

**Dr. S USHA**

PROFESSOR AND HEAD, Department of Zoology

**ADMINISTRATIVE DISTINCTION**

* HOD, Department of Zoology 2014 & 2022 onwards
* Research Supervisor of Kerala University from 2010
* FSA Secretary in S N College for Women, Kollam, 2006
* Participated as Organizing member in the 21st Kerala Science Congress held at Kollam during 28-31 January 2009.
* Co-ordinator of Rank List Preparation Committee in 2011 CBCSS I year Degree
* Joint Coordinator of online registration of students in CBCSS course, 2010
* Nodal Officer of IT Mission Course by KSITM 2009 to 15
* Resource person of IT Mission course, 2009 to 15
* Organizing Secretary of Campus Recruitment drive in S N College for Women college and Technopark on 22nd and 23rd June, 2012
* Coordinator of Spark Training Programme in IT lab, 2012
* Nodal Officer of MHRD- Conducted AISHE survey in S N College for Women, Kollam from 2010 to 2015.
* Coordinator of Community Health Club in S N CW for 3 years
* Member in committee Formulating of Proposal for new a Interdisciplinary ,Innovative Programme under UGC scheme2012
* Member 12th Plan Proposal committee, SNCW, Kollam, 2012
* Joint Convenor, Planning and Purchasing Committee,2012
* Joint Coordinator, U G & PG admissions in 2013
* Coordinator of Higher Education, UGC, Statistics and Collegiate Education
* Board of studies member in U G & PG of FMN College from 2014 to 2019.
* Board of studies member in Kerala University, 2014 to 2017.
* Member RUSA Committee & Member FIST Committee,2013 onwards
* Co coordinator of UGC Innovative course in Biomedical science,2015-17, SNC
* Coordinator of Palliative care in S N College, Kollam 2015 -17
* Coordinator of Women’s Study Club in S N College, 2015 -17
* Nodal Officer of NIRF from 2019 to 2021 at SNCW
* Coordinator of IT course Capacity Building in IT for Girls from 2017-21
* Resource person of IT course Capacity Building in IT for Girls 2017-21
* IQAC Member from 2017 to 2021
* Coordinator of Health survey in collaboration with DMO, Kollam 2017-
* University Examination team member, Kerala University in 2021 at SNCW,
* NAAC Coordinator from 2022 in SNCW
* Student IQAC Coordinator in 2022 onwards
* Convener of Pure water for Health – Consultancy service,2022
* Board of Studies member in Aquatic Biology & Fisheries, 2023
* Coordinator of Basic Computer & Bioinformatics- Certificate course-2023

**PARTICIPATION IN SEMINARS/ CONFERENCES/ WORKSHOPS**

* National Seminar on Number Theory and Combinatorics, Department of Mathematics, TKM College of Arts and Science, Kollam 29-31 October 2014
* NAAC Sponsored National Seminar on Challenges and Changes in AQAR and SSR Preparation, 18, 19 December 2019.

**PUBLICATIONS IN BOOKS OR JOURNALS**

* S. Narmada and V. Mahesh Kumar, Intuitionistic Fuzzy Bi-Ideals and Regularity in Near-Rings, International Journal of Algebra, Vol. 5, 2011, no. 10, 483 - 490.

**MEMBERSHIP IN PROFESSIONAL BODIES**

* Member, Board of Studies in Mathematics (Pass), University of Kerala

**ADDRESS & EMAIL**

Anugraha,105/A

Oruma Nagar

Thattamala P. O.

