



Prof. (Dr) C.C. Harilal

Official address:

Professor
Division of Environmental Science
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Employment record:

2009 – continuing
Assistant Professor (2009–17) / Associate Professor (2017–20) / Professor (2020 onwards) in the Division of Environmental Science, Department of Botany, University of Calicut.
2003 - 2009
Assistant Professor (UGC), Department of Plant Science, Mahatma Gandhi Government College, Mahe, Union Territory of Pondicherry.
2002 - 2003
Lecturer, Environmental Sciences (UGC), St. Berchmans' College, Changanacherry.
2000 – 2002
Project Fellow / Research Associate, CFD / CSD / MSD, National Centre for Earth Science Studies, Akkulam, Thiruvananthapuram, Kerala.

Qualifications:

Ph.D.	Environmental Sciences	2001	University of Kerala
M.Phil.	Botany	1996	Pondicherry Central University
M.Sc.	Botany	1994	University of Kerala
NET	Environmental Science	2001	Indian Council of Agricultural Research
NET	Economic Botany	1998	Indian Council of Agricultural Research
NET	Plant Physiology	1996	Indian Council of Agricultural Research
PGDMM	Management	2005	Indira Gandhi National Open University
Diploma	Videography	1994	Kerala Film Academy, Trivandrum
PGDEL	Environmental Law	2021	National Law School of India University, Bangalore (pursuing)

Research specialization:

Resource analysis, Eco restoration, Environmental pollution, Carbon sequestration, Phytoremediation, Vector control

Research gate: <https://www.researchgate.net/profile/Harilal-C-C/stats>

Google scholar: <https://scholar.google.co.in/citations?hl=en&user=9S034hsAAAAJ>

Professional Affiliations / Memberships:

- Course Coordinator / Head, Department of Environmental Science, University of Calicut (2015 onwards)
- Chief, University Employment Information and Guidance Bureau, University of Calicut (2014 onwards).
- Research Guide in Botany and Environmental Sciences of the University of Calicut (2010 onwards)
- Chairman (2018 onwards) and Member (2015 onwards), Board of Studies in Environmental Science, University of Calicut
- Member, Board of Studies in Applied Plant Science, University of Calicut (2018 onwards)
- Member, Board of Studies in Environmental Science, Thuncheth Ezhuthachen Malayalam University, Tirur (2018 onwards) and Christ College (Autonomous), Irinjalakuda (2018 onwards).
- Coordinator, GREEN BRIGADE (An Eco Club), Department of Botany, University of Calicut (2010 onwards)
- Member, Academic Council, University of Calicut (2018 onwards)
- Secretary, Alumni Association of the University of Calicut (2021)
- Chief Editor, ECO CHRONICLE (ISSN 0973 – 4155), A journal of Environmental and Social Sciences, Published by the Society for Environmental and Social Research, Thiruvananthapuram / Cochin (2006 onwards)
- Member, Green Committee, University of Calicut (2017 onwards)
- Coordinator, Bhoomitra Club, University of Calicut (2018 onwards)
- Coordinator, Green Audit, University of Calicut (2015)
- Member, Working group on SDG 14, Kerala State Council for Science, Technology and Environment, Government of Kerala (2021)
- Secretary, Department Council (Botany), University of Calicut (2010 - 2019)
- Member – IAAT – University of Calicut (2012 onwards)
- Member – GM Foundation, University of Calicut (2012 onwards)
- Programme Officer, National Service Scheme, Calicut University Campus Unit (2012 – 2016)
- Estate Officer, University of Calicut (2014-2016)
- Secretary / Treasurer, Parent Teacher Association (Botany), University of Calicut (2010 – 2016)
- Coordinator, Eco Club, Mahatma Gandhi Government College, Mahe (2007 – 2009)
- Caretaker Officer, 2(P) Indep Coy NCC, Karaikkal, U.T. of Pondicherry (2005 – 2007)
- Founder Secretary and Executive committee member, Society for Environmental and Social Research (Reg. No. T646/2000), Trivandrum / Cochin (2000 onwards).
- Chairman / Member, Board of question paper setters / Examiners / Adjudicators of Kerala / Kannur / Malayalam / Mahatma Gandhi Universities.

Projects undertaken:

1	Eco restoration of Ponnani Kole Wetlands through Community Participation (2019). Outlay: Rs. 3,50,000	State Wetland Authority of Kerala, Trivandrum	Principal Investigator
2	Eco restoration of eroded shoreline regions of Malappuram District using Riley encasement method of Mangrove afforestation (2014 – 17) Outlay: Rs. 18,65,000	Kerala State Council for Science Technology and Environment, Trivandrum	Principal Investigator
3	Identification and characterization of lipid resultant Fatty Acid Methyl Esterase (FAME) hyper-producing algal species from marine, coastal and freshwater environments of Kerala. (2015 – 2018). Outlay: Rs. 32,42,500	Department of Biotechnology - SERB, New Delhi	Project Supervisor (PI: Dr. K.V. Ajayan)
4	A pilot study for the bioconversion of hazardous DEHP plasticizer in plastics into a drug by <i>Achromobacter denitrificans</i> SP1. (2013 – 2017) Outlay: Rs. 28,10,000	Department of Biotechnology, New Delhi	Principal Investigator (officiating)
5	Biodiesel from rubber seed oil by lipase-mediated trans-esterification. (2014 – 2017) Outlay: Rs.14,96,660	Kerala State Council for Science Technology and Environment, Trivandrum	Principal Investigator (officiating)
6	Survey of selected plants and study of their efficacy for disinfection of contaminated dug well water. (2008 – 2010) Outlay: Rs. 3,00,000	Department of Science and Technology, New Delhi	Principal Investigator
7	Quantification, characterization and management of solid waste from Mahe, Union Territory of Puducherry (2005 – 2006). Outlay: Rs. 40,000	Department of Science, Technology and Environment, Government of Pondicherry	Principal Investigator

Extension activities undertaken:

- Coordinator, ECAC (2017), Energy Management Centre, Government of Kerala, organized by the Department of Botany, University of Calicut.
- Coordinator, ECAC (2016), Energy Management Centre, Government of Kerala, organized by the Department of Botany, University of Calicut.
- Coordinator, NEAC (2016), Ministry of Environment and Forest, Government of India, implemented in the Department of Botany, University of Calicut, for the setting up of a Bamboosetum.

- Coordinator, NEAC (2015), Ministry of Environment and Forest, Government of India, implemented in the Department of Botany, University of Calicut, for awareness programme on Biopesticides and Bioinsecticides.
- Coordinator, NEAC (2014), Ministry of Environment and Forest, Government of India, implemented in the Department of Botany, University of Calicut, for setting up a Butterfly park.
- Coordinator, NEAC (2013), Ministry of Environment and Forest, Government of India, implemented in the Department of Botany, University of Calicut, for the introduction of Biodiverse mix crops.

Publications (a. Journals)

- Ajayan K.V., Shamna P., Haritha D.S. and Harilal C C. Fatty acid profile and metal composition of seaweeds from three locations of the continental shelf of Kerala coast, India. (2021). *Regional Studies in Marine Science* (Elsevier), 45 (11): 101864, DOI: 10.1016/j.rsma.2021.101864 (IF: 1.183).
- Sheeja, K.M. and Harilal C C . Ionic flux and geological release of fluoride in groundwater sources of a semi-arid tropical region in south India. (2021). *International Journal of Environmental Analytical Chemistry* (Taylor & Francis), DOI: 10.1080/03067319.2021.1901281 (IF: 1.431)
- Karthika S. Menon and Harilal C C. Optimization of carbon mitigation efficiency of native microalgal species - *Chlamydomonas globosa* cultured under intermittent Supply of CO₂. (2020). *Research Journal of Chemistry and Environment* 24(11):15-20 (IF: 0.25).
- Hareesh E.S., Harilal, C.C., Pradeep, S. and Jula Garvasis. Quorum sensing mediated response of *Achromobacter denitrificans* SP1 towards prodigiosin production under phthalate stress. (2020). *Journal of Basic Microbiology* 60 (9). (Wiley) DOI: 10.1002/jobm.201900697 (IF: 1.909).
- Ajayan, K.V., Athira, N.K. and Harilal C.C. A novel method for the release of viable single cells from *Botryococcus braunii* (Race B) colony using iodine treatment (2020) *Algal Research* 48:101924 (Elsevier) DOI: 10.1016/j.algal.2020.101924 (IF: 4.008).
- Hareesh, E.S., Harilal C.C. and Pradeep, S. Response surface optimization of prodigiosin production by phthalate degrading *Achromobacter denitrificans* SP1 and exploring its antibacterial activity (2020). *Preparative Biochemistry & Biotechnology* 50(1) (Taylor & Francis), DOI: 10.1080/10826068.2020.1712659 (IF: 1.415).
- Archana G., Sajith, U., A. Yusuf and Harilal, C.C. Hormone induced root initiation in the stem cuttings of selected mangrove species (2019). *Eco Chronicle*, Vol. 14 (2) 167 – 172.
- Ajayan K.V., Anjula, K., Syamasurya A.P. and Harilal C.C. Energy efficient technology for enhanced growth and lipid production in *Chlamydomonas reinhardtii* through additional reflector coated LED photobioreactor. *Biochemical Engineering Journal* (Elsevier) 144 (2019) 81-88 (IF: 3.475).
- Ajayan, K.V., Harilal, C.C. and Paran Gani. Performance of reflector coated LED Bio-box on the augmentation of growth and lipid production in aerophytic Trebouxiophyceae algae *Coccomyxa* sp. *Algal Research* (Elsevier) 38 (2019), 101401 (IF: 3.723).

