and Environment Agarwal, N. K. And Singh, G.(2021), ISBN 978-93-89996-81-4 Narendra Publishing House, New Delhi (India) pp 184
	2. Fish Reproduction p157. ISBN 978-81-313-0357-3 Agarwal, N. K. (2008) , APH Publishing Corporation, New Delhi
Book Edited (02)	1. Water Biology. (2018). 379 p. ISBN-978-93-5056-888-0 (Eds) Khanna D. R., Bhutyani R., Gautam A., Pathak S. K. and Agarwal N.K. Discovery Publishing House Pvt. Ltd., New Delhi (India).
	2. Recent Researches in Aquatic Environment (1996) p.190 (Eds. Gautam A. and Agarwal N.K.) Daya Publishing House, Delhi.
Research Papers	69 (Sixty Eight) [Impact Factor: 0.00 – 6.1]
National/International Journals: 47; Conference Proceedings:06; Chapter in Books;15	
Research Supervision	
Ph.D. students supervised	09
Registered for Ph.D	03
M.Sc. dissertation	06

	Research Projects (Total funding more than Rs 80 lac)
DBT New Delhi	Genetic diversity molecular delineation and phylogenetic kinship in the declining population of four species of <i>Channa</i> from North India and possible conservation strategies. P.I. Prof. Iqbal Parwez, AMU, Aligarh Co-PI : Prof N. K. Agarwal Rs 59.53 Lac. 2011-2014
UGC New Delhi	Coldwater fish diversity and fisheries of the river Ganga and its tributaries in Garhwal Himalaya: Re-assessment and Inventorization in reference to habitat fragmentation. Rs. 9.08 Lac, 2010-2013
ICAR, New Delhi	Developing cryopreservation protocols for spermatozoa of snowtrout and other endangered cold water species. Rs. 16.25 Lac, (2002-2005)
ICAR. New Delhi	Reproductive strategies of snowtrout (<i>Schizothorax</i> sp.) with reference to environment of river Bhagirathi and Bhilangana of TehriGarhwal. Rs 7.64 Lac. (1998-2001)
	Honors & Awards
2010	Fish & Fisheries award of ASEA (Action for Sustainable, Efficacious development and Awareness)
2010	Fellow Award from MANU- International Council for Man and Nature
2017	Gold medal and fellow award of ASEA
	Professional consultancy
Team member of the EIA study group (2008)	Ecological parameters of the Bhagirathi River -Environmental flow consideration for Lohari-Nagpala HPP on the river Bhagirathi. Prof. H.R.Singh (P.I) Dr. Neeraj Kumar (Co-P.I.) Dr. N. K. Agarwal (Co-P.I.)
	Professional recognition
Member NAAC Peer Team	NAAC PTV, Assam Science and Technology University, Guwahati June 2025
Subject Expert	Nominated as subject expert in the 'Mukhyamantri Uchch Shiksha Shodh Protsahan Yojna 2025-26' by Directorate of Higher Education Uttarakhand
Subject Expert	Selection Committee, HR Degree College Laksar, SDS Univ., Nov.15, 2025
Subject Expert	Faculty promotion under CAS DBS PG College Dehradun, Nov. 29,2025
Subject Expert	Faculty promotion under CAS MKP PG College Dehradun,Dec.01, 2025
External Member	Board of Studies (Zoology) Sridev Suman Uttarakhand University, 2025
International Assessor	Appointment and Promotion Committee For Professor in University of Ibadan, Ibadan, Nigeria in the year 2023
Subject Expert	Selection Committee for the promotion of Associate Professor (stage-4) to Professor (stage 5) under CAS in Zoology at B.G.S.B University (J&K) held at Sringer on July 05, 2023
Subject Expert	Faculty promotion under CAS , HS Gour Sagar Univ. Sagar .Feb 2023
Subject Expert, DG ICAR Nominee	DPC for Scientist, ICAR-Directorate of Cold Water Fisheries Research, Bhimtal, Jan. 2019, March 2022
Subject Expert	Selection Committee (UGC- CAS) for Professor, Bareilly College, MJP Rohilkhand University Bareilly, July 2022
Subject Expert	Appointment of Professor/Associate Prof., CSJM Univ. Kanpur Aug. 2020
Expert	Selection Committee for Asso. Professor, DAV PG College Dehradun, 2020
Subject Expert	DPC for Scientist, ICAR-Directorate of Cold Water Fisheries Research, Bhimtal, July 2019
UGC nominee member	UGC-SAP advisory committee, Jammu Univ., Jammu 2017
Subject Expert	Interview Board for secondary teachers in UK PSC, 2015
Member	Board of Studies of Zoology, CSJM University Kanpur 2018, 2021
Co-opted Member	Board of Studies of Zoology, Aligarh Muslim University Aligarh since 2020-23

Member	RDC Sri Dev Suman Uttarakhand University, 2020, 2024, 2025
Convener	UG PG Syllabus Restructure Committee, SDS Uttarakhand University, 2018
Member	Faculty Board Life Science, MJP Rohilkhand University 2017, 2019, 2020
External expert	RDC (Zoology) CCS Meerut University 2017, 2021, 2022
Member	BOS, Biotech., HNB Garhwal Univ. since 2013 to 2020
Member	BOS, Zoology, HNB Garhwal Univ. since 2013 to till date
Subject Expert	Uttar Pradesh Public Service Commission (UP PSC) 2010
Subject Expert	Uttarakhand Public Service Commission in various committees from 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025
Subject Expert	Uttarakhand Subordinate Service Selection Commission, Dehradun 2022
Convener/ member	Various committees for approval of courses in affiliated colleges of SDS Uttarakhand University 2016-19
	Administrative Experience
Dean	School of Life Sciences, HNB Garhwal Univ., From Feb. 01, 2025 to till date
Head	Department of Zoology, HNB Garhwal Univ., From Feb. 01, 2025 to till date
In-charge Head	Deptt. of Environment Science, SRT Campus, Badshahithaul, since 2005
In-charge Head	Department of Zoology, SRT Campus, Badshahithaul Feb. 2017 to Jan. 2018 and Nov. 1, 2021 to Dec. 15, 2023
Deputy DSW	HNB Garhwal Univ., SRT Campus Badshahithaul 2013-15
Deputy Proctor	HNB Garhwal Univ., SRT Campus Badshahithaul 2015-16
Chief Election Officer	Student Union Election 2019-20 SRT Campus
Nodal officer	UKSEE 2018 entrance exam of Uttarakhand Technical University
Observer	Uttarakhand PMT-2015
Micro-observer	Loksabha Election 2017
Joint Secretary	HNB Garhwal Univ Alumni Association Since 2018
Assistant Dean Student Welfare	HNB Garhwal Univ., SRT Campus Badshahithaul, for the period 2004-07, 2009-2010, and 2011-13
Assistant Proctor	HNB Garhwal Univ., SRT Campus Badshahithaul 1995-96
Assistant Election officer	Student Union Election, HNB Garhwal Univ. SRT Campus Badshahithaul during the session 1995-96, 2006-07, 2008-09
Student counselor	HNB Garhwal Univ., SRT Campus Badshahithaul 2013-14
Program officer	NSS Unit HNB Garhwal Univ., SRT Campus Badshahithaul 2001-02
Convener	Campus Purchase committee for the session 2017-18
Convener	Admission Committee (M.Sc. Zoology) HNB Garhwal Univ. session 2014-15
Convener	Admission Committee (B.Sc. I Bio group) session 2015-16, 2017-18, 2019-20, 2021-22, 2023-24
Convener	Admission Committee (B.Sc. II Bio group) session 2014-15
Convener	Admission Committee (B.Sc. III sem Bio group) session 2018-19, 2022-23
Member	Admission Committee (M.Sc. Zoology) SRT Campus since 2014
Member	Inspired Teacher Network (Badshahithaul Campus) 2013-14
Member	Campus Administrative Committee for the session 2009-10, 2011-12
Member	Sport council, SRT Campus Badshahithaul, 2013
Member	Advisory Committee for NSS Unit of SRT Campus, 2013-14
In-charge	Student Union, SRT Campus, Badshahithaul 2004-07
Member	Election Committee, Student Union, HNB GU, SRT Campus 2005-06, 2006-07
Programme officer	NSS Unit HNB Garhwal Univ., SRT Campus Badshahithaul 2001-02
Centre Superintendent / Assistant Superintendent Exam	SRT Campus Badshahithaul in different academic sessions