Kollam

[usha@sncwkollam.org](mailto:usha@sncwkollam.org)

[ushasubhagan@gmail.com](mailto:ushasubhagan@gmail.com)

**QUALIFICATION**

MSc, Ph.D

**DATE OF JOINING**

03-12-2004

**EXPERIENCE IN YEARS**

19 Years

**Election duties carried out from 2005**

**Kerala Elections** – Presiding officer - 4 times (Karunagappally, Paravoor-2, Kottarakkara)

Polling Officer -1 time

**Management Elections** – 2005 onwards when called for duty as Presiding officer

As polling officer- Single time only

As data entry help after presiding duty during 2012

**College Union Elections**- As Executive member -4 times

Presiding officer/Counting official- all duties

College Union Election **Assistant Returning officer** – Single time

Senate Election – **Returning Officer**- SingleTime

**Design of New Curricula and Courses**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No. | Name of Course | Class and Semester | University/Board |
| 01 | Capacity Building in IT for Girls | Certificate course for 3 months | Kerala State I T Mission |
| 02 | Redesigning of UG&PG courses in FMN College, Autonomous on 07/03/2015 | BSc Zoology 6 semesters  MSc Zoology 4 semesters | Kerala University |
| 03 | Redesigning of UG&PG courses in FMN College, Autonomous on 20/01/2017 | BSc Zoology 6 semesters  MSc Zoology 4 semesters | Kerala University |
| 04 | Basic Computer & Bioinformatics ( Pending reqst) | Certificate course for 30 days | College level |

**Documents submitted to an International Body/organization or Central or State Government or Local Bodies or Universities**

|  |  |  |
| --- | --- | --- |
| Sl. No. | Description/Patent | International Bodies/ Central/State Government/  Local Bodies |
| 01 | Project Report of “Skill Enhancement Women Resource Centre” by Kerala State I T Mission on 30/05/2015 | State Government |
| 02 | Annual Report prepared and submitted to S N College on the Innovative Course of UGC in S N College (Post graduate diploma in Biomedical sciences) | Central |
| 03 | Prepared and Submitted a study report on “A season wise study of Disease Surveillance in Government District Hospital, Pathanamthitta, Kerala | State Government |
| 04 | Prepared and submitted a study report on 24/11/2016 entitled “Common Health hazards of Women Workers in Cashew Factory” to the Managing Director at Urban Stanislaus & Company, DP No27, Mundakkal West, Kollam, Kerala, | Local body |
| 05 | Submitted final report of survey project on “A study of Aedes larval survey” to District Medical officer, DMO office, Kollam on 13/01/2018 | State government |
| 06 | Final report submitted to District Malarial Officer, DMO, Kollam on the topic “A study of Dengue larval Prevalence in Mundakkal area, Kollam Corporation, Kerala” on 23/11/2018 | State government |
| 07 | A report on “Mosquito source Reduction” was submitted to District Malarial Officer, DMO, Kollam on 19/07/2019 | State government |
| 08 | Prepared and submitted a report on “Awareness of Corona virus” to District Medical Officer on 07/02/2020 | State government |

**Collaborations**

1.With District Health Office, Kollam, Government of Kerala

**MOUs**

1.Avodha

2.G Tec ( Request pending)

3.Industry

**Area of Interests**

**Research Areas**

* Nano biotechnology
* Novel methods of Pollution control
* Water Analysis works
* Health related works
* Collaboration works

**Others**

* Computer data entry
* Computer applications in Biology
* Biochemical analyses
* Documentation works
* File management System

**Technical Skills**

Operating systems: Red Hat Linux, Windows

Computer programmes (Windows, M.S.Word, M.S.Excel including statistics, Power point, Moodle platform, Spark, Editing in Paint, Google classroom, Drive, Sheets, Forms, Meet, Designing, e-mail, Internet and SPSS)

Bioinformatics application

Barcode of Life applications

Animal identification

Smart Board and ICT Teaching

Other innovative methods

**UGC Orientation/Refresher Course attended**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of the Course /Summer School | Place | Duration | Sponsoring Agency |
| Orientation Course | ASC, University of Kerala. | 16/06/2005 to 13/07/2005 | UGC |
| Refresher course in Life Science | ASC, University of Kerala | 25/10/2006 to 14/11/2006 | UGC |
| Refresher Course in Environmental Science | ASC, University of Kerala | 24/02/2009 to 17/03/2009 | UGC |
| Refresher Course in Environmental Science | ASC, University of Kerala | 01/02/2012 to 22/02/2012 | UGC |