- Ajayan K.V., P.S. Manaswini and C.C. Harilal (2018) Effect of nitrate and phosphate levels on biochemical contents and fatty acid methyl esters profile of *Monoraphidium contortum* (Thuret). Eco Chronicle (ISSN: 0973-4155) Vol. 13, No. 2. June, 2018.
- Neethu G Pillai & Harilal C. C. Delineation of sites ideal for mangrove afforestation in the South west coast of Kerala. (2018). International Journal of Scientific Research and Review. 7 (10), 389 – 398.
- Ajayan K. V., C. C. Harilal & M. Selvaraj. Phycoremediation resultant lipid production and antioxidant changes in green microalgae *Chlorella* Sp. International journal of phytoremediation (Taylor & Francis), 19; 20 (11): 1144 - 1151. August 2018 <https://doi.org/10.1080/15226514.2017.1413333> (IF: 2.237).
- Neethu G Pillai & Harilal C. C. Growth sustaining aspects of *Excoecaria agallocha* L. for strategic afforestation protocols. (2018). International Journal of Scientific Research in Biological Sciences. 5(4) 137-142.
- Neethu G Pillai & Harilal C. C. Standardization of the growth sustaining attributes of *Avicennia officinalis* L. for strategic afforestation protocols. (2018). International Journal of Advanced Scientific Research and Management. 3(8) 201 – 206.
- Neethu G Pillai & Harilal C. C. Evaluation of the growth sustaining attributes of *Rhizophora mucronata* Lam. for strategic afforestation protocols (2018). International Journal of Multidisciplinary Research Review. 3(8) 497 – 501.
- Neethu G Pillai & Harilal C. C. Optimization of the growth sustaining attributes of *Bruguiera cylindrica* (L.) Blume for strategic afforestation practices (2018). International Journal of Scientific Research and Review. 7(8) 167 – 176.
- Neethu G Pillai & Harilal C. C. MANGROVES – A REVIEW. International Journal of Recent Advances in Multidisciplinary Research. 5(8) 4035-4038.
- Neethu G Pillai & Harilal C. C. Inventory on the diversity and distribution of mangroves from the coastal ecosystems of Kerala state, India. (2018). International journal of recent scientific research. Vol 9 Issue 2(D). 4002-24007. DOI: 10.24327/IJRSR.
- Karthika, S. Menon, Thasnim P.M. and C.C.Harilal. Growth standardization studies on *Monoraphidium contortum* cultured under pH specific conditions in Bolds Basal medium. (2018). Journal of Algal Biomass Utilization 9 (1), 19 – 25. 229 – 6905.
- Bindumol G.P. and Harilal C.C. Mobility and dissipation of Chlorpyrifos and quinalphos in sandy clay loam in an agroecosystem – a laboratory based soil column study. (2017). Environmental Monitoring and Assessment (Springer) 2017: 189: 506, DOI: 10.1007/s10661-017-6142-9 (IF: 1.959)
- Karthika, S. Menon and Harilal, C.C. Biofixation potential of carbon dioxide by fresh water species of *Chlorella* and *Closteriopsis*. International Research Journal of Environmental Sciences. Volume 5(2), 2016.51-56, ISSN: 2319-1414.
- Karthika.S. Menon and Harilal, C.C. Growth maximization and carbon dioxide assimilation studies of *Protococcus* species grown under culture conditions using Bolds Basal medium. Journal of Algal Biomass Utilization. Volume 7(3), 2016.42-52, ISSN: 2229-6905.
- Neethu G. Pillai and Harilal C.C. Assessment of seasonal changes in water quality adjoining Thekkumbad mangrove – sacred grove ecosystem of Kannur district, Kerala, India. International Research Journal of Environmental Science, Vol. 6 (8) 43 – 47 (ISSN: 2319 – 1414).

- Karthika S. Menon, K.P. Sini and C.C. Harilal. Standardization of pH favouring augmented growth and biomass production of fresh water micro algal species of *Coccomyxa*, in Bolds Basal medium. Indian Journal of Scientific Research. Volume 13 (1), 2017. 116 – 121, ISSN: 2250-0138.
- Shilna E.P., Harilal C.C., Sajith, U., Athira, P. and Sinooja, P. Evaluation of the growth performances of the propagules of selected mangrove species along Kadalundi – Vallikkunnu Community Reserve, Kerala, India. International Journal of Plant, Animal and Environmental Sciences, Volume 7 (1), 2017. ISSN: 2231 - 4490
- Snisha S. and Harilal C.C. Feasibility studies of natural plants coagulants in the removal of selected water contaminants. International Journal of Developmental Research. Vol. 07, Issue 07, 2017, pp 13732 – 13735 (ISSN: 2230 – 9926)
- Snisha S. and Harilal C.C. pH stabilization of potable water using selected plant metabolites. International Journal of Current Research, 8, (03), 2016. 28053-28057 (ISSN: 0975-833X)
- Shilna E.P., Sajith, U. and Harilal C.C. Surveillance of water quality in pursuit of mangrove afforestation along the coastal and inland aquatic environments of Malappuram District, Kerala, India. International Research Journal of Environmental Sciences, Vol. 5 (6), 2016. 41-50 (2319 – 1414)
- Neethu G. Pillai and Harilal C.C. Surveillance on the tolerance limit of *Sonneratia alba* Sm. to certain hydrogeochemical parameters from heterogeneous natural habitats of Kerala, South India. International Research Journal of Biological Sciences, EISSN: 2278 – 3202, Vol. 5 (1), 2016. 28-37
- Sajith, U., M. C. Rathy and C. C. Harilal. (2016). Habitat characterization and diversity assessment of mosquitoes from selected coastal districts of Kerala, India, *Recent Research in Science and Technology*, 8, 1-5.
- Sajith, U., Rathy, M.C. and Harilal, C.C. (2015). Studies on the efficacy of Plants in controlling Mosquito vectors. *Eco chronicle*, ISSN: 0973 – 4155, 10(1)77-81.
- Sajith, U., M.C. Rathy and C.C. Harilal., (2015) Assessment of Mosquito Vector Diversity across habitats in the Ponnani Municipal Area, Kerala, India. *International Journal of Biological and Medical Research*, ISSN: 0976 – 6685, 6(2) 4879-4882.
- Neethu G. Pillai and Harilal C.C. (2015) Status of mangrove diversity in the coastal environments of Kerala. *Eco Chronicle*, ISSN: 0973 – 4155. 10(1), 30 - 35.
- Rathy, M.C., Sajith, U. and Harilal, C.C (2015) Plant diversity for mosquito control: A Preliminary study. *Journal of Mosquito Research*, ISSN 1927-646X, Vol 2(1) pp 29-33.
- Sajith, U., Rathy, M.C., and Harilal., C.C. (2015) Diversity Assessment of Mosquitoes with reference to the occurrence of Vector – borne diseases in Thalassery municipal Area of Malabar coast, Kerala, India. *International Journal of Development research*, ISSN: 2230 – 9036, 5(6): 4592-4594.
- Snisha, S. and Harilal, C.C. (2015) Feasibility studies on the efficacy of selected plants in mitigating fluoride from contaminated water. *Eco chronicle*. ISSN: 0973 – 4155, 10(2) 123-125.
- Sasikala, K., Pradeepkumar, G. and Harilal C.C. Rare, endangered and threatened flowering plants from Mahe, U.T. of Pudukcherry, India. *Phytotaxonomy*, ISSN: 0972 – 4206, Vol. 14, 2014, 61 – 68.
- Girish Kumar, E. and C.C.Harilal, (2014) Land reforms and Agrarian Relations in the state of Kerala, India-A socio Economic Evaluation. *Indian Journal of Ecology*, ISSN: 0304 – 5250, 41(2) pp 344-348 (IF: 0.54).