—————	Seminar/Workshops/ attended/ paper presented/delivered invited talks/chaired technical sessions
International	06
National	84
—————	Seminar/ workshop organized
Member organisin g committee	International Seminar on Himalayan Challenges: Towards Interdisciplinary Dialogues for Sustainability and Development' Jointly organized by Sri DevSumanUttarakhand University and Doon University Dehradun from 29 th Nov-1 st Dec 2017.
—————	Membership of professional/academic bodies, societies, etc.
Life member	Coldwater Fisheries Society of India, DCFR-ICAR, Bhimtal
Life member	Inland fisheries society of India, Central Inland Capture Fisheries Research Institute, Barrackpore (WB)
Life member	Indian Fisheries Association, CIFE Versova, Mumbai
Life member	Society of Bio-science, Mujaffarnagar
Life member	Action for Sustainable Efficacious Development and Awareness, Rishikesh
Life member	Fresh water Biological Association of India , Bhagalpur
Life member	Zoological Society of India, Bodh Gaya
Life member	Nature Conservators, Muzaffarnagar
—————	Patents/ Products/ Technologies Developed
2014	Gene sequences of 09 cold water fish species Submitted to NCBI GenBank USA (http://www.ncbi.nlm.nih.gov/) GenBank Accession number [KJ183107, KJ183108, KJ183109, KJ183110, KJ183111, KM191351, KM191352, KM191353, KM191354] GenBank Accession number KJ869417, KJ869418, KJ869419, KJ869420, KJ869421, KJ869422, KJ869423, KJ869424
2006	Protocol for the Cryopreservation of Semen of Snowtrout sp. (<i>Schizothoraxrichardsonii</i> and <i>Schizothoraichthysprogastus</i>) was developed
2001	Snowtrout (<i>Schizothoraxrichardsonii</i>) seed production technique developed for the first time by artificial fertilization and Induced breeding through Ovaprim administration
2001	Spawning grounds of indigenous snowtrout in the Bhagirathi and Bhilangana Rivers are identified.
2001	In-depth studies was conducted on the breeding biology and reproductive environment of commercially important snowtroutsp.of different aquatic bio-tops.
2001	Low cost flow through hatchery and hatching boxes was designed for snowtrout seed production to ensure conservation in the wild

List of Research papers published

(From January 2019 onwards)

1. Bhattacharya I., Kothandaraman H., Kothiyal S., Sharma P., Purohit S., Anitha A., and Agarwal N.K.(2026). Evaluation of season and sex specific differential gonadal transcriptomics in Himalayan snow trout *Schizothorax plagiostomus*, Heckel, 1838. *Sci Rep* (2026). <https://doi.org/10.1038/s41598-026-47745-7>
2. Raghuvanshi S. K., Agarwal N. K. (2026). Impact of Semen Dilution and Sperm to Egg Ratio on Fertilization Success in Snowtrout (*Schizothorax richardsonii*). *U.P. J Zool.*, 47(7),233-240. <https://doi.org/10.56557/upjoz/2026/v47i75604>
3. Kotiyal S., Sharma P., Purohit S., Agarwal N.K., Bhattacharya I. (2024). Evaluation of gonadal gene expression in Himalayan SnowTrout *Schizothorax plagiostomus* during annual reproductive cycle. *J. Endocrinol Reprod.* 28(2), 143-157. DOI: 10.18311/jer/2024/35089.
4. Bisht J., Uniyal T., Agarwal N.K. (2024). Present status and future prospects of fisheries of Tehri dam reservoir. *Environment Conservation Journal* 25(3): 846-853. Doi: <https://doi.org/10.36953/ECJ.28612890>.
5. Singh G, Singh H., Thapliyal B.L., Singh R. and Agarwal N. K. (2022). Impact of Tehri hydropower project on water quality of river Bhilangana, central Himalaya, India. In: *Climate change and conservation of biodiversity and natural resources in the Himalayan environment* (ed. Semwal V.P.) Ms. Bishan Singh Mahendra Pal Singh, Dehradun. (India). pp349-356. ISBN-978-93-92570-346.
6. Singh G, Singh H., Thapliyal B.L., Singh R. and Agarwal N. K. (2022). Fish diversity and physico-chemical features of Kharmola Stream- a spring fed tributary of river Bhagirathi in Garhwal Himalaya. In: *Climate change and conservation of biodiversity and natural resources in the Himalayan environment* (ed.Semwal V.P.) Ms. Bishan Singh Mahendra Pal Singh, Dehradun. (India). pp159-169. ISBN-978-93-92570-346.
7. Singh Gurnam, Singh Harpal and Agarwal N. K. (2021). Assessment of fish assemblages and physico-chemical parameters of Ranu-ki-Gad Stream- A Tributary of river Bhagirathi in Central Himalaya (India). *Journal of Aquatic Biology & Fisheries.* 9 : 42-47. ISSN 2321-340X URL https://www.jabf.in/articles/Vol9/1-2/Singh_Gurnam_etal.pdf
8. Charak S. R., Chaudhary, D.K. and **Agarwal N.K.** (2021). A study on the Physical and biochemical characteristics of semen of *Tor putitora*- an endangered fish species in Himalayan water. *Indian J Animal Research.* 55(7):744-750. First online published 7/8/2020. DOI: 10.18805/ijar.B-4127.(**Impact Factor 0.427**) ISSN: 0976-0555
9. Raghuvanshi S. K., Charak S. R. Agarwal N. K. (2019). Semen Characteristics and Extenders Competency during Refrigerated Storage of Snowtrout (*Schizothorax richardsonii*) Semen. *Int. J. Fish. Aquat. Stud.* 7(6): 350-354. E-ISSN: 2347-5129, P-ISSN: 2394-0506. URL <https://www.fisheriesjournal.com/archives/2019/vol7issue6/PartE/7-6-23-554.pdf>
10. **Agarwal N. K.**, Rawat, U. S. and Singh G. (2018).Fish assemblages and habitat ecology of River Pinder in central Himalaya, India. *Iranian J. Fisheries Sciences.*18(1):1-14 DOI: **10.22092/ijfs.2018.118930.** ISSN:**1562-2916**(**Impact Factor 0.495**). URL https://jifro.areeo.ac.ir/article_117465.html
11. **Agarwal, N. K.**, Singh, H., Singh, A. and Singh, G. (2018). Bhilangana river regulation for hydro power project in central Himalaya: Impact on Planktonic Assemblages. *Biojournal*, 13(1):1-10.**ISSN:0970-9444.**