**HRDC/SPARK Courses attended other than Orientation and Refresher courses**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of the Course /Summer School | Place | Duration | Sponsoring Agency |
| Short term course for Research Guides | TVM | 22-10-2010 -27-11-2010 | UGC Academic Staff College |
| Short term course for Soft Skill Development | TVM | 18-03-2014- 22-03-2014 | UGC Academic Staff College |
| Short term course in Women Empowerment | TVM | 06-11-2017-  11-11-2017 | In UGC-HRDC,  sponsored by RUSA |
| Short term course in Student Counseling and Mentoring | TVM | 04-07-2019-10-07-2019 | UGC-HRDC |
| Orientation in e Tenders By Spark | TVM | 2 Days | Spark, Kerala Govt. |

**RESEARCH, PUBLICATIONS AND ACADEMIC CONTRIBUTIONS**

**Published Research Papers in Peer-reviewed or UGC listed Journals**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Title with page  Nos. | Journal | UGC ISSN/ISBN  No | Whether peer reviewedImpact Factor | No. of Co- authors | Whether you are the main  Author |
| 01 | Fin Erosion of carp fishes in relation to water quality. 15(5): 365-370,2003 | Journal of Ecobiology | ISSN:  0970-9037-03-15-365 | Peer reviewed | 1 | Yes |
| 02 | Morphology, Composition and Development of Fins in common carp, *Cyprinus carpio.* 51 (4): 471-480,2004 | Indian Journal of Fisheries | ISSN:  0970-6011 | Peer reviewed  0.5 | 1 | Yes |
| 03 | Fins of carp fish, *Catla catla* in relation to Ecology, Morphology, Composition and Development. 23 (1): 106-112,2005 | Environment & Ecology | ISSN:  0970-0420 | Peer reviewed | 1 | Yes |
| 04 | Fin characteristics of carp fishes in relation to ecological niches. 20(1): 97-99 (2007) | Journal of Ecobiology | ISSN:  0970-9037-07-20- 97 | Peer reviewed | 1 | No |
| 05 | Risk factors for Hepatitis B infection- a community based case control study from southern india,  Vol.-3, Issue-1, P. 172-180,2013 | Indian Journal of Basic and Applied Medical research | ISSN:  2250-284x | Peer reviewed | 4 | No |
| 06 | A study on contamination risks of wells from Kollam district, southern India. Volume 4,Issue 4,727-732. 2014 | Journal of Water, Sanitation and Hygiene for Development. | ISSN:  2043-9083 | Peer reviewed | 4 | Yes |
| 07 | Heavy metal content in Etroplus suratensis and its local environment in Ashtamudi lake, Kerala,2015  Vol XIV No.2 p14-21. | Holistic Thought | ISSN:  0975-363X | Peer reviewed | 1 | Yes |
| 08 | Immunomodulatory  Effect of Triphala Bio-Fortification on *Oreochromis mossambicus*. Vol 5. Issue 8.2016.P. | International Journal of Science and research (IJSR). | ISSN:  2319-7064 | Peer reviewed | 2 | No |
| 09 | Growth promotion  Effect of Triphala Bio-Fortification on *Oreochromis mossambicus*. Vol 5.Issue  9.2016.P. | International Journal of Science and research (IJSR). | ISSN:  2319-7064 | Peer reviewed | 2 | No |
| 10 | Effect of Temperature on the optical and antioxidant properties of Bio and organic synthesized Hematite nanoparticles. Materials Science and Engineering 360(2018)012017 | Materials Science and Engineering | doi:10.1088/1757-899 X/360/1/012017. | Peer reviewed  Impact factor- 36.214 | 3 | No |
| 11 | Environmental nanotechnology- Antibacterial and Arsenic pollution control properties of Zinc oxide nanoparaticles. Indian.J Sci. Res.18(1):107-110,2018 | Indian  Journal of Science Research | ISSN:2250-0138  ISSN:0976-2876(print) | Peer reviewed | Nil | Yes |
| 12 | Antimicrobial activity of Zinc oxide nanoparticles on selected gram positive and gram negative bacteria. Advances in Bioresearch. Vol 9 (5) 2018.100-104. | Advances in Bioresearch. (ABR) | ISSN:2277-1573  Print: ISSN 0976-4585 | Peer reviewed | Nil | Yes |
| 13 | Extraction Isolation and structural elucidation of certain active principles of C longa. Trends in Biosciences 11(7), 2018. 1-6. | Trends in Biosciencess | ISSN:  0974-8431 | Peer reviewed | 2 | No |
| 14 | Antigenotoxic properties of Njavara Rice Oryza Sativa L. Indica an indigenous medicinal rice variety of Kerala, Volume 8,Issue 10,b445 –b449,2022 | Journal of Emerging Technologies and innovative Research  (JETIR) | ISSN:  2349-5162 | Peer reviewed | 1 | No |
| 15 | Monitoring of water pollution of selected freshwater sites of Kollam district, using the aquatic insects as bio indicators,Volume 11 Issue 3,2022, 397-401. | International Journal of Science and research (IJSR). | ISSN:  2319-7064  ID- SR22302003356 | Peer reviewed | 1 | No |
| 16 | Monitoring of Bioaccumulation of heavy metals in Ashtamudi Lake,Ramsar site in Kerala,Volume 11,  Issue 3,2022,832-836. | International Journal of Science and research (IJSR). | ISSN:  2319-7064  ID- SR22316130348 | Peer reviewed | 1 | Yes |