- Sasikala, K., C.C. Harilal and G. Pradeepkumar, Phytosociological studies of two sacred groves in Mahe, U.T. of Puducherry, India. *Bioscience Discovery*, ISSN: 2229 – 3469, 5(2):152-159, 2014.
- Sasikala, K., Pradeepkumar, G., Harilal, C.C. and Ravindran, C.P. 2013. Status of Sacred Groves in Mahe, U.T. of Puducherry. *Indian Journal of Forestry* Vol. 37 (3) 2014.
- Rathy, M.C., Sajith, U. and Harilal, C.C (2014) Studies On The Effect Of Plant Aqueous Extracts On The Control Of Mosquito Vectors. *Journal of Aquatic Biology and Fisheries* Vol. 2. pp. 545to 549.
- Hidayathulla R.M , Dinu Kuriakose, Sajith, U. and Harilal C.C. (2012) Preliminary study on Zoodiversity of Bangaram atoll, U.T. of Lakshadweep, *Eco Chronicle* (ISSN 0973-4155) Vol 7 (Issue 2) June 2012 pp 74-80.
- Hidayathulla R.M , Gireesh kumar E and Harilal C.C. (2012) Phytodiversity of Bangaram atoll (Part- I Angiosperms), U.T. of Lakshadweep. *Eco Chronicle* (ISSN 0973-4155). 7 (1) pp 11-16.
- Rathy.M.C., Sajith, U. and Harilal, C.C (2012) Impact of selected plants on the control of mosquito vectors. *Eco-Chronicle*. ISSN 0973-4155, 7(1)pp21-26.
- Pradeep Kumar, G. and Harilal C.C. 2012. An integrated study on the wetlands and ground water quality of Mahe, U.T. of Puducherry with special reference to salinity intrusion, *Eco chronicle*, ISSN 0973-4155, Vol. 6 (1) 13 – 23.
- Harilal C.C. and Pradeep Kumar, G. 2011. Quantification, characterization and management of solid waste from Mahe, U.T. of Pondicherry, *Eco Chronicle*, ISSN 0973-4155, Vol. 5 (4) 185 – 193.
- Harilal C.C. and Ciju, M., Primary productivity studies of Kuttanad Agroecosystem. *Eco Chronicle*, ISSN 0973-4155, 5 (2), 2010, 93-97.
- Karthika S. Menon and Harilal, C.C., Feasibility studies on atmospheric carbon dioxide sequestration using selected micro algal members. *Eco Chronicle*, ISSN 0973-4155, 5 (2), 2010.
- Girish Kumar, E., Harilal, C.C. and Pradeep Kumar, G. Phytoplankton diversity of Mahe river with special reference to aquatic nutrients. *Eco Chronicle*, ISSN 0973-4155, Vol. 5 (4), 2010. pp: 287 – 290.
- Harilal, C.C. and Sobha, V. Feasibility studies of *Eichhornia crassipes* (Mart. Solms) in the treatment of milk factory effluent. *Eco Chronicle*, ISSN 0973-4155, 3 (3): 2008: pp: 205 – 214.
- Bindu, P. Nair, Girish Kumar, E. and Harilal, C.C., Studies on the effect of certain non-transition elements in the development of photosynthetic pigments in plants. *Eco chronicle*, ISSN 0973-4155, 3 (1): 2008; pp. 65 – 68.
- Harilal, C.C., Pradeep Kumar, G. and C.P. Ravindran. A comparative evaluation of suspended particulate matter retention in the leaf surfaces of selected plants. *Eco – chronicle*, ISSN 0973-4155, 2 (2): 2007; pp. 107 – 112.
- Sobha, V. and C.C. Harilal, Minerals and nutrients accumulation in *Pistia stratiotes* L. in changing water, *GEOBIOS* 33 (4): 2006; pp. 237 – 240.
- Harilal, C.C., Phytoplankton diversity of two rivers of Kerala with special reference to aquatic nutrients. *Pollution Research*, 24 (4): 2005; pp. 773 – 776 (IF: 0.52)
- Sobha, V. and C.C. Harilal, Minerals and nutrients accumulation in *Salvinia molesta* (Mitchell.) with changing water quality, *GEOBIOS*, 32 (2-3): 2005; pp. 137 – 140.

- Sobha, V. and Harilal C.C., Influence of changing water quality on *Eichhornia crassipes* (Mart.) Solms. in the uptake patterns of various minerals and nutrients., Ecology, Environment & Conservation 12(1): 2005; pp. 1-6 (IF: 0.45).
- Harilal, C.C. and K. Sasikala. Bacterial contamination of well water in and around Thiruvalla municipal area of Pathanamthitta District. Indian Journal of Environmental Protection 24 (1): 2004; pp. 25 – 28 (IF: 0.25)
- Harilal, C.C., Aknees Hashim, P.R. Arun and S. Baji, Hydro geochemistry of two rivers of Kerala with special reference to drinking water quality. Ecology Environment and Conservation 10 (2): 2004; pp. 187 – 192 (IF: 0.45).
- Kannabiran, B. and Harilal, C.C., Studies on the effect of domestic sewage on the growth and yield of *Vigna mungo* (L.) Hepper., Pollution Research, 17 (1): 1998. pp: 33 – 37 (IF: 0.52).

b) Papers presented in workshops and Conferences

- Sheeja, K.M. and Harilal, C.C. Variation in ground water with respect to changing monsoonal patterns in Malappuram and Palakkad Districts of Kerala. National seminar on role of community in water conservation – a milestone towards sustainable development. The Gandhigram Rural Institute, Dindigul, Tamilnadu, 6th February, 2020.
- Karthika S. Menon & C.C. Harilal. pH specific modification of the culture medium for the enhanced growth of *Desmodemus opoliensis*. National Seminar on Forestry, Plant Genetics and Improvement. Kerala Forest Research Institute, Peechi, 3-4 December, 2019.
- Aparna Sreekumar, Sashna, N.C., & Harilal, C.C. A review on the responses of tree species to elevated carbondioxide – an approach to mitigation efforts through carbon offset planting. XLII All India Botanical Conference, 6-8, November 2019 of the Indian Botanical Society.
- Sashna, N.C., Aparna Sreekumar & C.C.Harilal. Response of grass species to elevated Carbon dioxide: Implication for carbon mitigation efforts. XLII All India Botanical Conference, 6-8, November, 2019 of the Indian Botanical Society.
- K. M. Sheeja and Harilal, C. C. A surveillance on Fluoride contamination in the groundwater sources of Palakkad District, Kerala. International conference on Recent innovations in Bio-sustainability and Environmental Research 2019 (RIBER-2019). Department of Zoology, Annamalai University, 20th February to 22nd February 2019.
- Hareesh, E. S. and Harilal, C.C. Profiling of quorum sensing signaling molecules (N-acyl-Homoserine Lactones) produced by *Achromobacter denitrificans* SP1 using LC-Q-ToF-MS analysis and its role in prodigiosin production. International Conference on Extremophilic microbes for the sustainable development in Agriculture, Environment and Health. Department of Microbiology, Periyar University, Salem, Tamil Nadu. 19-21, December 2018.
- Vishnu Sreejith, M. and Harilal C.C. Diversity and niche characteristics preference of Avifauna across selected harbours of Malabar Coast of Kerala, India. National Symposium on Animal Behaviour, Biodiversity and Human future. Ethological society of India (ESI) and Department of Zoology, University of Calicut. 4-6 December, 2018
- Haritha D. S., Ajayan K. V. and Harilal C. C. Fatty acid and biochemical composition of seaweeds from Thikkodi Bio reserve, Kerala. National Seminar on Plant Diversity Conservation and Bio-prospecting in Western Ghats. Department of Botany, Govt. College Kasaragod. 26th and 27th September 2018.

- Anjula K, Ajayan K. V, Harilal C. C and Shyamasurya A. P. Effect of LED light on the growth and lipid production in *Chlamydomonas reinhardtii*. National Seminar on Plant Diversity Conservation and Bio-prospecting in Western Ghats. Department of Botany, Govt. College Kasaragod. 26th and 27th September 2018.
- Hareesh E. S., C. C. Harilal and Ajayan K. V. National Seminar on Research in Agricultural, Environmental, Industrial and Food Microbiology: Advances and Challenges, SAFI institute of advanced study, Ramanattukara. 15-16 March 2018.
- G. P. Bindumol and C. C. Harilal. Spatio temporal variability in soil characteristics and its influence on the retention of Chlorpyrifos and Quinalphos in cardamom growing soils of Idukki District, Kerala. National seminar on Recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28, February 2018.
- Karthika S. Menon and C. C. Harilal. Studies on the carbon confiscation efficiency of *Acutodesmus obliquus* under intermittent supply of carbon dioxide. National seminar on Recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28 February 2018.
- K. M. Sheeja and C. C. Harilal. Seasonal changes in the ground water table of Malappuram and Palakkad districts of Kerala with respect to Changing Monsoonal Patterns. National seminar on recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28 February 2018.
- P. S. Manaswini, K. V. Ajayan and C. C. Harilal. Changes on growth and biochemical properties of *Monoraphidium contortum* under various nitrate levels. National seminar on Recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28 February 2018.
- Hareesh, E. S. and Harilal, C. C. Selection of ideal medium and DEHP concentration for the enhanced production of prodigiosin by *Achromobacter denitrificans* SP1 and an *invitro* assessment of its antibacterial properties. National Conference on Bio resource utilization for sustainable food and energy production. Department of Botany, Periyar University, Salem, TamilNadu. 1-2 February 2018.
- Karthika S. Menon, Sini, K.P and Harilal.C.C.(2017).Growth maximization studies of *Chlamydomonas eudorinae* in Bolds Basal medium under varying levels of pH. 3rd National Biodiversity congress, February 22 – 26, 2017. Trivandrum.
- Karthika, S.Menon, Thasnim, P.M. and C.C.Harilal. (2017). Optimization of pH favouring enhanced growth of freshwater microalgal species *Chlamydomonas gorvei* in Bolds Basal medium. National seminar on modern trends in conservation, utilization and improvement of plant genetic resources in collaboration with Gregor Mendel Foundation University of Calicut at Department of Botany, university of Kerala on November 23-24, 2017.Trivandrum.
- Bindumol G.P. and C.C.Harilal. (2017).Seasonal variation in water quality of aquatic bodies adjoining cardom ecosystems of Idukki district, Kerala. National seminar on modern trends in conservation, utilization and improvement of plant genetic resources in collaboration with Gregor Mendel Foundation University of Calicut at Department of Botany, university of Kerala on November 23-24, 2017.Trivandrum.
- Bindumol G.P. and Harilal C.C. Leaching characteristics of Quinalphos in sandy clay loam soil in Cardamom Plantations. National seminar on biodiversity and importance of western ghats for better living. Department of Botany, Government College, Kasaragod. 29 – 30, August, 2017.