12. Alauddin A., Chaturvedi S., Azmi L., Shukla I., Naseem Z., Rao C.V. and **Agarwal N K.** (2018).Gastroprotective Effect of Formononetin against Ethanol-Induced Gastric Ulceration in Rats via Augmentation of Cytoprotective Markers and Curtailing Apoptotic Gene Expression. Phcog Mag 14: pp S605-12.**DOI:** 10.4103/pm.pm_205_18. **ISSN : 0973-1296 (Impact Factor 1.525)**
13. Alauddin A., Chaturvedi S., Malik, M.Y., Azmi L., Shukla I., Naseem Z., Rao C.V. and **Agarwal N K.** (2018). Formononetin and biochanin A protects against ritonavir induced hepatotoxicity via modulation of NfκB/pAkt signaling molecules. Life Sciences 213:174-182. <https://doi.org/10.1016/j.lfs.2018.10.023>. **ISSN: 0024-3205 (Impact Factor 6.1)** URL <https://www.sciencedirect.com/science/article/abs/pii/S0024320518306404?via%3Dihub>
14. **Agarwal, N. K.,** Singh G., Singh H., Kumar, N. and Rawat, U. S. (2018).Ecological impacts of Dams on the Fish Diversity of Bhagirathi River in Central Himalaya (India). Journal of Coldwater Fisheries 1(1): 74-84. URL: https://dcfr.res.in/download/journalsep18/N.K._Agarwal__G.Singh.H.Singh_N.Kumar_and_U.S.Rawat_Ecological_impacts.pdf
15. Charak S. R., **Agarwal N.K.** and Shah T. K. (2018). An Approach for determination of semen quality of golden mahseer (*Tor putitora*) from central Himalaya. The Pharma Innovation Journal. 7(1):83-86. Online ISSN: 2277-7695, Print ISSN: 2349-8242 URL: <https://www.thepharmajournal.com/archives/2018/vol7issue1/PartB/7-1-4-189.pdf>
16. **Agarwal N. K.,** Singh H., Singh G. and Charak S. (2018).Bhilangana River Impoundment: Consequences to riverine environment. In: Water Biology (eds Khanna D. R. Bhutyani R.)Discovery Publishing House Pvt. Ltd., New Delhi (India). pp 82-94. (ISBN-978-93-5056-888-0)
17. Singh Gurnam and **Agarwal N. K.** (2017). Impact of hydropower project (RoR) on the ichthyofaunal diversity of river Birahiganga in central Himalaya (India). Journal of Fisheries. 5(2) : 507-512. DOI. <http://dx.doi.org/10.17017/j.fish.v5i2.2017.192>. ISSN: (Print) 2311-3111 Online 2311-729X
18. Rawat U.S. and **Agarwal N.K.** (2015). Biodiversity: Concept, threats and conservation. Environment Conservation Journal. Vol. 16 (3): 19-28. E ISSN: 2278-5124, p ISSN: 0972-3099. URL: <https://journal.envirocnj.in/index.php/ecj/article/view/418>. DOI: [10.36953/ECJ.2015.16303](https://doi.org/10.36953/ECJ.2015.16303)
19. Singh Gurnam and **Agarwal N. K.** (2014). Fishing methods in upper Ganga River system of Central Himalaya, India. Journal of Fisheries. Volume 2 Issue 3 Pages: 195-202. DOI: [10.17017/j.fish.90](https://doi.org/10.17017/j.fish.90) ISSN: 2311-3111 Online2311-729X (Print) URL: https://journal.bdfish.org/index.php/fisheries/article/view/JFish_43
20. Singh Gurnam and **Agarwal N. K.** (2014). Fish assemblage structure and habitat use of the snow fed stream Assiganga - a major tributary of river Bhagirathi in Central Himalaya (India). International Journal of Aquatic Biology 2(6): 305-312.**ISSN: 2322-5270 (Online), 2383-0956 (Print)** <https://ij-aquaticbiology.com/index.php/ijab/article/view/126>
21. **Agarwal N. K.,** Singh Gurnam and Rawat U.S. (2014).Present status and threats to the Ichthyofaunal diversity of a snow fed river Nandakini in central Himalaya (Garhwal), India. In : Uttarakhand Disaster:Contemporary issue of Climate Change and Development with Holistic Approach (eds. Rawat U.S. &Semwal V.P.), Winsar Publication Dehradun, India. pp 173-182. **(ISBN 978-81-86844-58-8).**
22. Chaudhary D.K., Sood N., Swaminathan T.R., Rathore G., Pradhan P. K., **Agarwal N. K.,** Jena J. K. (2013). Establishment and Characterization of an epithelial cell line from thymus of Catlacatla (Hamilton, 1822). Gene. 512(2): 546-53. doi: 10.1016/ j. gene.2012.09.081. **E -pub Sep. 2012. (Impact Factor 3.688) ISSN: 0378-1119.**

23. **Agarwal N. K.**, Saini V. and Raghuvanshi, S. K. (2013). Characterization and short-term storage of semen of a coldwater Himalayan fish species. *Biojournal*, 8(1): 1-8.
24. Singh Gurnam and **Agarwal N. K.** (2013). Fish diversity of Laster stream, a major tributary of river Mandakini in Central Himalaya (India) with regard to altitude and habitat specificity of fishes. *Journal of Applied and Natural Science* 5 (2): 369-374. Online ISSN: 2231-5209 | Print ISSN: 0974-9411 DOI: [10.31018/jans.v5i2.334](https://doi.org/10.31018/jans.v5i2.334)
25. **Agarwal N. K.** and Singh Gurnam (2012). Documentation of fishes and physico-chemical characters of a stream Indrawati- a spring fed tributary of River Bhagirathi at Uttarkashi (Central Himalaya, Garhwal) India. *Environment Conservation Journal*. Vol. 13 (3): 117-124. ISSN: 2278-5124 (Online) ISSN: 0972-3099 (Print) DOI: [10.36953/ECJ.2012.130319](https://doi.org/10.36953/ECJ.2012.130319)
26. Chaudhary D. K., Sood N., Rathore G., Pradhan P. K., Punia P., Agarwal N. K., Jena J. K. (2012). Establishment and characterization of macrophage cell line from thymus of *Catlacatla* (Hamilton, 1822). *Aquaculture Research*, 45(2), p 299-311 doi: 10.1111/j.1365-2109.2012.03227.x (first online published 12 July 2012). **(Impact Factor= 2.082) Online ISSN: 1365-2109**
27. Chaudhary D. K., Sood N., Pradhan P. K., **Agarwal N. K.**, Rathore G. (2012). Production and characterization of monoclonal antibody against putative T lymphocytes of *Catlacatla*. *In Vitro Cell. Dev. Bio.-Animal* 48(8):483-492. DOI: 10.1007/s11626-012-9532-x **(Impact Factor= 2.117) Print ISSN: 1071-2690**
28. Chaudhary D. K., Sood N., Pradhan P. K., Singh A., Punia P., **Agarwal N. K.**, Rathore G. (2012). Establishment of a macrophage cell line from adherent peripheral blood mononuclear cells of *Catlacatla*. *In Vitro Cell. Dev. Biol.- Animal*, 48(6): 340-348. DOI: 10.1007/s11626-012-9516-x. **(Impact Factor= 2.117) Print ISSN: 1071-2690.**
29. Ayoade, A. A. and **Agarwal N. K.** (2012). Preliminary analyses of physical and chemical parameters of Tehri dam reservoir, Garhwal Himalaya, India. *Zoology and Ecology*, 22 (1): 72-77. DOI: 10.1080/21658005.2012.674656. (ISSN 2165-8005 (online) 2165-8013 Print), (Impact Factor: 0.831)
30. **Agarwal N. K.**, Singh Gurnam and Singh Harpal (2011). Present status of Ichthyofaunal diversity of Garhwal Himalayan river Bhilangna and its tributaries with reference to changing environment. *Environment Conservation Journal*, 12(3): 101-108. ISSN: 2278-5124 (Online) ISSN: 0972-3099 (Print) DOI: [10.36953/ECJ.2011.120319](https://doi.org/10.36953/ECJ.2011.120319) URL: <https://journal.envirocnj.in/index.php/ecj/article/view/1874>
31. **Agarwal N. K.** (2011). Cryopreservation of Fish Semen. In *Himalayan Aquatic Biodiversity Conservation & New Tools in Biotechnology* (eds. J.P. Bhatt, Madhu Thapliyal & Ashish Thapliyal), pp 104-127. Transmedia Publication, Srinagar (Garhwal) Uttarakhand. ISBN - 978-81-904778-3-6 DOI: 10.13140/RG.2.1.1215.7209/1
32. Ayoade, A. A., **Agarwal, N. K.** and Chandola-Saklani, A. (2009). Changes in Physico-chemical Features and Plankton of Two Regulated High Altitude Rivers, Garhwal Himalaya, India. *European Journal of Scientific Research*, 27 (1): 77-92. **(Impact Factor, 0.713) ISSN: 1450-216x**
33. **Agarwal N. K.** and Singh Harpal (2009). Snowtrout Fishery in Uttaranchal: Causes of Depletion & Strategy for Propagation. *Environment Conservation Journal*. Vol. 10(1&2): 135-140. ISSN: 2278-5124 (Online) ISSN: 0972-3099 (Print)
34. **Agarwal N. K.** and Raghuvanshi S. K. (2009). Spermatocrit and sperm density in snowtrout (*Schizothorax richardsonii*): Correlation and variation during the breeding season. *Aquaculture*, 291: 61-64. DOI 10.1016 / j. aquaculture.2009.03.002 **(Impact Factor, 4.242). ISSN: 0044-8486**