**PAPERS PRESENTED**

* 1. **Invited Lectures and Papers at International/ National/ State or University Level**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl.  No. | \*Title of the Lecture/ Paper/ Academic Session | Title | Organized by | Whether International/ National/ State or  University Level |
| 01 | Implications of the quality of drinking water in the residential areas of Kollam corporation,Kerala | Ist Indian Biodiversity Congress | Biodiversity Board, University of Kerala, CISSA | National |
| 02 | Water quality of wells in relation to health in Kollam corporation area | International Conference on “Climate change, Forest Resource and Enviro  nment ” | Organized by Department of Environmental Sciences, Thiruvananthapuram from December 9-11,2011. | International |
| 03 | Presented a paper in a UGC sponsored National seminar “ Recent advances in Computational Biology”, A computational method to aid the calculation of dissolved oxygen and carbon dioxide in water. | Recent advances in Computational Biology” | organized by PG and Research Department of Zoology, Government Arts College, Karur, Tamil Nadu, India on 9th March,2012 | National |
| 04 | Presented paper in a UGC sponsored National seminar “ Biodiversity – its conservation for Sustainable Future “  Freshwater Pond Polyculture-impact of quality of water. | Biodiversity – its conservation for Sustainable Future “ | organized by Departments of Botany and Zoology, St. Thomas College, Ranni, Pathanamthitta Kerala from March 27-28, 2012. | National |
| 05 | An Evaluation of Heavy metal content in an economically important fish Etroplus suratensis.121-129 | UGC National Seminar on Bio nano photonics, Seminar Proceedings | Department of Physics, S N College for Women, S N Press, Kollam | National |
| 06 | An Evaluation of heavy metal content in a few organisms collected from Ashtamudi lake.  115-119. | UGC seminar on Coping with Academic stress- need of the hour, | Seminar Proceedings by Department of Home Science, S N College for Women, S N Press, Kollam | National |
| 07 | An Assessment of heavy metal concentrations in water, sediment,plankton and fish of lake Ashtamudi, Kollam- Kerala Page-45 | Biological Resources in contemporary plant sciences, Seminar Proceedings | Department of Botany, S N College for Women, S N Press, Kollam | National |
| 08 | “Environmental Biotechnology- An Assessment of Arsenic pollution control property of ZnO nanoparticles”.41-43 | National Seminar on “Recent trends in Biodiversity and Conservation Biology” on August 11-12, 2015. | Department of Zoology, S N College, Chempazhanthy. | National |
| 09 | Environmental Nanotechnology-ZnO nanoparticles and Arsenic pollution. Page-17 | NSST -2015-National seminar | Department of Physics, TKMM College, Nangiarkulangara and CPCRI, Kayamkulam sponsored by UGC | National |
| 10 | Women Empowerment & Environment, Pages 6-8. | UGC national Seminar proceedings on “Protection of Western Ghats, Concerns and Policy alternatives” published from S N College,Kollam | PG & Research Department of Political science, Sree Narayana College, Kollam | National |
| 11 | Histopathology of gills and liver in Cyprinus carpio treated with Zn O2 nanoparticles | “ Conservation of Freshwater Biodiversity under changing climate and Land Cover“ | Organized by Department of Zoology, University of Kerala during January 20-21, 2017. | National |
| 12 | Presented a Paper on “A study of Bioconcentration of Heavy metals from a few components of Ashtamudi Lake” | National Seminar on “ Blue Economy- Fostering sustainable development and profitable resource utilization | organized by Department of Zoology, F M N College, Kollam during August 22-23, 2017. | National |