- Karthika, S.Menon, Thasnim, P.M. and C.C. Harilal (2015).pH specific modification of the bolds basal medium for the enhanced growth of microalgae *Monoraphidium contortum*. National seminar on plant breeding biotechnology and conservation held at Malabar botanical garden and institute of plant sciences in collaboration with Gregor Mendel Foundation University of Calicut at Department of Botany on December 3 to 5, 2015.
- Snisha S. and Harilal C.C (2015) Studies on the efficacy of the seeds of *Strychnos potatorum* in controlling selected water contaminants (abstract) 27th Kerala Science congress from 27th to 30th January 2015. Organized and sponsored by Kerala State Council for Science, Technology and Environment, Government of Kerala Co-Sponsored by Department of Science and Technology, Government of India, In association with NATPAC, Trivandrum.
- Sajith, U., Rathy, M.C. and Harilal, C. C. (2015) Diversity assessment and habitat characterization of Mosquito species from selected coastal municipal areas of Kerala – in pursuit of disease surveillance and management”, Second National Biodiversity Conference, Thiruvananthapuram, 26 – 27 February, 2015.
- Anjana, T. and Harilal, (2015) Assessment of the growth responses of *Samanea saman* (jacq) merr. to elevated levels of free carbon dioxide. In 27th Kerala Science congress from 27th to 30th January 2015 organized and sponsored by Kerala State Council For Science, Technology and Environment, Government of Kerala Co-Sponsored by Department of Science and Technology Government of India In association with NATPAC, Trivandrum.
- Anjana, T. and Harilal, C.C (2015) Growth responses of *Albizia saman* F. Muell. to various levels of atmospheric carbon dioxide. Second National Biodiversity Congress 2015, held at Kanakakunnu palace Trivananthapuram Kerala 26-27 February 2015.
- Athira, P., Sinooja, P., Shilna E. P. and Harilal, C.C (2015) Growth performances of the propagules of *Rhizophora* and *Bruguiera* sp. in heterogeneous estuarine habitats. Second National Biodiversity Congress (NBC 2015) 2015, held at Kanakakunnu palace Trivananthapuram Kerala 23-27 February 2015.
- Karthika S. Menon and C. C. Harilal (2015) Feasibility studies on carbon assimilation potential of species of *Phytoconis* and *Ankistrodesmus* under continuous supply of carbon dioxide. 27th Kerala Science congress from 27th to 30th January 2015 organized by Kerala State Council For Science, Technology and Environment, Government of Kerala Co-Sponsored by Department of Science and Technology Government of India, in association with NATPAC, Trivandrum.
- Neethu G Pillai and Harilal C.C. (2015) Appraisal of tolerance limit of *Bruguiera cylindrical* (L) Blume. to certain hydrogeochemical parameters from heterogeneous natural habitats of Kerala. UGC sponsored National seminar on Biodiversity conservation – Threats and Challenges, University College, Thiruvananthapuram, 18 – 19, August 2015.
- Sajith U., Rathy M.C. and Harilal C.C (2015) Efficacy of crude extracts of *Mimosa pudica* and *Blumea oxyodonta* as larvicidal agents, aiding mosquito control in 27th Kerala Science congress from 27th to 30th January 2015 organized and sponsored by Kerala State Council For Science, Technology and Environment, Government of Kerala Co-Sponsored by Department of Science and Technology Government of India In association with NATPAC, Trivandrum

- Sajith, U., Rathy, M.C. and Harilal, C.C., (2014) "Assessment of the mosquito diversity in light of the repeated occurrence of vector borne diseases in Ponnani municipal area of Malabar Coast, Kerala". UGC sponsored National Seminar on Environmental Impact Assessment (2014), organized by Department of Botany, Newmann College, Thodupuzha.
- Snisha S, and Harilal, C.C. (2014) A Sustainable Approach To The Removal Of Turbidity From Water Using Natural Coagulants organized by Center for Innovation in Science and Social Action, C.P.R Environmental Education Centre, Navdanya and School of Public Health SRM University.
- Sajith, U., M.C. Rathy, C.C. Harilal , R.M Hidayathulla, M.C. Rathy, S.Snisha, Seasonal Changes in the Diversity pattern of Mosquito Vectors from Ponnani Muncipal Area of Malappuram District, Kerala. National seminar on Lakes, Rivers, and Wetland Ecosystem – A Climate Change Perspective. WET CLIMATE 2014 .Page no 331-338.
- Karthika S.Menon and Harilal C.C., Feasibility studies on carbon assimilation potential of *Ankistrodesmus* and *Closteriopsis sp.* under continuous supply of carbon dioxide. 26th Kerala Science Congress - organized and sponsored by Kerala State Council For Science, Technology and Environment, Government of Kerala, Co-Sponsored by Department of Science and Technology Government of India, in association with JNTBGRI, Palode Thiruvananthapuram and CWRDM Kunnammangalam Kozhikode, January 28th to 31st 2014. Page number 2454-2460.
- Snisha S. and Harilal C.C (2014) Feasibility studies on selected plants in removing hardness from water. UGC sponsored National Seminar on Recent trends and challenges in Environmental Biotechnology "Enviro Biotech 2014", Department of Zoology, Sree Narayana College, Punalur.
- Sajith U., Rathy M.C., and Harilal C.C. (2014) "Plant Diversity for Mosquito control: A preliminary Study". UGC sponsored National seminar on "Socio-Economic Root causes of Biodiversity Loss" in collaboration with Kerala Sasthra Sahithya Parishath on 24th and 25th January 2014 organized by department of botany SN college Kannur Kerala
- Sajith U., Rathy M.C., and Harilal C.C. (2014) Evaluation of Mosquito Diversity in Selected Coastal Districts of Kerala Having Endemicity of Filariasis". (Abstract) in third Indian Biodiversity Congress (IBC 2014), from 18th -20th December 2014 organized by Center for Innovation in Science and Social Action, C.P.R Environmental Education Centre, Navdanya and School of Public Health SRM University.
- Rathy, M.C., Sajith, U. and Harilal, C. C. (2014) Larvicidal Activity Of Medicinal Plant Extracts Against Mosquito Vectors, UGC sponsored National Seminar on Environmental Impact Assessment (2014) organized by Department of Botany, Newmann College Thodupuzha Idukki Dist. Page No.
- Rathy, M.C., Sajith, U. and Harilal, C. C. (2014) Studies On Phytochemicals As Potential And Sustainable Sources Of Larvicidal Formulations For The Control Of Mosquito Vectors. in third Indian Biodiversity Congress (IBC 2014), from 18th -20th December 2014 organized by Center for Innovation in Science and Social Action, C.P.R Environmental Education Centre, Navdanya and School of Public Health SRM University.
- Hidayathulla, R.M. and Harilal, C.C. Vulnerability assessment of Bangaram atoll of Lakshadweep Archipelago to environmental impacts, National Conference on

Disaster Management: Issues and Challenges, Christian College, Chennai, February 28, 2014.

- Anjana, T. Harilal, C.C. and Girish Kumar, (2014) Primary Productivity studies of Beypore and Kadalundi estuaries of Malabar Coast, Kerala, with respect to fishery. UGC sponsored National Seminar on Environmental Impact Assessment, Department of Botany, Newmans' College Thodupuzha.
- Karthika S. Menon and C. C. Harilal (2014) Feasibility studies on carbon sequestration potential of *Chlorella* and *Closteriopsis* under continuous supply of CO₂. UGC sponsored National Seminar on Environmental Impact Assessment (2014) organized by Department of Botany, Newmann College Thodupuzha Idukki Dist., Kerala.
- Neethu G. Pillai and Harilal C.C. (2014) Assessment of the seasonal changes in Water quality adjoining Thekkumbad mangrove-Sacred Grove ecosystem. National seminar on Sacred Grove conservation organized by Kerala State Medicinal plants board, OISCA International and Sir Syed College Taliparamba on February 21st to 22nd 2014 at Sir Syed College Taliparamba Kannur Kerala.
- Neethu G.Pillai and Harilal C.C. (2014) Status of mangrove diversity in the coastal environments of Kerala. UGC sponsored National seminar on "Socio-Economic Root causes of Biodiversity Loss" in collaboration with Kerala Sasthra Sahithya Parishath on 24th and 25th January 2014 organized by department of botany SN college Kannur Kerala
- Snisha S. and Harilal C.C. (2014) Preliminary Studies On The Efficacy Of Selected Plants In Mitigating Fluoride From Contaminated Water (abstract) UGC sponsored National Seminar on Environmental Impact Assessment (2014) organized by Department of Botany, Newmann College Thodupuzha Idukki Dist. Kerala. Page No.
- Snisha S., Harilal C.C., and Pradeep Kumar, G. (2014) A Preliminary Assessment On The Capability Of Selected Plants In Aiding Turbidity Removal From Contaminated Water in proceedings of 26th Kerala Science Congress, from January 28th to 31st 2014.
- Rathy, M.C., Sajith U. and Harilal, C.C. A study on the effects of plant secondary metabolites in the control of mosquito vectors. National Symposium on Emerging trends in Biotechnology, CUSAT, Cochin, 2014.
- Rathy, M.C., Sajith, U. and Harilal, C. C. (2013) Studies On The Effect Of Plant Aqueous Extracts On The Control Of Mosquito Vectors. International conference on ecosystem conservation, climate change and sustainable development (ECOCASD 2014) held at Trivandrum Kerala India during 3-5 October 2013 sponsored by aquatic biology and fisheries University of Kerala and directorate of environment and climate change Govt. of Kerala. pp294
- Pramod, C., Pradeep, A.K and Harilal, C.C. (2013). Seasonal pools on lateritic plateaus: unique habitats of great diversity – A case study from Northern Kerala. International conference on Ecosystem Conservation, Climate Change and Sustainable Development, Department of Aquatic Biology and Fisheries, University of Kerala, Trivandrum, 3-5 October, 2013.
- Sasikala, K., Pradeep Kumar, G., Harilal, C.C. and Ravindran, C.P (2013). Conservation and management aspects of sacred grooves in Mahe, U.T. of Puducherry. UGC, DBT, CSIR and DRDO sponsored International Conference on Conservation Strategies for Bio Resources, 5th – 6th, February, 2013.