35. **Agarwal N. K.**, Raghuvanshi S. K. and Saini V. (2009). Cryopreservation of snowtrout (*S.richardsonii*) milt as a means for propagation and ex-situ conservation of species. In: *Fish Genetic Resources*, (eds. W.S. Lakra, A.K., Singh & P.C. Mahanta), Narendra Publishing House, New Delhi. pp 273-284. ISBN: 978-81-906091-6-6
36. **अग्रवाल एन० के०**, रघुवंशीएस० के० एवं वन्दना सैनी (2008). गढ़वालहिमालय की भागीरथी नदी का बदलता पर्यावरणीय परिदृश्य : शीतजलमात्स्यीकविकासतथासंरक्षण की दशा एवंदिशा प्दरू उत्तरीपर्वतीय राज्यों की मत्स्य विविधता : संरक्षण एवंप्रबंधन. W. S. Lakra, L. K. Tyagi (eds). National Bureau of Fish Genetic Resources, Lucknow pp. 211-217.
37. **अग्रवाल एन० के०**, रघुवंशीएस० के० एवं वन्दना सैनी (2008). शीतजलीय स्नोट्राउट (*साइजोथोरैक्स रिचार्डसोनी*) के संवर्धन एवंसंरक्षणहेतुवीर्यपरिरक्षण की अतिहिमिकरणतकनीककाविकास: (प) अतिहिमिकृतवीर्यपरीक्षण– शुक्राणुगतिशीलता, कृत्रिम निषेचन एवं मत्स्य बीज परिवर्धन प्दरू उत्तरीपर्वतीय राज्यों की मत्स्य विविधता : संरक्षण एवंप्रबंधन W. S. Lakra, L. K. Tyagi (eds). National Bureau of Fish Genetic Resources, Lucknow pp. 245-254.
38. **Agarwal N. K.**, Thapliyal B. L. and Raghuvanshi S. K. (2007). Induced Breeding and artificial fertilization of snowtrout, *Schizothoraxrichardsonii* through the application of ovaprim. *J. Inland Fish. Soc. India* 39(1):12-19.
39. Kathait J.S., Joshi V., **Agarwal N.K.** and Jagwan J.S. (2007). Phytochemical examination of *Pittosporumnepaulense* and its effect on micro-organism as an antibacterial agent. In:(eds. Chopra A.K., Khanna D.R., Prasad G., Malik D.S. and Bhutiani R.)*Medicinal plants: conservation, cultivation and Utilization*. Daya Publishing House, Delhi. 127-131.
40. **Agarwal N. K.** and Thapliyal B. L., Raghuvanshi S. K. and Saini V. (2007). Hydrobiological environment of river Bhilangana and its impact on the reproductive potential of snowtrout (*Schizothoraxrichardsonii*). In: Mitigation of Pollutants for clean Environment (Proc. of the 15th National Symposium on Environment –NSE-15), Puranik *et al.* (eds.) Macmillan India Ltd. pp 552-558.
41. **Agarwal N. K.** and Thapliyal B. L. (2005). Pre-impoundment hydro-biological study of the Bhilanganariver from Tehri Dam reservoir area in Uttaranchal. *Environmental Geochemistry*, 8 (1&2):143-148.
42. **Agarwal N. K.**, Khanna D. R., Thapliyal B. L. and Rawat U. S. (2005). Resource assessment of hill fisheries in Garhwal Himalayan region of Uttaranchal: a Perspective. In D. R. Khanna, A. K. Chopra. and G. Prasad (eds.), *Aquatic Biodiversity in India: The present scenario*. Daya Publishing House, New Delhi: 81-97.
- 43^प **अग्रवाल एन० के०**, खन्ना डी० आर०, थपलियाल बी० एल० एवम् रघुवंशीएस० के० (2005). शीतजलीय मत्स्य (स्नोट्राउट) बीजउत्पादनतकनीककाविकास, **उत्तरांचलमेंमात्स्यीक**, केन्द्रीय मात्स्यीकशिक्षासंस्थान 69.77
- 44^प **अग्रवाल एन० के०**, रघुवंशीएस० के० एवं वन्दना सैनी (2005). शीतजलीय स्नोट्राउटमत्स्य प्रजाति के संवर्धन एवंसंरक्षणहेतुवीर्यपरिरक्षण की अतिहिमिकरणतकनीककाविकास,**उत्तरांचलमेंमात्स्यीक**, केन्द्रीय मात्स्यीकशिक्षासंस्थान, 117. 122^प
- 45^प बंगवाल के० के०, बहुगुणा बी० के०, **अग्रवाल एन० के०** एवं गुसाईं एस० एस० (2005). गढ़वालहिमालय मेंमौण (मत्स्य) मेलेकासामाजिक–सांस्कृतिकस्वरूप : मत्स्य संरक्षण व संवर्द्धन की आवश्यकता एवंउपाय **उत्तरांचलमेंमात्स्यीक**, केन्द्रीय मात्स्यीकशिक्षासंस्थान, 130.134
46. **Agarwal N. K.**, Raghuvanshi S. K., Vandana Saini, and Rawat U. S. (2004). Milt Quality and short term storage of snowtrout (*Schizothoraxrichardsonii*) sperm. *J. Inland Fish. Soc. India*, 36(2):13-18.
47. **Agarwal N. K.**, Rawat U. S., Thapliyal B. L. and Raghuvanshi S. K. (2004). Breeding biology of snowtrout, *Schizothoraxrichardsonii*, inhabiting the Bhagirathi river of Garhwal Himalaya. *J. Inland Fish. Soc. India*, 36(1) : 1-8
48. **Agarwal, N. K.**, Rawat, U. S., Thapliyal, B. L. and Raghuvanshi, S. K. (2003). Seasonal variation in physico-chemical characteristics of the river Bhagirathi and its impact on phytoplankton and benthic entomofauna. In: Raj, V.V., Puranik, V.D., Mahadevan, T.N., Saradhi, I.V., Gurg, R.P., and

Ramola R.C. (Eds.), *Proc. of XII National Symposium on Environment (NSE-12)*. BARC, India. June 5-7, 2003, p.430-437.