| 13 | Presented Paper entitled “An Evaluation of heavy metal content in an economically important fish Etroplus suratensis in relation to biomagnification” at the KSCSTE supported National Seminar | on “ Conservation of Wetland ecosystems for long term ecological security“ | organized by Department of Botany, S N College for Women, Kollam during January 18-20,2018. | National |
| 14 | Presented Paper entitled “Histopathology of liver treated with IrO nanoparticles in a culture fish Cyprinus carpio” at the National Seminar | “ reaching the unreached through science and technology“ | organized by S N College, Kollam during February 12-14,2018. | National |
| 15 | Presented Paper entitled “An Evaluation of uptake of iron oxide nanoparticles by fish muscles” at the KSCSTE supported National Seminar on “ Emerging challenges in Biodiversity conservation with special reference to recent trends in ecotoxicology“ | “ Emerging challenges in Biodiversity conservation with special reference to recent trends in ecotoxicology“ | organized by Department of Zoology, MSM College, Kayamkulam, Kollam during February 26-27,2018. | National |
| 16 | Presented Paper entitled “Using Excel-important tips to calculate water quality parameters” at the KSCSTE supported National Seminar on “ Bioinformatics“ organized by Department of Zoology, S N College, Sivagiri, Varkala during March 5-7, 2018. | “ Bioinformatics“ | organized by Department of Zoology, S N College, Sivagiri, Varkala during March 5-7, 2018. | National |
| 17 | Presented a Paper at the KSCSTE supported National Seminar on “ Frontline approaches to material science and computational chemistry“ | “ Frontline approaches to material science and computational chemistry“ | organized by Department of Chemistry, S N College for Women, Kollam during March 14-16,2018. | National |
| 18 | Presented Paper in the International Conference on innovations and sustainable research in environment and life sciences“, Antimicrobial properties of Nanoceria, page 192 | International Conference on innovations and sustainable research in environment and life sciences“ | Organized by Department of Zoology, F M N College, Kollam during August 7-9,2018. | International |
| 19 | An evaluation of drinking water quality og dug wells in Kollam district. | 31st Kerala Science Congress | organized by Department of Zoology, FMN College, Kollam | State |
| 20 | A Study of vector  Indices of Ades aegypti in Mundakkal area, Kollam. Pages 135 | “Blue growth initiative: sustainable Fishery development strategies and advanced technologies for Aquaculture“ | organized by Department of Zoology, F M N College, Kollam during August 7-9,2019. | International |
| 21 | Presented Paper in the National Seminar on “ Challenges and Changes in AQAR and SSR preparation “on 19th 20th December 2019 organized by IQAC, S.N. College for Women, Kollam. | “ Challenges and Changes in AQAR and SSR preparation “on 19th 20th December 2019 | organized by IQAC, S.N. College for Women, Kollam. | National | 3 |
| 22 | International Seminar on Current Status and Challenges for Conservation and Sustainable use of Biodiversity (ISCCSB 2020), Biochemical and Histopathological changes in tissues of Cyprinus carpio treated with iron oxide and cerium oxide nanparticles.CSS-BC9 page 88 in Theme IV Biochemistry | International Seminar on Current Status and Challenges for Conservation and Sustainable use of Biodiversity (ISCCSB 2020) | PG & Research Department of Zoology, Sree Narayana College, Kollam | International | 5 |