- Sasikala, K., Pradeepkumar, G., Harilal, C.C. and Ravindran, C.P. Conservation and Management aspects of the Sacred groves in Mahe, U.T. of Puducherry. Bioresource conservation strategy, 81 – 85, Narosa Publishing House, New Delhi, 2013.
- Rathy, M.C., Sajith, U. and Harilal, C.C. Larvicidal activity of crude aqueous extracts of *Adenocalymma alliaceum* against mosquito larvae. Swadeshi Science Congress (23rd), 2013.
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- Sasikala, K., G. Pradeep Kumar, C.C. Harilal, and C.P. Ravindran (2012) Status of Sacred Groves in Mahe (U.T. of Puducherry). In National Seminar on Depletion of Forests and Livelihood Concern, conducted by Department of Zoology, Christ University, Bangalore, P31.
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- Sasikala, K., G. Pradeep Kumar, C.C. Harilal, and C.P. Ravindran (2012) Status of Sacred Groves in Mahe (U.T. of Puducherry). National Seminar on Depletion of Forests and Livelihood Concern conducted by Department of Zoology, Christ University, Bangalore.
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- Sasikala, K., Pradeepkumar, G., Harilal, C.C. and Ravindran, C.P. 2012. "Status of Sacred Groves in Mahe (U.T. of Puducherry)". National Seminar on depletion of forest and livelihood concerns, organized by Dept. of Zoology, Christ University, Bangalore 17, 18, February, 2012.
- Rathy M. C and Harilal C.C (2012) Studies on the effect of crude plant extracts on the control of Mosquito vectors. LAKE 2012 National conference on conservation and management of wetland ecosystems organized by the school of environmental sciences, Mahatma Gandhi university, in association with Indian Institute of science Bangalore and advanced center of environmental studies and sustainable development, Mahatma Gandhi university Kottayam.
- Sasikala, K., Pradeepkumar, G., Harilal, C.C. and Ravindran, C.P. (2012) Phytodiversity and Socio-cultural studies of the Sacred Groves in Mahe, U.T. of Puducherry. Proceedings of the Second Indian Biodiversity Congress, Bangalore, December 9 - 11.

- Sasikala, K., Pradeepkumar, G., Harilal, C.C. and Ravindran, C.P. 2012. "Medicinal Plant diversity of the sacred groves in Mahe, U.T. of Puducherry". National Seminar on Phytomedicines, Dept. of Botany, Bharathiar University, Coimbatore, 4th - 5th October, 2012.
- Karthika S.Menon and Harilal C.C. (2011) Feasibility studies on the sequestration of atmospheric carbon dioxide using selected microalgal members. National seminar on genetics, breeding and biotechnology held at University of Calicut in collaboration with Gregor Mendel Foundation University of Calicut at Department of Botany on December 16 to 17, 2011.
- Girish Kumar, E. and Harilal, C. C., 2008. Land reforms and agrarian relations in the state of Kerala – a socio-economic evaluation. National Seminar on Human Development and Social Exclusion, Department of Economics, Andhra University, Visakhapatnam, Andhra Pradesh, 6 - 7 October, 2008.
- Girish Kumar, E., Harilal, C.C., Pradeep Kumar, G. and C.P. Ravindran. Plants in water purification – A documentation. DST sponsored national seminar on "Recent trends in biodiversity conservation and documentation", organized by Department of Plant Science, MGGAC, Mahe, U.T. of Pondicherry on 6-7, November, 2008.
- Harilal C.C., Pradeep Kumar, G., Girish Kumar, E. and Ravindran, C.P., Feasibility studies of selected plants in the treatment of water contaminants. DST sponsored national seminar on recent trends in biodiversity conservation and documentation, Department of Plant Science, MGGAC, Mahe, Puducherry, 7 - 8, November 2008.
- Harilal, C.C., Girish Kumar, E. and Pradeep kumar, G. Agro-productivity studies of pondicherry U.T., as influenced by land and agriculture reforms. National Seminar on Human Development and Social Exclusion, Department of Economics, Andhra University, Visakhapatnam, Andhra Pradesh, 6 - 7 October 2008.
- Chandni, G., Mathew, E.J. and C.C. Harilal, A standardization model for assessing the feasibility of sites for mangrove afforestation. Proceedings of the eighteenth Kerala Science Congress, Thiruvananthapuram 2006; pp. 374 – 376.
- Harilal C.C., Rinu George and Jayaraj G.R., Studies on the potability of aquatic systems surrounding a pigment processing factory. Proceedings of the Sixteenth Kerala Science Congress, 2004; 04 - 08.
- Harilal C.C., Aknees Hashim, Nair, M.N.M. and Suchindan G.K., Assimilative capacity of water environment at Kumarakom. Proceedings of the 12th Kerala Science Congress, Kumily, 2000.
- Harilal, C.C. and Sobha, V. Role of *Eichhornia crassipes* in the detoxification of polluted aquatic environments, International Conference on Natural Resource Management and Conservation (ICNRMC), Department of Environmental Science, University of Kerala, Thiruvananthapuram, 19 – 21 November, 1998.
- Harilal, C. C., Status of water resources in Kerala, National Seminar on Environment and Development, Kerala University Research Student's Union, University of Kerala, Thiruvananthapuram, 07 – 09 May, 1997.

c) Book chapters contributed

- Muhammad Dilshad, P.P. and Harilal C.C. Change detection in land cover using Remote Sensing and GIS techniques – A case study of Ponnani Kole Wetland, Kerala. (2019). PONNANI KOLE WETLANDS - Problems and Prospects (ISBN: 978-81-935133-3-0), Published by Gregor Mendel Foundation, University of Calicut, P. 07 – 15.

- Ajayan, K.V., Harilal, C.C. and Archana, V. Microalgal diversity of Ponnani Kole Wetland of Kerala. (2019). PONNANI KOLE WETLANDS - Problems and Prospects (ISBN: 978-81-935133-3-0), Published by Gregor Mendel Foundation, University of Calicut, P. 63 – 73.
- Neethu G. Pillai and Harilal C C. (2017). Inquisition on the tolerance limit of *Excoecaria agallocha* L. to certain hydrogeochemical parameters in pursuit of their introduction in heterogeneous coastal environments. Mainstreaming biodiversity for sustainable development (Kerala Biodiversity Board) Publisher: Kerala State Biodiversity Board (ISBN: 978-81-934231-1-0)
- Karthika S. Menon and Harilal C C. (2017). Growth maximization studies of *Chlamydomonas eudorinae* in Bolds Basal medium under varying levels of pH. Mainstreaming biodiversity for sustainable development (Kerala Biodiversity Board) Publisher: Kerala State Biodiversity Board (ISBN: 978-81-934231-1-0)
- Neethu G Pillai and Harilal C.C. (2015) Appraisal of the tolerance limit of *Bruguiera cylindrica* (L) Blume. to certain hydrogeochemical parameters from heterogeneous natural habitats of Kerala. (ISBN: 978-93-5254-247-5). Biodiversity conservation, threats and challenges. Pages 71-77.
- Rathy, M.C., Sajith, U. and Harilal, C. C. (2014) A study on the Effect of Plant Secondary metabolites in the Control of mosquito vectors. National Symposium on Emerging Trends in Biotechnology 2014 organized by Dept of Biotechnology CUSAT, 22-23 January 2014. (ISBN-978-93-80095-47-9).
- Hidayathulla R.M and Harilal C.C (2014) Vulnerability assessment of Bangaram Atoll of Lakshadweep Archipelago to Environmental Impacts, : *Issues and Challenges* Edited by Mrs. B. Eswari, Dr. Yasodharan Suresh and Rajib Bhaduri published by Semmodhani Pathippagam A3, abhirami Nivas, no.43 Valmiki Street East Tambaram Chennai 600059 (ISBN 978-93-81006-75-7) February 28 (2014) pp 283-291.
- Rathy, M.C., Sajith, U. and Harilal, C. C. (2013). Larvicidal activity of Crude aqueous extracts of *Adenocalymma alliaceum* against mosquito larvae. 23rd Swadeshi Science congress 6th – 8th November 2013 organized by Swadeshi movement Kerala and MG university Kottayam. (ISBN 978-81-928129-1-5).
- Sasikala, K., Pradeepkumar, G., Harilal, C.C. and Ravindran, C.P. Conservation and Management aspects of the Sacred groves in Mahe, U.T. of Puducherry. Bioresource conservation strategy, 81 – 85, Narosa Publishing House, New Delhi, 2013. (ISBN: 978-81-8487-363-4)
- Sasikala, K., Pradeepkumar, G., Harilal, C.C., E. Girishkumar and Ravindran, C.P. 2013. Medicinal Plant Diversity of the sacred groves in Mahe, U.T. of Puducherry. 18 163 - 171 Scientific Basis of Herbal Medicine 2013, Daya publishing house, New Delhi. (ISBN: 978-81-7035-873-2)

d. Conference proceedings

- Neethu G. Pillai and Harilal C.C. Inquisition on the tolerance limit of *Excoecaria agallocha* L. to certain hydrogeochemical parameters in pursuit of their introduction in heterogeneous coastal environments, 265 – 270, NBC-2017.
- Karthika S. Menon, K.P. Sini and C.C. Harilal. Growth maximization studies of *Chlamydomonas eudorinae* in Bolds Basal medium under varying levels of pH. Mainstreaming Biodiversity for sustainable development. NBC-2017, 445 – 451.