49. **Agarwal N.K.**, Thapliyal B.L., Rawat U.S. and Raghuvanshi S.K. (2003): Egg Production Potential of *Schizothorax richardsonii* in relation to two Riverine Environments. Proc. Nat. Symp. Ecol. & Biodi. Aqu. Envi.
50. **Agarwal N.K.**, Thapliyal B.L., and Rawat U.S.(2001) : Artificial breeding of a snowtrout, *Schizothorax richardsonii*, inhabiting the Bhilangana river of Garhwal Himalaya." J. Inland Fish. Soc. 33 (1) 77-80
51. **Agarwal N.K.** and Singh H.R. (1996). Yolk nucleus in the developing oocyte of snowtrout *Schizothorax plagiostomus*-A cytological and cytochemical approach. J. Anim. Morphol. Physiol. Vol. 43 (1) pp133-135.
52. Jauhri R K., Sexena A.K. and **Agarwal N.K.** (1995). Mosquito problems in irrigation system in DoonVally. In "Recent researches in aquatic Environment" (eds., A. Gautam and N.K. Agarwal). Daya Publishing House, Delhi. pp 119-123.
53. Singh H.R., Nautiyal P., Dobriyal A.K., Pokhriyal R.C., Negi M., Baduni V., Nautiyal R., **Agarwal N.K.** and Gautam A. (1994). Water quality of river Ganga (Garhwal Himalaya). Acta Hydrobiol.36(1):3-15
54. Singh N., **Agarwal N.K.** and Singh H.R. (1993): SEM investigation on the adhesive apparatus of *Garra gotyla gotyla* (Family: Cyprinidae) from Garhwal Himalaya. In: "Advances In Fish Biology" (ed., H.R. Singh). Hindustan Publishing Corporation, Delhi: 281-291.
55. Singh N and **Agarwal N.K.** (1993). Organ of adhesion in four hillstream fishes: A comparative morphology study. In: "Advances in Limnology"(ed., H.R. Singh). Narendra Publishing House, Delhi: 311-316.
56. Nautiyal P., **Agarwal N.K.** and Singh H.R. (1993). Certain abiotic components of the fluvial system and their inter-relationship as evidenced by statistical evaluation. In: "Advances in Limnology" (ed., H.R. Singh). Narendra Publishing House, Delhi: 181-186.
57. **Agarwal N.K.**, Singh N. and Singh H.R. (1992). Post-ovulatory follicle (Corpus luteum) histology of a snowtrout *Schizothorax plagiostomus* (Heckel) of Garhwal Himalaya. Acta Ichthyologica et Piscatorial Vol. XXII (1): 141-150.
58. **Agarwal N.K.**, Singh N. and Singh H. R. (1992). Histological and Histochemical study of the steroid synthesizing cellular sites in the testes of a hill-stream fish *Schizothorax plagiostomus*. Acta Ichthyologica et Piscatorial Vol. XXII (1): 113-118.
59. Singh N., Bhatt K.C. and **Agarwal N.K.** (1992). The Alaknanda catchment area (Garhwal Himalaya): A case study of developmental strategies vis-à-vis Ichthyofauna and environmental imbalances. In "Aquatic Environment" ed. A. Gautam. Ashish Publishing House, New Delhi.
60. Singh N and **Agarwal N.K.** (1991). The SEM surface structure of the adhesive organ of *Pseudoechneis sulcatus* McClelland (Teleostei: sisoridae) from Garhwal Himalayan hillstream. Acta Ichthyologica et Piscatorial Vol. XXI (2): 29-35.
61. Singh N and **Agarwal N.K.** (1991). The SEM surface structure of the adhesive organ of hillstream fish *Glyptothorax pectinopterus* (Teleostei: sisoridae) from Garhwal Himalaya. Functional and Developmental Morphology Vol.1 (4): 11-13.
62. **Agarwal N.K.** and Singh H.R. (1991). Ovarian Structure, Development and Cyclicity in *Schizothorax plagiostomus*(Heckel) of Garhwal Himalaya. Ad. Bios. 10 (1): 33-48.

63. **Agarwal N.K.** and Singh H.R. (1990). Pre-ovulatory follicular atresia (Corpora atretica) in snowtrout *Schizothorax plagiostomus* (Heckel) of Garhwal Himalaya. J. Anim. Morphol. Physiol. 37 (1-2): 29.
64. Singh N., Singh H.R. and **Agarwal N.K.** (1990). Histo-enzymology of the mesencephalon of hillstream teleost *Barilius bendelisis* (Ham.) from Garhwal Himalaya. J. Freshwater Biol. 2 (3): 233-240.
65. **Agarwal N.K.**, Bahuguna S.N. and Badola S.P. (1990). Seasonal variation in the gut contents of a snowtrout *Schizothoraichthys progastus* (McClelland) from the River Ganga in Garhwal Himalaya. Indian J. Anim. Sciences 60(6):750-752.
66. **Agarwal N.K.**, Dobriyal A.K., Pokhriyal R.C., Bahuguna A.K. and Singh H.R. (1988). Fecundity of a hill-stream loach *Noemacheilus montanus*. Him. J. Environment. Zool. 2: 133-135.
67. **Agarwal N. K.**, Singh W. and Singh H.R. (1988). Fecundity of the snowtrout *Schizothorax plagiostomus*(Heckel) from Garhwal Himalaya. J. Indian Fish. Assoc.18: 537-548.
68. Lakra W.S., **Agarwal N.K.** and Singh H.R. (1987). Present status of snowtrout in Garhwal Himalaya. U.P. J. Zoology 7 (1): 85-88.
69. Singh H.R. and **Agarwal N.K.** (1986). Spawning ecology of *Schizothorax plagiostomus* from Garhwal Himalaya. *Proc. Symp. Fish.*: 82-85.

Conference/Symposium/Workshop Attended: 97

International :

1. Chaired technical session and delivered invited talk on **'Fish Fish diversity of upper Ganga river system and Challenges to its conservation'** in International Conference on **'Contemporary Issues of Climate Change, Conservation of Biodiversity and Natural Resources in Himalayan Environments'** organized by Department of Zoology, Govt. P.G. College, **New Tehri** Uttarakhand (India) from Nov. 14-16, 2019.
2. Chaired technical session **'Rivers & Dams'** and also presented a research paper entitled **'River Fragmentations and their Impact on Fish Diversity in Upper Ganga River System, Central Himalaya (India)'** in International Seminar on **'Himalayan Challenges: Towards Interdisciplinary Dialogues for Sustainability and Development'** organized by SDS Uttarakhand University from 29th Nov.-1st Dec 2017.
3. Presented research paper on **'Dams on the Bhagirathi river system: Impacts to fish diversity and fisheries'** in 3rd **International Geo-Hazards Research Symposium** organised by Deptt of Physics, HNB Garhwal University Campus Badshahithaul (10-14 June 2012).
4. Presented research paper on **'The Environmental Impacts of Dams: Habitat fragmentation and cold water fish diversity.'** In International conference on **'Recent Trends in Climate Change Researches vis-à-vis Biodiversity'** organised by Department of Animal Science, M.J.P., Rohilkhand University Bareilly from 3-4 December 2012.
5. Participated and presented a research paper entitled **'Fertility of Cryopreserved snowtrout (*Schizothorax richardsonii*) sperm'** in International Conference **'Asian Pacific Aquaculture 2011'** organised by World Aquaculture Society, at Kochi, India from 17-20th January 2011.
6. Participated as resource person and also presented research paper on **'The Impact of Impoundment on the Physical and Chemical Hydrology of Bhilangana River, Uttarakhand, India'** in World Congress for Man and Nature **"Global Climate Change & Biodiversity**

Conservation” Organized by Deptt of Zoology & Environment Science, Gurukul Kangari Vishwavidalaya Haridwar (11-13 Nov. 2011)

7. Delivered invited talk on *‘Biodiversity Conservation’* and also chaired technical session in World Congress for Man and Nature **“Global Climate Change & Biodiversity Conservation”** Organized by Deptt of Zoology & Environment Science, Gurukul Kangari Vishwavidalaya Haridwar (11-13 Nov. 2011)