**PARTICIPATION IN SEMINARS/ CONFERENCES/ WORKSHOPS**

1. Participated in the National Symposium on Biotechnology of 21st century from February 2-3,2006 held at Fatima Mata National College, Kollam.

2. Participated in the Lions- Quest Skills for Adolescence Workshop from 13th to 15th October,2006 at Pathanamthitta, Kerala.

3. Participated in the National Symposium on Recent trends in biodiversity conservation and Environmental biotechnology held during January 11 & 12, 2007 at Fatima Mata National College, Kollam.

4. Participated in the workshop on Formulation of Research project proposals for funding, on 26th September, 2007 by PG & Research Dept. of Zoology, S N College, Kollam

5. Participated in the state level workshop on Captive Breeding of Fish from September 24-16,2009 by PG & Research Dept. of Zoology, Fatima Mata National College, Kollam.

6. Attended the one day work shop on On-line enrolment,on-line registration,on-line Hall ticket & on- line nominal rolls for UG courses conducted by University Computer Centre on 23-09-2010 held at Senate House campus, University of Kerala, Tvm.

7. Participated in the college level training programme in General Informatics, S N College for Women, Kollam from13th- 15th December,2010.

8. Participated in the ‘Insplore’ held at Kerala Science & Technology Museum on 24th and 25th January,2011, Thiruvananthapuram.

9. Participated in the IT Mission sponsored computer training programme from 31-01- 2011 to 05-02-2011. Thiruvananthapuram

10. Participated in the Value @ Amrita Workshop on Virtual labs on 24/09/2011 at Amritapuri campus, Ernakulam, Kerala.

11. Participated in the State level energy conservation programme organized by NSS in S N College for Women, Kollam from on 18-02-2012.

12. Participated in the International Workshop on Risk Reduction and Contingency planning organized by Department of Revenue and Disaster Management held during 9th and 10th March 2012 at Kanakakkunnu Palace Grounds, Thiruvananthapuram, Kerala.

13. Participated in the National Workshop on Environmental Impact assessment organized by Department of Environmental Sciences held during 28-31 march,2012 at Department of Environmental Sciences, Tvm.

14. Participated in the workshop on Red Ribbon Express Campaign organized at Kollam junction Railway station on 3rd and 4th May,2012.

15. Participated in the Workshop organized by Nehru Yuva Kendra-Kollam, in association with Youth information centre, sarada Vilasini vayanashala, Kollam from 9th -10th June,2012.

16. Participated in a National Workshop on Thesis writing skills held on 28th -30th June,2012 organized at Christ University Nodal office, Vazhuthacaud, Thiruvananthapuram, India.

17. Participated in the Workshop for Nodal officers of AISHE organized by MHRD held on 19.10.2012 at Senate House campus, University of Kerala, Tvm.