- Sajith, U., Rathy, M.C. and Harilal, C. C. Studies on the Efficacy of Plants in controlling Mosquito Vectors. Proceedings of the UGC sponsored National seminar on "Socio-Economic Root causes of Biodiversity Loss" by the Department of Botany, SN college, Kannur, in collaboration with the Sasthra Sahithya Parishath, Kerala, 2014.
- Snisha S., Harilal C.C. and Pradeep Kumar G. A preliminary assessment on the capability of selected plants in aiding turbidity removal from contaminated water. Proceedings of the 26th Kerala Science Congress, Pookode, Waynad. Pages 2461 – 2466, 2014.
- Neethu G. Pillai and Harilal C.C. Status of mangrove diversity in the coastal environments of Kerala. Proceedings of the UGC sponsored National seminar on "Socio-Economic Root causes of Biodiversity Loss" in collaboration with Kerala Sasthra Sahithya Parishath on 24th and 25th January 2014 organized by department of Botany SN college Kannur Kerala, 2014.
- Karthika S. Menon and C. C. Harilal. Feasibility studies on carbon assimilation potential of *Ankistrodesmus* and *Closteriopsis* sp. under continuous supply of carbondioxide. Proceedings of the 26th Kerala Science Congress, Pookode, Waynad Pages 2454 – 2460, 2014.
- Girish Kumar, E., Harilal, C.C., Pradeep Kumar, G. and C.P. Ravindran. Plants in water purification – A documentation. Proceedings of the DST sponsored national seminar on "Recent trends in biodiversity conservation and documentation", organized by Department of Plant Science, Mahatma Gandhi Government College, Mahe, U.T. of Pondicherry on 6-7, November, 2008.
- Harilal C.C., Aknees Hashim, Nair, M.N.M. and Suchindan G.K., Assimilative capacity of water environment at Kumarakom. Proceedings of the 12th Kerala Science Congress, Kumily, 2000.

e) Books Authored / edited

- Harilal C.C. (Editor), Ponnani Kole Wetlands - Problems and Prospects (ISBN: 978-81-935133-3-0), Published by Gregor Mendel Foundation, University of Calicut (funded by the State Wetland Authority of Kerala)
- Harilal C. C., Ajayan K.V. and Shahida V. Characterization of non-traditional plant fibres. (ISBN: 978-620-0-21416-4). Lambert Academic Publishing
- Neethu G. Pillai and Harilal C.C. Extent and Diversity of Kerala Mangroves (ISBN: 978-613-9-97546-4) Lambert Academic Publishing

Research Guidance (Ph.D. programmes in Environmental Science / Botany)

(a) Ph.D. Awarded

- Dr. R.M. Hidayathulla (Environmental Science) 2017
Studies on coastal erosion in selected uninhabited islands of Lakshadweep Archipelago with special reference to Biodiversity Conservation.
- Dr. Rathy M.C. (Environmental Science) 2018
Studies on the effect of plant secondary metabolites in the control of mosquito vectors.
- Dr. Sajith U. (Environmental Science) 2018
Entomological and environmental studies on the endemicity of filariasis in Kerala.

- Dr. Snisha S. (Environmental Science) 2018
Characterization of bioactive components in plants with respect to their efficacy in the treatment of selected water contaminants.
- Dr. Neethu G. Pillai (Botany) 2018
Studies on the standardization of growth requirements of mangroves for assessing the probability of sites for afforestation.
- Dr. Karthika S. Menon (Botany) 2018
Feasibility studies on the utilization of fresh water microalgal species in carbondioxide sequestration.
- Dr. Bindumol P. (Environmental Science) 2019
Studies on leaching and dissipation of commonly used organophosphorus pesticides in Cardamom ecosystems of Idukki District, Kerala.
- Mr. Hareesh E.S. (Botany) 2021
Studies on *Achromobacter denitrificans* strain SP1 regarding the production of Prodigiosin upon utilizing hazardous phthalate.

(b) Ph.D. undergoing

- Mrs. Sheeja (Environmental Science)
Surveillance of ground water quality in relation to geochemistry in selected districts of Kerala, with special reference to fluoride and arsenic contamination. (2015)
- Sashna N C (Botany)
Carbon sequestration potential of selected native grasses – An assessment using carbon dioxide controlled systems (Botany)
- Aparna Sreekumar (Botany)
Assessment of carbon assimilation potential of selected tree species of Kerala using OTC/FACE/SACC systems (Botany).
- Swetha K (Botany)
An inventory on the diversity of Family Scytonemataceae in selected districts adjoining the Western Ghats region of Kerala.
- Jiji P.V. (Environmental Science)
Studies on the mosquito repellent efficiencies of plant formulations.
- Naseefa K. (Botany)
Carbon sequestration and growth promotion potentials of Biochar on selected rice varieties of Kerala.

(c) Co Guidance

- Mrs. Jasmine P.J. (Environmental Science)
Investigations on the use of algae for waste water renovation and for the generation of value added products. (2014)
- Mrs. Sinta (Environmental Science)
Land use changes and Soil-Water degradation of Thrissur Kole Wetland system, Kerala.

d. Post Doctoral Mentorship

- Dr. K.V. Ajayan.
Taxonomic revision of freshwater microalgae under Selenastraceae and Scenedesmaceae: Novel insight into lipidomic and proteomic metabolomes, UGC-Dr. D.S.Kothari Post Doctoral Fellow (UGC DSK-PDF), 2019.

- Dr. Roni M. Phyto-fabrication of silver nanomaterials and genomic characterization of dengue and zika virus vector outbreak in endemic regions of Tamil Nadu and Kerala, UGC-Dr. D.S.Kothari Post Doctoral Fellow (UGC DSK-PDF), 2020.

(e) M.Phil. awarded

- Archana V. Carbon assimilation potential and biomass utilization feasibilities of *Monoraphidium contortum* under experimental conditions (2019)
- Noufira, S.V. Upregulation studies of Lutein content in selected species of microalgae (2018)
- Praseetha N. Nutritional characterization of edible bamboo species from Waynad District of Kerala state (2017)
- Sanitha Gopalakrishnan. Assessment of the salinity tolerance of tree species ideal for biofencing in the tidal influxed coastal environments of Kerala (2016)
- Anjana, T. Growth responses of *Albizia saman* F. Muell to elevated levels of atmospheric carbondioxide (2015).
- Karthika S. Menon. Studies on carbon confiscation potential of selected micro algal members under continuous supply of carbon dioxide (2013).

(f) M.Phil. undergoing

- Rincy P. 2020. Phyto sequestration.

(g) M. Sc. dissertations

- Guided 54 dissertations in various disciplines of Botany / Plant Science and Environmental Science

Invited Lectures / Talks

- Invited lecture on Principles of Eco restoration, Webinar in connection with World Environment Day, Department of Chemistry, St Berchmans' College, Changanacherry on 6th June 2021.
- Invited lecture on Eco restoration initiatives, Webinar in connection with World Environment Day celebration by Mathrubhoomi Seed Club in collaboration with Government Higher Secondary School, Mavelikara on 5th June 2021.
- Invited lecture on Eco restoration efforts for heterogeneous habitats, Webinar in connection with World Environment Day celebrations by the Department of Biotechnology, University of Kerala, in collaboration with Centre for Biodiversity Conservation (CBC) on 5th June, 2021.
- Invited lecture on Eco restoration strategies, Webinar on Reimagine, Recreate and Restore in connection with the observance of World Environment Day by the Department of Botany, St Mary's college, Thrissur on 5th June 2021.
- Invited lecture on Strategies of eco restoration, Webinar series of the Department of Psychology, University of Calicut in connection with the observance of World Environment Day on 4th of June, 2021.
- Eco restoration initiatives, Webinar series in connection with the observance of World Environment Day by the Department of Chemistry, Majlis Arts and Science College, Puramannur, Valancherry, Malappuram on 4th of June, 2021.

- Invited lecture on Sustainable Development Goals – Where do we stand?, International Seminar on “Arabic Broadcasting and Sustainable Development Goals”, Department of Arabic, University of Calicut on 3rd March 2021.
- Invited lecture on Carbon sequestration strategies, World Environment Day observance seminar of the Department of Botany, SN College, Nangiyarkulangara on June 5th 2020.
- Invited lecture on Phyto diversity and carbon sequestration potential. World Environment Day commemoration seminar of the Albertian Centre for Human Resource Development and Research, St. Alberts College, Ernakulam on 05/06/2020.
- Environment in light of Covid 19 Pandemic (Part 2). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 22/05/2020.
- Environment in light of Covid 19 Pandemic (Part 1). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 15/05/2020.
- Post flood management of water resources (Part 3). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 13/03/2020.
- Post flood management of water resources (Part 2). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 06/03/2020.
- Post flood management of water resources (Part 1). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 28/02/2020.
- Invited talk on Wetlands of Kerala and their cultural importance. UGC Seminar series of the Department of Botany, Ferook College, Ferook on 12th February 2020.
- Invited talk on Climate Change and Biodiversity, Programme on “Climate warriors: Training youth in understanding and fighting climate change”, sponsored by the Directorate of Environment and Climate Change, Government of Kerala and organized by the Integrated Rural Technology Centre, Palakkad on 7th February, 2020,
- Invited lecture on ‘The History of Climate Change’, UGC National Seminar on “Environment and Development: Issues, Challenges and Potentialities” by the Department of History, University of Calicut on 6/2/2020.
- Invited lecture on Coastal Biodiversity – In light of Coastal conservation. Workshop on “Coastal and marine biodiversity conservation” for the members of Municipality and Grama Panchayats, Organized by the Social forestry extension division of the Department of Forests, Government of Kerala at Payyoli Municipality on 29/01/2020.
- Biodiversity of India – Prospects and Challenges, Seminar Series ‘Sahya’ of the Department of Botany, Vimala College, Thrissur on 28th January, 2020.
- Impact of flood on Agro-biodiversity and ecosystems, Department of Environment and Climate Change (DoECC) sponsored National Seminar on ‘Post Flood Crops’, Organized Jointly by Indian Institute of Spices Research and Sullamussalam Science College, Areekode on 27th January, 2020.
- IYPH 2020: Evaluation of food security in the context of Global Climate Change, Science fair organized by the Deputy Director, Education, Government of Kerala at St. Jammass HSS, Malappuram on 25th January, 2020.
- Recent trends in carbon sequestration efforts, Directorate of Environment and Climate Change (DoECC) sponsored National seminar on “Anthropogenic climate change and ecosystems: Challenges and Remedies”, Department of Botany, SN College, Kannur on 20th January, 2020.