National

1. Participated and presented a research paper in National Seminar on **‘Fish and their Environment’** held at Gurukul Kangari University Haridwar (Dec. 15-19, 1988).
2. Participated and presented a research paper in **74th Indian Science Congress**, Bangalore, 1987.
3. Participated and presented a research paper in II National Seminar on **‘Fish and their Environment’** held at Kerala University, Trivendrum (21-23 Nov., 1988).
4. Participated and presented a research paper in National Seminar on **‘Advances in Limnology and Conservation of endangered fish species’** held at HNB Garhwal University, Srinagar Garhwal, UP, India. (22-24 Oct. 1989).
5. Attended National Workshop on **‘Himalayan Ecology’**, held at Manali, organised by School of Entomology St. John’s College, Agra (26-30 Sept. 1989).
6. Attended National Sangosthi on **‘Role and responsibility of educated youth in Eco-regenerative and other developmental activity in the Himalaya on voluntary basis’**, held at HNB Garhwal University, Srinagar Garhwal, (25-26 May, 1990).
7. Participated in National convention on **‘Recent advances on Environmental Management for vector borne Diseases control’**, held at D.A.V. (PG) College, Dehradun, (10-12 Feb. 1994).
8. Participated and presented a research paper in National Symposium on **‘Recent Advances in Bio-sciences held at development of Bio-science’**, M.D. University, Rohtak, (3-5 Nov. 1995).
9. Participated and presented a research paper in National Seminar on **‘Prospective in Environmental Heterogeneity in the management of parasitic diseases’**, held at D.A.V. (PG) College, Dehradun, (1996).
10. Participated and presented a research paper in Regional Conference on **‘Sustainable Ecosystem and Environment from Sustainable, Efficacious Development and Awareness’** organised by Action for Sustainable Development and Awareness. NGO at Rishikesh (29-30 Nov. 1998).
11. Presented a research paper in National Symposium on **‘Aquatic Biodiversity and Emerging Trends in Freshwater Biology’**, held at HNB Garhwal University, Srinagar Garhwal. Organised by Department of Zoology, HNB Garhwal University, Srinagar Garhwal (22-24 Oct. 1999).
12. Presented a research paper in **‘Fifth Indian Fisheries Forum’** held at Central Institute of fresh water aquaculture, Kausalyaganga,(C I F A) Bhubneswar- Orissa.(17-20 January,2000).

13. Presented a research paper in '**First Indian Fisheries Science congress**' organised by Indian Society of fisheries Professionals, Mumbai held from 21-23rd September, 2000 at Panjab University, Chandigarh.
14. Participated and presented a research paper in Workshop on '**Development of research strategies for Aquafarming in Uttaranchal**' Organised by College of Fisheries sciences, G.B.P.University of Agriculture and Technology, Pantnagar on April 21, 2002.
15. Participated and presented a research paper in National seminar on "**Relevance of Biosphere Reserve, National Parks & Sanctuaries (Protected Habitats) in Present Context**" held at Gurukul Kangri University Haridwar, Uttaranchal from 25th - 26th , May 2002.
16. Participated and presented a research paper in "**Sixth Indian Fisheries Forum**" held at Central Institute of Fisheries education , Versova Mumbai (17-20 Dec. 2002)
17. Participated and presented a research paper in National Symposium on "**The Ecology & Biodiversity of Aquatic Environments**" held at Department of Zoology, Allahabad University, Allahabad. (15-17 Feb. 2003)
18. Participated and presented a research paper in National Symposium on "**Fish Genetics and Gene Banking**" held at Central Institute of Fisheries education , Versova Mumbai (29th &30th , March 2003)
19. Participated and presented a research paper in Twelfth National Symposium on "**Environmental protection strategies for sustainable development**" held at department of physics. HNB Garhwal university campus Badshahithaul, Uttaranchal (5-7 June, 2003)
20. Participated and presented a research paper in **15th All India Congress of Zoology**' held at University of Jammu.(29th –31st Oct., 2004)
21. Participated and presented a research paper in National Seminar on "**New trends in fishery Development in India**" held at Department of Zoology, Panjab University Chandigarh (February 16 –18, 2005).
22. Participated in discussion in Brain storming session on "**Development of processing & value addition in fresh water fishes**" held at College of fisheries, G.B.Pant Univ. of Agri. & Tech. Pantnagar (April 25, 2005).
23. Participated and presented a research paper in Regional workshop on "मीठाजल मत्स्य विविधता: उत्तरी भारत के पर्वतीय राज्यों में टिकाऊ मात्स्यिकी हेतु संरक्षण एवं प्रबंधन" held at NBFGR, Lucknow (24-25th April, 06.)
24. Attended National Seminar on '**Medicinal plants: Conservation, Cultivation and Utilization**' held at Deptt. of Zoology & Environment Science, Gurukul Kangari Univ. Haridwar.(March 9-11, 2007)
25. Participated and presented a research paper in National Seminar on '**Recent Advances & rebuilding of Fish and Fisheries in North East India**' sponsored by North Eastern Council, Govt. of India, Shilong. Organised by Deptt. of Pisciculture, St.Anthony's College Shilong from 22-23 August, 2007
26. Participated as resource person in **4th National Teachers' Science Conference - 2007** 'Focal Theme- Environment Education for Better Life' A programme of RVPSP, DST, & NCSTC-Network at Dehradun (22-25 Sept., 2007)

27. Participated and presented a research paper in **2nd Uttarakhand State Science Congress** organized by Kumaon University Nanital organised at Uttarakhand Academy of Administration Nanital during 15-17th Nov., 2007
28. Participated and presented a research paper in National workshop on '**Development of Reservoir Fisheries and Conservation of Aquatic Biodiversity with particular reference to Tehri Dam Project**' organised by Deptt of Zoology, Govt. P.G.College New Tehri. from 1-2 December, 2007
29. National Seminar on '**Global Warming: It's impact on Environment, Economy, Society and Politics**' organized by SMJN P.G.College, Haridwar (27-28 December, 2008)
30. National seminar on '**Recent Advances in Vector Biology & Control**' and Prof. G.P.Agarwal Felicitation symposium ' held at DAV P.G. College Dehradun (3-4 December, 2008)
31. Attended regional seminar on '**Intellectual Property and Innovation Management in Knowledge Era.**' held at Govt. P.G. college Uttarkashi. (31st July, 2009).
32. Chaired technical Session and deliver lecture on '*Cryopreservation of snowtrout (Schizothorax richardsonii) Semen : Post-thaw sperm motility and fertility evaluation*' in National Seminar on '**Thrust Areas in Fish Biotechnology and Fish Conservation**' organised by Department of Zoology, Meerut College, Meerut (19th Sept., 2009)
33. Participated and presented a research paper on '*River based propagation of snowtrout (Schizothorax richardsonii) through artificial fertilization and in-situ hatching*' in **4th Uttarakhand State Science Congress** 2009 organized by UCOST, Dehradun at G.B.Pant Univ. of Agriculture & Technology, Pantnagar during 10-12th Nov., 2009.
34. Participated and presented a research paper on '*Cryopreservation of Snowtrout (Schizothoraichthys progastus) Semen: Means for Propagation and Conservation*'.in National Workshop on '**Fisheries Conservation and Enhancement in Northern Hill States**' jointly organised by NBFGR Lucknow & HNBGU Srinagar at Deptt. of Zoology, HNB Garhwal Univ. Srinagar Garhwal during 9-10th March, 2010.
35. Participated and presented a research paper on '*Cryogenic Preservation and Fertility Evaluation of Semen From a Snow trout Species - Schizothoraichthys progastus*' in National Conference on '**Advances in Biotechnology and its Role in Aquatic Biodiversity Conservation & Fisheries**' organised by RCU Govt. P.G. College Uttarkashi from 17th -18th March, 2010.
36. Presented a research paper on '*The River Ganga in Himalaya*' and actively participated in the discussion in National seminar on '**River Ganga & Water Conservation**' organized by MANU- International Council for Man & Nature, Haridwar on 5th August 2010.
37. Participated and presented a research paper on '*Fishing Methods and Gears Used in Stream/Rivers of Garhwal Himalayan Region of India*' in National Conference on '**Conservation of Aquatic Biodiversity, Development of Cold Water Fisheries, Fish Biotechnology and Emerging Trends in Fresh Water Environments**' organised by Deptt. of Zoology, Govt. P.G.College, New Tehri, from 25-27 November 2010.
38. Chaired the Session and also presented research paper on '*Habitat alteration: A study of physico-chemical characteristics of river Bhilangna and its impoundment for Tehri dam reservoir*' in National Seminar on '**Environmental Management & Biodiversity**