18. Participated in the Orientation programme in connection with UG online admission 2013-14 held at Senate House campus, University of Kerala, Tvm on 18/05/2013.

19. Participated in a National Workshop on “Biostatistics for Research (Basic Principles and Advanced Tools)” held during 19th -21st March,2015 organized at Cashew Bhavan, Kollam By CEPC Laboratory and TKM Arts & science College, Kollam. India.

**SEMINARS AND CONFERENCES ATTENDED**

1.Participated in a National seminar on“ Inland Water Resources and Environment “ held• during 2-4 February,2004 at Kariavattom, Thiruvananthapuram.

2. Participated in a UGC sponsored National seminar “ Spectroscopy as a tool for structural• elucidation “ organized by PG Department of Zoology, S N College for Women, Kollam during August 24-25,2005. 3.Participated in National seminar on“ Waste Management Techniques “ organized by• Department of Environmental Sciences held during 14-15 October,2005 at Kariavattom.

4.Participated in a National seminar on“Human Resources Development in Bioinformatics”• organized by Department of Biosciences, on 21st February 2006.

5.Participated in a UGC sponsored National seminar “Biotechnology for a clean• Environment “organized by PG and Research Department of Zoology, S N College, Kollam October 15-16,2008. 6.Participated in the National seminar on “Current status of Environmental issues-strategies• for control and management “ organized by the Department of Zoology, TKM College of arts and Science, Kollam 0n 22-01-2007.

7.Participated in a UGC sponsored National seminar on“ Biofuels- Its importance in the• present scenario “ organized by the Department of Botany, S N College for Women, Kollam on 28 February 2007. 8.Participated in a seminar on “ Biodiversity conservation and sustainable development “• organized by PG and Research Department of Zoology, S N College, Kollam October 15-16,2008.

9.Participated in a UGC sponsored National seminar “ Biotechnology for a clean• Environment “ organized by PG and Research Department of Zoology, Fatima Mata National College, Kollam on 28th February , 2008 at F M N College, Kollam.

10.Participated in the seminar “ Warm earth” in the R Sanker Birth Centenary Seminar held• on 30-09-2008 at S N College for Women, Kollam.

11.Participated in a UGC sponsored National seminar “ Biotechnology for a clean• Environment “ organized by PG and Research Department of Zoology, S N College, Kollam October 15-16,2008. 12.Participated in the 21st Kerala Science Congress held at Kollam during 28-31 January• 2009. 13.Participated in a UGC sponsored National seminar “ Emerging trends in Green• Biotechnology” held at S N College for women from September 24-25,2009.

14. Attended a National seminar KUNSED -2009 on “ Climate change and Water resources• ” held by Department of Environmental Sciences, Thiruvananthapuram from October 8- 9,2009.

15. Participated in the First Indian Biodiversity Congress IBC 2010, held from 27-3,• December 2010 at Chandrasekharan Nair Stadium, TVM.

16. Participated in a National seminar “ Climate change: Global Risks, Challenges and• Decisions “ organized by PG and Research Department of Zoology, Fatima Matha National College, Kollam during January 6-7,2011.

17. Participated in the 44th state annual conference of Kerala government medical officers• association on January 29th, 2011 at IMA hall, Chackai, Thiruvannathapuram.

18. Participated in the seminar series Vision 2010-11, Diamond jubilee seminar series• sponsored by PTA in S N College for Women, Kollam on 01-02-2011.

19. Attended the 21st Swadeshi Science Congress held during November 7-8,2011 at CEPC• laboratory and technical division, Cashew Bhavan, Kollam, Kerala.

20. Attended an International Conference on “ Climate change, Forest Resource and• Environment ” organized by Department of Environmental Sciences, Thiruvananthapuram from December 9-11,2011. 21.Participated in an International Conference on “ Nanomaterials – Synthesis,• Characterisation and Applications held at M G University, Kottayam, Kerala from 12- 15th January 2012.