- Co-Chair, Seminar on Forestry, Plant Genetics and Improvement, December 3-4, 2019, Kerala Forest Research Institute and GM Foundation at Peechi, Thrissur.
- Panel discussion, ICFRE sponsored Regional Research Conference on Management of Fragile Ecosystems in Climate Change Scenario. 20th November 2019. Institute of Forest Genetics and Tree Breeding (ICFRE), Coimbatore
- Keynote address on the occasion of seminar “Floristic diversity of laterites and wetlands”, organized by the Department of Botany, Brennen College, Thalassery on 14th November 2019
- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, DPHSS, Palapetty, Malappuram on 17/10/2019.
- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, MES College, Valancherry on 15/10/2019.
- Wetlands and conservation strategies –with special reference to Kole Wetlands”, State Wetland Authority of Kerala project on wetland conservation, 14/10/2019. Sree Neelakanta Government Sanskrit College, Pattambi.
- Wetlands and conservation strategies –with special reference to Kole Wetlands. State Wetland Authority of Kerala project on wetland conservation, PSMO College, Tirurangadi on 11/10/2019.
- SWAK funded awareness programme on “Eco restoration of Ponnani Kole wetlands through community participation., GHSS, Kattoor on 23/9/2019.
- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, 3/10/2019. Al Falah HS, Kakkidipuram.
- Wetlands and conservation strategies –with special reference to Kole Wetlands 3/10/2019. State Wetland Authority of Kerala project on wetland conservation, THSS Vattamkulam.
- SWAK funded awareness programme on “Eco restoration of Ponnani Kole wetlands through community participation., Department of Botany, Government College, Pattambi, 14/10/2019
- Invited lecture on Ozone hole and climatic changes, KSCSTE sponsored seminar and ozone day celebrations by Sree Krishna College, Guruvayur on 24th September, 2019.
- Invited lecture on Climate change and carbon sequestration initiatives, KSCSTE sponsored World Environmental Day celebrations 2019, on 21/6/2019 at the Department of Botany, Sir Syed College, Thaliparamba
- Invited lecture on Carbon sequestration potentials, Department of Environment and Climate Change sponsored conference on ‘Biodiversity Conservation’, organized by MES College, Mampad on 21-22, February, 2019.
- Invited lecture on Global climate change and sequestration efforts in the Department of Physics, SN College, Kannur, in connection with the Annual Alumni meet on 14 - 16 February 2019.
- Recent trends in Phyto-sequestration of atmospheric carbon dioxide, National seminar on Advances and applications in Plant Science, Department of Botany, University of Kerala, Kariavattom, Trivandrum. 6- 8, February, 2019.
- Wetlands – An abode of Diversity, MES Kalladi College, Mannarkkad, KSCSTE sponsored seminar in connection with World Wetland Day – 2019, 6/2/2019.

- Delivered an invited lecture on the topic 'Microalgal technologies for Resource Recovery', on the occasion of the National Seminar on Plant – Microbe interactions (Sponsored by the Directorate of Collegiate Education, GoK) organized by the PG and Research Department of Botany, SN Government Sanskrit College, Pattambi, on 5th December, 2018.
- Delivered an Inaugural lecture on 'Biosequestration potentials in carbon mitigation research', on the occasion of Botany Association Inauguration of Mahatma Gandhi Government College, Mahe, U.T. of Puducherry on 5th October, 2018.
- Delivered an invited lecture on 'Biodiversity of Western Ghats-Challenges and Mitigation' on the occasion of the DoECC sponsored National Seminar on 'Western Ghats – A treasure house of Biodiversity', organized by the Department of Environmental Sciences, Kannur University during 12-14, March, 2018.
- Delivered an invited lecture on 'Climate Change and Carbon Research' on the occasion of the KSCSTE sponsored World Environment Day activities at EMEA College, Kondotty on 18th June 2018.
- Delivered an invited lecture on 'Wetlands for sustainable urban future' in the KSCSTE sponsored 'World Wetland Day celebrations' organized by the Department of Botany, MES Asmabi College, Kodungallur, on 9th February, 2018.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in the year 2017.
- Delivered a lecture on 'water literacy' on the occasion of National River Festival 2017 organized by Nilavicharavedi, Kerala at Cheruthuruthi, Thrissur on 2-5, June 2017.
- Delivered an invited lecture on 'micro algal food supplements' on the occasion of the International workshop on integrative biology, organized by the Centre for Evolutionary and integrative Biology, University of Kerala, Thiruvananthapuram on January, 2017.
- Delivered an invited lecture on 'micro algal technologies for environment management' on the occasion of the national seminar (UGC) on micro algal technologies for environmental management, organized by the Department of Botany, University College, Thiruvananthapuram, Kerala from 7-8 December, 2016.
- Presented an extension lecture on water quality issues on the occasion of seminar on Water Resources management, organized by ISM at K.P. Kesava Menon Hall, Calicut on 7th October 2016.
- Chaired a session in the KSCSTE sponsored national seminar on 'Environmental issues – challenges and concerns' organized by the Chair for Gandhian Studies and Research, University of Calicut, from 28 – 27, September, 2016.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in the year 2016.
- Co-chair, National seminar on patents, plant breeding, biotechnology and conservation. December 3-5, 2015. Malabar Botanical Garden and Institute for Plant Sciences, Calicut.
- Co-chair, National seminar on advances in angiosperm systematics and conservation, 19 – 21, November, 2015, Department of Botany, University of Calicut.
- Delivered an invited lecture for the participants of the refresher programme in Environmental Sciences conducted by the UGC Academic Staff College of the University of Calicut on 15th January 2015.

- Delivered an invited lecture for the participants of the refresher programme in Environmental Sciences, conducted by the UGC Academic Staff College, Kannur University on 19th November 2014.
- Officiated as Co ordinator, 15th Refresher course in Life Sciences (Multidisciplinary), Academic Staff College, University of Calicut, 4th – 24th, July, 2014.
- Delivered an invited lecture for the participants of the 83rd orientation programme conducted by the UGC Academic Staff College of the University of Calicut on 27th March 2014.
- Delivered a key note lecture on Environmental Awareness on the occasion of the MoEF - NEAC activities organized jointly by Swadeshi Science Movement and Mother Teresa College of Teacher Education, Calicut on 24th February, 2014.
- Delivered a key note address on Sacred groves and water conservation on the occasion of 15 days environmental awareness programme (Sponsored by Department of Environment and Climate Change, Govt of Kerala) organized by Darsanam, Calicut on 5th of January 2014.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in the year 2013.
- Delivered an invited lecture on the occasion of the UGC sponsored national conference on Natural Resources management: A key to sustainability, organized by the Department of Botany, Assumption College, Changanacherry on 5-6, December, 2013.
- Delivered a talk at All India Radio, Calicut, on Natural Resources Conservation on December 2013.
- Invited talk on "Resources Conservation" at Prof. Joseph Mundassery Smaraka Government HSS, Thrissur on 27th July 2012.
- Delivered an invited lecture on the DSTE sponsored seminar on "Sacred Groves Conservation and Management" organized by P.G. Dept. of Plant Science, MG Government College, Mahe, on 29th March 2012.
- Delivered an invited lecture on the occasion of the national seminar on "Urbanization trends and economic development" conducted by department of economics, Government college, Madappally on 01st March 2012.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in the year 2012.
- Delivered an invited lecture on the occasion of the National Seminar on Emerging Trends in Plant Sciences (sponsored by Directorate of Collegiate Education, Government of Kerala) by the Department of Botany, Govt Brennen College, Thalassery on 7th and 8th February, 2012.
- Invited talk on "Green Technologies: scope for a sustainable future", on the UGC sponsored seminar on "Green Chemistry – The ultimate tool for pollution control", organized by the Department of Chemistry, Assumption College, Changanacherry on 14th and 15th February, 2012.
- Extension lecture on Disciplines in Environmental Science at Thaqwa Afsal-ul-ulama Arabic College, Andathode, Thrissur on 3rd March 2011.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in 2011.
- Invited talk on "Biodiversity conservation –prospects and constraints" on the occasion of the National seminar (UGC) on Biodiversity and conservation of nature,

organized by the Department of Botany, St. Joseph's College, Irinjalakuda from 23 – 24 August 2011.