- Conservation**’ jointly organised by ‘Action for Sustainable Efficacious Development and Awareness’ and ‘MANU-International Council for Man and Nature’ at Omkarananda Institute of Management and Technology, Rishikesh from 26-27th Feb.2011.
39. Participated and presented a research paper on ‘*Present status of Ichthyofaunal Diversity of River Bhilangna and its Tributaries from Garhwal Himalaya*’ in National Seminar on ‘**New Innovations in Parasitological Research**’ organized by Department of Zoology, D.A.V.P.G College, Dehradun from 29th -30th March 2011.
 40. Participated and presented a research paper on ‘*Environmental Flow Requirements and Conservation Potential of Major Life Forms in The River Bhagirathi of Garhwal Himalaya*’ in the National Conference on ‘**Biodiversity vis-a-vis Environmental Degradation in Hilly Terrains**’ organised by D.B.S. (P.G.) college, Dehradun from 15-16th May 2011.
 41. Delivered invited talks 1. ‘*Induced breeding & Fry production*’, 2. *Fingerling stocking & Pond Management*, in a training Programme on ‘**Enhancement of Fish Production**’ organized by Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut from 20-24 Sept. 2011.
 42. Attended National workshop on ‘**Intellectual Property Rights/Patent Awareness**’ Jointly organised by UCOST Dehradun and HNB Garhwal Univ. campus Badshahithaul on 26th Nov. 2011.
 43. Chaired IV technical session and delivered a lecture in National Conference on ‘**Innovations in Modern Biology**’ organized by Department of Zoology Meerut College, Meerut (16-17 March 2012)
 44. Participated as resource person in National workshop on ‘**Expert Consultation on Academic Partnership for Excellence and Networks in Fisheries Education and Research**’ held at Central Institute of Fisheries Education (CIFE), Versova, Mumbai (17-18 April 2012).
 45. Delivered Plenary lecture on ‘*Cryopreservation of Fish Semen*’ in National Seminar on ‘**Advanced Biology: Emerging Trends in Biological Galaxy**’ Organized by Department of Zoology, CMP College, Allahabad from 6-7 Oct. 2012.
 46. Chaired academic session and presented a research paper on ‘*Critically important fish habitats within the Bhilangana river system in Central Himalaya, Garhwal (India)*’ in National Seminar on ‘**Status of Environment and Biodiversity: RIO+20 and Role of Space Technology**’ Organised by Department of Zoology & Environment Science Gurukul Kangari University, Haridwar, Uttarakhand from 2-3 Nov. 2012.
 47. Participated as resource person and delivered lecture on ‘*Cryopreservation of fish semen: Protocol for snowtrout species*’ to participants of **UGC refresher course** at Academic Staff College, **Dr. Babasahed Ambedkar Marathwada University Aurangabad** on 23rd Feb.2013.
 48. Chaired session and presented a research paper on ‘*Impact of Dams on Ganga river Ecosystem in Central Himalaya (India)*’ in National seminar on ‘**Environment and Biosciences & 17th Convention of U.P. Government Colleges Academic Society**’ organised by Department of Zoology, Govt. Raza P. G. College Rampur (U.P.) from 2-3 March 2013.

49. Participated and Presented a research paper on '*Present status and threats to the Ichthyofaunal diversity of a snow fed river Nandakini in central Himalaya (Garhwal), India*' in National Seminar on '**Uttarakhand disaster: contemporary issues of climate change and development with a holistic approach**' organized by SDS University, Badshahithaul from 25th-27th Oct. 2013
50. Participated as expert in Brain storming session on 'Occupational and Nutritional Health Hazard' of 8th USSTC-2013 organized at Doon University Dehradun from 26th -28th Dec. 2013
51. Participated and delivered lecture on '*HIV (Human Immunodeficiency Virus) and AIDS (Acquired immune deficiency syndrome)*' in a NSS Workshop on '**AIDS Awareness**' organized by Red Ribbon Club at SRT Campus Badshahithaul, Tehri Garhwal on Dec.02, 2013
52. Chaired technical session and presented as a research paper on '*The Impact of Dams on Ganga river Ecosystem in Central Himalaya (India)*' in National Seminar on '**Economic Up-gradation: Environmental Degradation**' organized by Omkarananda Institute of Management & Technology, Rishikesh from 24-25th Jan 2014.
53. Chaired session and delivered an invited lecture on '*Snowtrout Fishery: causes of Depletion & Strategy for Propagation and Conservation of Species*' in National seminar on '**Biodiversity: Sustainable Development & Conservation**' organized by Jammu University Jammu from 6-8th March 2014.
54. Participated as resource person, delivered lectures and organized sessions under Zoology discipline in six days workshop jointly organized by School of Science, Uttarakhand Open Univ. at RCU Govt. PG College, Uttarakshi from 24-29th May, 2014.
55. Attended conclave on '**Renaissance of Science in Uttarakhand**' organized by School of Science, Uttarakhand Open Univ. at Doon University, Dehradun on 12th June 2014.
56. Participated as resource person and delivered lectures on '*1. Cryopreservation of fish semen 2. The Impact of Dams on Ganga river Ecosystem in Central Himalaya (India)*' to participants of **UGC refresher course** at Academic Staff College, **Kumaon University, Nainital** on 7th Nov. 2014.
57. Chaired session and delivered an invited lecture on '*Fish Semen Banking: A tool for Propagation and ex-situ conservation of a Snowtrout Species (S. richardsonii)*' in National seminar on '**Science and Technology for Human Development**' organized by Department of Zoology, Jammu University Jammu from 25-27th March 2015.
58. Chaired session and delivered an invited lecture on '*Cryopreservation of Fish Semen: Basic Principle for cold water fish species.*' in National Symposium on '**The role of Classical Zoology in present day Scenario.**' organized by Department of Zoology, R.G.P.G. College Meerut from 19-20 December 2015.
59. Participated in National Consultation on '**Rainbow Trout Farming: Prospects and Challenges for Strategic Development**' Organized by ICAR- Directorate of Coldwater fisheries Research, Bhimtal from 20-21 Sept. 2015.
60. Participated as Subject expert in the meeting held on 29th March 2016 for the implementation of E-Learning programme of RUSA Project at Directorate of RUSA Project, Dehradun