22. Participated in a UGC sponsored National seminar “ Recent advances in Computational• Biology” organized by PG and Research Department of Zoology, Government Arts College, Karur, Tamil Nadu, India on 9th March, 2012.

23. Participated in a National seminar on “Recent Trends and future prospects of Biodiversity• and Conservation” organized by Department of Zoology, S N College, Punalur, Kollam from March 15-16,2012.

24. Participated in a UGC sponsored National seminar “ Biodiversity – its conservation for• Sustainable Future “ organized by Departments of Botany and Zoology, St. Thomas College, Ranni, Pathanamthitta, Kerala from March 27-28, 2012.

25. Participated in a UGC sponsored National seminar “ Biotechnology Vs Biodiversity”• organized by Department of Zoology, S N College for Women, Kollam on 21st and 22nd November,2012.

26. Participated in a UGC sponsored National seminar “ Climate Change and its Impact on• Biodiversity- an Indian Perspective “ organized by Department of Zoology, Sree Narayana College, Sivagiri, Varkala, Tvm from January 17 -18, 2013.

27. Participated in a UGC sponsored National seminar “ Recent trends in Bio-Nano Photonics• organized by Department of Physics, S N College for Women, Kollam on 19st and 20nd December,2013. 28.Participated in a UGC sponsored National seminar “ Coping with academic stress –need• of the hour” organized by Department of Home Science, S N College for Women, Kollam on 20th and 21st February 2014.

29.Participated in a UGC sponsored National seminar “Ethnic knowledge of Biological• Resources in contemporary plant sciences” organized by Department of Botany, S N College for Women, Kollam on 28th and 29st August, 2014.

30. Participated in a UGC sponsored National seminar “ Fitness and Lifestyle disease• management “ organized by Department of Physical Education, S N College for Women, Kollam, during March 26-27,2015.

**WEBINARS**- 50 plus

**INVITED LECTURES AS RESOURCE PERSON**

Kerala State IT mission course Resource person from 2010-2015,2017 -2021

Innovative course in Biomedical Sciences -2025-16

**PUBLICATIONS IN BOOKS**

**One Book- Methodology and Perspectives of Zoology**-CBCSS SEMESTER III,♣ Methodology and Perspectives of Zoology. 978-81-930754-6-3.

**MEMBERSHIP IN PROFESSIONAL BODIES**

**Memberships in organizations**

* 1.Life member of S N Trusts, Kollam
* 2. Life member of FANSA in Kerala chapter
* 3. Life member of International Journal Bioscan.
* 4.Life Member Sree Narayana Educational Society (Regd charitable society from 07/10/2017)
* 5.Life member of international body “ Oiska”
* 6.Life member of “VijnaBharati”.
* 7.Life membership in the Indian Science Congress Association, India on 18/10/2017.
* 8.Life Member, Sree Narayana Trusts, Kollam
* 9.Membership in Kolloorvila Service Cooperative Bank, Kollam
* 10. Life member of international body Global Energy Parliament (GEP)

**RESEARCH OUTPUT**

Approved Research guide in University of Kerala since 2010 – 2 students

(Ms. Jisha.S-Part time & Ms.Neethu s – Full time)

**No. of Research Projects undertaken by Dr. S Usha**

1. Completed UGC Minor Project entitled “Evaluation of Well water quality in relation to health status in Kollam corporation, Kerala” vide UGC No: MRP(S) 614/09-10/KLKEO 16 dated 27/01/2010.
2. Completed a project sanctioned from Dist. Medical Office, Kollam entitled “Study of Water Quality and Sanitation in Kollam District” in 2013.
3. Completed UGC Minor Project entitled “Bioaccumulation of Heavy metals in an economically important fish Etroplus suratensis of Ashtamudi lake and its impacts on health status of people of Kollam corporation, Kerala.” vide UGC No: MRP(S) 0260/12- 13/KLKEO16 dated 23/09/2013.