- Delivered 2 lectures (sessions) as part of educational multimedia production at EMMRC, University of Calicut on Eco restoration (July, 2011).
- Invited talk on "Impact of Tourism on Environment" on the occasion of the ECO's 2010, organized by the Department of Botany, PSMO College, Tirurangadi on 1st of October, 2010.
- Invited talk on "Environment and Youth – Teacher's Perspective" in connection with the inauguration of Natural Science Association of Titus II Teacher's College, Thiruvalla, Pathanamthitta on 8th February, 2010.
- Invited talk on "Remote Sensing – Prospective future technology" on the occasion of the lecture series being organized by the Science Forum of Marthoma College, Tiruvalla on 8th February, 2010.
- Invited talk on the occasion of the seminar (DST, Puducherry) on "Biodiversity – issues and concerns", organized by CE Bharathan Govt. Higher Secondary School, Mahe, U.T. of Puducherry on 13th November 2010.
- Invited talk on "Recent trends in climate change" on the occasion of the MoEF - NEAC activities organized by the Calicut University Botanical Society at the Department of Botany, University of Calicut on 18th November 2010.
- Delivered a Key note address on the occasion of the inauguration of the district level World Environment Day activities jointly by the Science Club, Swadeshi Science Movement and Education Department at Koodali, Kannur on 5th June 2010.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in 2010.
- Participated and coordinated a panel discussion on the occasion of the DSTE, Puducherry sponsored seminar on Water Management, organized by the Department of Botany, MG Government College, Mahe, U.T. of Puducherry on 28th January, 2010.
- Invited talk on "Remote Sensing" in connection with the inauguration of the Botany Association, Government Brennen College, Thalassery on 4th of November 2009.
- Invited talk on "Socio economic impact of climate change – A critical evaluation" on the occasion of the DCE sponsored national seminar on Socio economic impact of climate change - Emerging challenges and future policy options, organized by the Department of Economics, KMM Government Womens College, Kannur from 6-7 october, 2009.
- Invited talk on "Impact of Chemicals on the Terrestrial Biodiversity of India" on the occasion of the UGC sponsored national seminar on "Chemical Aspects of Biodiversity", organized by the Department of Chemistry, St. Joseph's College for Women, Alappuzha on 12th and 13th August, 2009.
- Invited talk on "Status of Environment in Kerala" in the Kerala State Council for Science Technology and Environment sponsored seminar on "Globalization and Environmental Hazards – Kerala experience", organized by Department of Economics, KMM Govt. Women's College, Kannur on 24th and 25th January, 2008.
- Invited talk on "Environmental Resources of Kerala", in connection with the one day seminar, organized by the Department of Botany, Christian College, Chengannur, Pathanamthitta, on 3rd March, 2008.
- Invited talk on "Impact of Tourism on the Coastal Environments of Kerala" in the national seminar on "Sustainable development of Kerala Economy", organized by

the Department of Economics, SES College, Sreekantapuram, Kannur, Kerala, from 20 - 21 November, 2008.

- Invited talk on "Impact of developmental activities on the Biodiversity of India", in connection with the UGC sponsored National Seminar on "Linkage between Economic Development and Environment in India", organized by the Department of Economics, SN College, Kannur, from 25 – 26, September 2008.
- Invited talk on "Remote Sensing – Technology for the Future", in connection with the Annual Association Activities of the Department of Botany, D.B. Pamba College, Parumala, Pathanamthitta on 09th November 2007.
- Invited talk on "Non-conventional energy resources", in connection with the "Akshaya Urge Divas", by the Department of Science and Technology, Government of Puducherry at MG Government College, Mahe on 23rd March 2005.
- Invited talk on "resource conservation", in connection with the inaugural function and celebration of conservation day, organized by the Town and Country Planning Department, Government of Puducherry at Mahe on 25th November 2004.
- Invited talk on "Water quality issues", in connection with the Annual Association activities of the Department of Chemistry, Assumption College, Changanacherry, on 09th February 2002.
- Invited talk on "Environmental Awareness" organized by C.P.R. Environmental Education Centre, Chennai at Marthoma College, Thiruvalla, 29 – 30 June, 2001.

Participation in seminar / workshop / training programmes

- Training programme on EIA of water resources projects, organized by CWRDM at Thiruvananthapuram from 20 – 25, November, 1995.
- Participated in the national conference on Recent Trends in Biotechnology, organized by the Department of Botany, Sanatana Dharma College, Alappuzha on 25 – 27, March, 2000.
- Participated in the national seminar on Indian contribution to Environmental Sciences, Biodiversity and Space Biology, organized by Swadeshi Science Movement at Priyadarsini Planetarium, Thiruvananthapuram during 15-16, December, 2001.
- Participated in the symposium on 'Frontiers in Biodiversity' organized by Department of Botany, Pachaiyappa Plant Science Research Forum, Pachaiyappas College, Chennai during 25-26, February, 1995.
- Refresher course (21 days) in Environmental Studies, UGC- ASC, Bharathidasan university, Thiruchirappalli, Tamil Nadu.
- One day workshop on facilitating innovation and patent filing organized by IUCIPRS, Cochin University of Science and Technology, Cochin on 3rd February 2016.
- National workshop on coastal environment day, National Centre for Earth Science Studies, Akkulam, Thiruvananthapuram on 19th February 2016.
- Attended National seminar on advances in angiosperm systematics and conservation, 19 – 21, November, 2015, Department of Botany, University of Calicut.
- Orientation programme (28 days) – Academic Staff College, University of Kerala.
- NNRMS – ISRO sponsored national training programme in Hyperspectral Remote Sensing and Object Oriented Image Analysis (14 days), organized by the

Department of Earth Sciences, Annamalai University, Chidambaram, Tamil Nadu (2008)

- Refresher course (21 days) in Environmental Studies – Academic Staff College, University of Calicut.
- National workshop on Biodiversity database organization and management (3 days), Tropical Botanical Garden and Research Institute, Thiruvananthapuram (12-14, March, 2008).
- Kerala Environment Congress organized by Centre for Environment and Development at Cochin (6-7, May, 2005)
- Kerala Science Congress (17th session) organized by Kerala State Council for Science, Technology and Environment, Peechi, Thrissur (29 – 31, January, 2005).
- Seminar on More Crop per Drop (DSTE sponsored) organized by Mahatma Gandhi Government Arts College, Mahe, U.T. of Pondicherry, on 27th April, 2007.
- Kerala Science Congress (19th session) organized by Kerala State Council for Science, Technology and Environment at Kannur (2007).
- Kerala Science Congress (20th session) organized by Kerala State Council for Science, Technology and Environment, Thiruvananthapuram (2008).
- Seminar on Medicinal Plant Cultivation – Problems and Prospects, Mahatma Gandhi Government College, Mahe, U.T. of Pondicherry, 17th April 2008.
- OISCA Global Meet 'Human Activities and Climate Change', Kanakakunnu Palace, Thiruvananthapuram (2008).
- Seminar on Application of spectroscopic and chromatographic techniques in pharmaceutical industry, Department of Chemistry, St Berchmans' Coll'ge, Changanacherry on 14-15 November, 2008.
- Seminar on zero waste technology with special reference to Vermiculture, Department of Zoology, Mahatma Gandhi Government Arts College, Mahe, U.T. of Pondicherry. (2009).
- Seminar on challenges and prospects of research in the new world order, University of Calicut (2010).
- Workshop on IPR and economic development in the knowledge era, Patent Facilitating Centre, TIFAC and University of Calicut (12th August, 2010).
- International conference on 'locating the indigenous: local, national and global forms of Indian medicinal practices'. Department of History, University of Calicut (21-23, October, 2010).
- National workshop on 'Bioinformatics tools: sequence analysis, molecular visualization and docking'. Department of Biotechnology and Bioinformatics, Tropical Botanical Garden and Research Institute, Palode, Thiruvananthapuram (4-7 January, 2011).
- National workshop on advanced GPS surveying. School of Biosciences, Bharathidasan University, Thiruchirappalli, Tamil Nadu (3-4, February, 2012).
- International workshop on disaster risk reduction and contingency planning, Department of Revenue and Disaster Management, Government of Kerala, Thiruvananthapuram, Kerala (9-10 March 2012).
- Pre campaign workshop of National Environmental Awareness Campaign, organized by CED, Thiruvananthapuram on 8th October 2012.
- Seminar on forestry practices in Kerala with special reference to Biodiversity conservation. Department of Botany, University of Calicut (18 March 2011)

- VI International symposium on the family Zingiberaceae. Department of Botany, University of Calicut, 10 – 13, September, 2012.
- Programme Officers meet, National Service Scheme, University of Calicut on 15th of December 2014.
- Ministry of drinking water and sanitation (Government of India) sponsored training programme on water resources management, organized by the Centre for water resources development and Management, Kunnamangalam, Kozhikode from 12 – 14 March 2014.
- Seminar on Research projects – The art of writing proposals, organized by Directorate of Research, University of Calicut on 23rd March 2014.
- KSCSTE / UGC sponsored national workshop on Botanical Nomenclature, organized by the Department of Botany, University of Calicut from 17 – 19, March 2014.
- Participated in the 27th session of Kerala Science Congress held at Camelot Convention Centre, Alleppey, from 27 – 29 January 2015.
- Participated in the 28th session of Kerala Science Congress held from 28 – 30 January, 2016 at University of Calicut.
- Participated in the 29th session of Kerala Science Congress held from 28 – 30 January, 2017 at Marthoma College, Thiruvalla.
- Participated in the online Hands on Training Programme on LMS – MOODLE, organized by the University of Calicut Kerala, from 26th June to 5th July 2020.
- Participated in the 3 day programme on curriculum development, organized by the MHRD – TLC, University of Calicut from 6-8 July 2020.
- Participated in the one day programme on OBE, organized by the MHRD – TLC, University of Calicut, for the members of the Board of studies on 15th January 2021.

Seminars / conferences organized

- Organizing Secretary – UGC sponsored national seminar on ‘Recent trends in Global Climate Change and Carbon Sequestration Research’ Department of Botany, University of Calicut (26-28, February, 2018)
- Organizing secretary – UGC sponsored extension seminar on ‘Avenue Plants – identification, cultivation and dissemination protocols in the wake of Global Environmental Challenges’, organized by the Department of Botany, University of Calicut (25-27, September, 2017)
- Organizing Secretary- UGC sponsored seminar on ‘Forestry practices in Kerala with special reference to Biodiversity conservation, Department of Botany, University of Calicut (18th March 2011).
- Organizing Secretary - DST, New Delhi sponsored national seminar on ‘Recent Trends in Biodiversity conservation and Documentation’, organized by Department of Plant Science, Mahatma Gandhi Government Arts College, Mahe (6-7, November, 2008)