61. Delivered Lead lecture on '*Ecological impacts of Dams on the Fish Diversity of Bhagirathi River in Central Himalaya (India)*' in National Seminar on '**Strategies, Innovations and sustainable Management for enhancing coldwater Fisheries and aquaculture**' organized by DCFR-ICAR, Bhimtal from 22-24 September 2017.
62. Chaired technical session and presented paper on '*River fragmentation and their impact on fish diversity in upper Ganga River System, Central Himalaya (India)*' in International Seminar on '**The Himalayan Challenge: Towards Interdisciplinary Dialogues for Sustainability and Development**' organized by Sri Dev Suman Uttarakhand University at Doon University Dehradun from 29th Nov-1st Dec 2017
63. Attended National Workshop on '*Role of Open Educational Resources in Higher Education*' organized by Faculty Development Centre, H N B Garhwal University Srinagar Garhwal from 15-17th December, 2017.
64. Participated as resource person on 10th Jan 2018 and delivered lectures on '*Cryopreservation Techniques for biological Samples*' in '**One week workshop on Practical Skill Enhancement**' organized by Department of Zoology, Jammu University Jammu from 9th 16th Jan 2018.
65. Delivered technical talk on '*Snow trout: Causes of Depletion and strategies for its propagation and conservation*' at College of Fisheries, G.B. Pant University of Agriculture and Technology, Pantnagar on 17th April 2018.
66. Delivered invited lecture on '*The Hydropower Projects in Ganga river Basin: Environmental Aspects*' in one week short term course on '**Hydro Power Generation: Technologies and Policies**' organized by THDC Institute of Hydro engineering and Technology from 27th Aug-01 Sept 2018.
67. Resource Person (Chaired technical session) and delivered lecture on '*Fish Community structure and functions along the altitudinal gradient in river Alaknanda of central Himalaya, India.*' in 11th National Conference of Medical Arthropodology on "**VECTOR-BORNE AND ZONOTIC DISEASES: Surveillance & Control under dynamics of global warming, climate change and environment**" organized by DAV PG College Dehradun from 26-27th October 2018.
68. Delivered invited lecture on "*Effect of Water Withdrawals and Impoundments on Fish Assemblages in upper Ganga river system in central Himalaya*' in National Seminar on "**Challenges in Biodiversity Conservation & Management**" organized by Department of Zoology, University of Jammu from 20th to 21st December 2018.
69. Delivered invited talk on "*Effect of Water Withdrawals and Impoundments on Fish Assemblages in upper Ganga river system in central Himalaya*' in National Seminar on "**Frontiers in Environment. Health & Biosciences**" organized by Institute of Biosciences & Technology, C.S.J.M. University Kanpur, U.P. from 16-17th February, 2019.
70. Resource person and delivered 2 lectures on '*Environmental Issues*' in 3-week **UGC Refresher Course in Environment studies** at UGC Human Resource Development Center of Kurukshetra University, Kurukshetra on 9th Feb. 2019.
71. Resource person and delivered invited talk on '*Evaluation of Semen Characteristics and Extenders Competency during Refrigerated Storage of Snowtrout (Schizothorax richardsonii) Semen*' in national symposium on '**Coldwater Fisheries Development in**

India: Innovative Approaches and Way Forward for Enhancing Hill Farmers Income' and Foundation Day Celebration at ICAR DCFR, Bhimtal from September 24-25, 2019

72. Resource Person and delivered keynote lecture on '*Hydropower Projects on the Upper Ganga River System: Fragmenting Rivers, changing habitat and Fish Diversity*' in National Conference on "**Geology and Natural Resources of India**" organized by Department of Geology, Pt. L.M.S. Government P.G. College, Rishikesh from 25-26 November, 2019.
73. Participated in Indo-Egyptian Webposium on '*Covid Reality: Cost of Human Lives and Economy of the World*' organised by **CSM University Kanpur** on 18th May, 2020.
74. Participated in International Webinar on '*Impact of Covid -19 on Research and Academic Activities*' organised by **Department of Physics, Govt. P.G.College, New Tehri, Tehri Garhwal** India from 19-20 June, 2020.
75. Participated in International Webinar on '*Perspective on Fish Taxonomy*' organised by **Department of Zoology, Bajkul Milani Mahavidyalaya, Medinipur, West Bengal**, India on 21st September, 2020.
76. Delivered invited lecture on '*Fish Diversity of Bhagirathi River Basin and Challenges to Their Conservation*' in national workshop on '**Biodiversity and ecosystem health assessment of upper Ganga Basin**' organized by Deptt. of Zoology & Environmental Science, Gurukul Kangri Univ. Haridwar, in collaboration of National Institute of Hydrology, Roorkee from 22-26 Feb 2021
77. Resource Person and delivered invited lecture on '*Fish diversity of upper Ganga river system: Identification and Conservation*' in Online workshop on '**Fish and Avian Diversity: Identification and Conservation**' organized by FDC, Kurukshetra University, Kurukshetra from 03-04 March 2021
78. Delivered invited lecture under Star College Scheme on '*Upper Ganga River Basin: Fragmenting rivers and Changing Fish Diversity*' organized by **Department of Zoology, DAV College, Muzaffarnagr** on 7 March 2021
79. Delivered invited Lecture on '*Present Status, challenges and mitigation measures for the conservation and sustainable development of fish life in the upper ganga river basin.*' in '**Colloquy: Ganga Samvad**' being organized by **Indian Institute of Public Administration (IIPA)** on the occasion of world Environment Day from 4-5th June 2021
80. Delivered Invited lecture on '*Cleaning of Rivers and Rejuvenation of Small Tributaries in Uttarakhand*' and acted as Panellist for panel discussion in a programme organised by **USERC Dehradun** on World Environment Day, 5th June 2021.
81. Delivered invited lecture on "*COVID-19: Emergence, Transmission and Resurgence*' in *virtual National Seminar on 'Resurgence of Covid-19: Third Wave'* Organised by **Government Degree College Bijbehara, Jammu** in collaboration with **Himalayan Ecological and Conservation research Foundation (HECRF) J &K** on 02 August 2021
82. Act as resource person and delivered invited lecture on "*How to Write an Effective Research Paper*" in one day workshop on '**Scientific Paper Writing**' Organised by **Pt LMS Rishikesh Campus of SDS Uttarakhand Univ, in collaboration with SPECS Dehradun** 30 March 2022.
83. Delivered Guest lecture on '*Biodiversity Loss and its preventive measures*' at D.A.V.

College Muzaffarnagar under STAR College Scheme 19th Dec. 2022.

84. Delivered invited lecture on **“Hydropower projects in the Upper Ganga River Basin: Fragmenting Rivers, Changing Habitat and Fish Diversity”** in two days workshop on *‘Climatic and human induced hydro-ecosystem alteration on freshwater ecosystems in Indian Himalaya’* organized by Garhwal Regional Center of G.B. Pant National Institute of Himalayan Environment in collaboration with Department of Zoology, HNBGU from 18th – 19th July 2023
85. Delivered invited lecture on **“Cold water fish diversity of upper Ganga river system: Challenges and mitigation measures for its conservation and sustainable development”** in National conference on **‘Strategies for Management of Bio-resources’** organized by Department of Animal Sciences, MJP Rohilkhand University Bareilly from 26th – 27th March 2023
86. Delivered invited lecture on **“Hydropower Projects: Impacts on Aquatic Life and Possible Mitigation Measures for Environmental Sustainability”** in Faculty Development Program on **‘S Hydropower & water Resource Management for Sustainability’** organized by THDC Institute of Hydropower Engineering & Technology (THDC-IHET) sponsored by AICTE Training and Learning (ATAL) Academy Tehri from 20th – 25th March 2023
87. Delivered invited lecture on **“Indigenous Technologies For Viksit Bharat’ on the occasion of National Science Day’** organized by HNB Garhwal University SRT Campus Badshahithaul on 28th Feb. 2024.
88. Delivered Invited Lecture on **‘Fish diversity of upper Ganga river system: Challenges and mitigation measures for the conservation and sustainable development of fishery resources’** in **17th Agricultural Science Congress**, jointly organized by National Academy of Agricultural Sciences and G.B. Pant University of Agriculture and Technology Pantnagar during 20-22 February 2025.
89. Resource person and delivered Invited lecture on **‘Citation Styles & Plagiarism Detection Software’** in 10-day Research Methodology Workshop organized by the **Department of Defence, Strategic & Geo-Political Studies, H.N.B. Garhwal University, SRT Campus Tehri** from 21st to 30th July 2025
90. Resource person in the **Research Tool Vetting Workshop** organized by Regional Institute of Education- NCERT, Bhopal from 4-8 August 2025.

Seminar/ workshop organised:

1. Member organising committee of **International Seminar on Himalayan Challenges: Towards Interdisciplinary Dialogues for Sustainability and Development’** Jointly organized by Sri Dev Suman Uttarakhand University and Doon University Dehradun from 29th Nov-1st Dec 2017.
2. Convener, Entrepreneurship Skill Development Program- **‘Field Training on Cold Water Fish Farming’** organised by Department of Zoology, HNB Garhwal University SRT Campus, in association of CDO New Tehri and Department of Fisheries New Tehri from 18-19 March 2025

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