

**Dr. P. Thangavel**  
Assistant Professor  
Department of Environmental Science, School of Life Sciences  
Periyar University  
Periyar Palkalai Nagar, Salem - 636 011, Tamil Nadu, India  
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## Education

1996-2002 Ph.D. in Environmental Sciences, Bharathiar University, Coimbatore, India.  
1998-1999 Diploma in Industrial Pollution Control, Annamalai University, India.  
1992-1993 M.Phil. in Zoology (interdisciplinary with Environmental Sciences),  
Bharathiar University, Coimbatore, India.  
1990-1992 M.Sc. in Zoology, Bharathiar University, Coimbatore, India.  
1987-1990 B.Sc. in Zoology, Bharathiar University, Coimbatore, India.

## Positions

since 2013 Assistant Professor, Department of Environmental Science, Periyar University,  
Periyar Palkalai Nagar, Salem, Tamil Nadu, India.  
2011-2013 Guest Lecturer, Department of Environmental Science, Periyar University, Periyar  
Palkalai Nagar, Salem, Tamil Nadu, India.  
2009-2010 Post Doctoral Research Associate, School of Environmental Science and  
Engineering, Sun Yat-Sen University, Guangzhou 510275, PR China.  
2005-2007 Visiting Scientist, United States Department of Agriculture (USDA) Forest Service,  
Northern Research Station, Durham, New Hampshire, USA  
2004-2005 Research Associate (CSIR), Bharathiar University, Coimbatore, TN, India.  
2002-2003 Senior Research Fellowship (Extended) (CSIR), Bharathiar University, Coimbatore,  
Tamil Nadu, India.  
1996-1999 Senior Research Fellowship (CSIR), Bharathiar University, Coimbatore, Tamil  
Nadu, India.

## Dissertation / Thesis

M.Sc., Synergistic effect of dimecron-cuman L on acetylcholinesterase (AChE) activity  
and histology of different tissues of *Sarotherodon mossambicus* (Peters).  
M.Phil., Use of restoration potential of leaves of *Portulaca oleracea* Linn. in the  
biomonitoring of heavy metals in aquatic environments.  
Ph.D., Aluminium effects on soil quality and on the growth and yield of green gram,  
*Vigna radiata* L. Wilczek cv. KM 2.

## Research Projects

1. Insights into the mechanisms of Fe and Cd accumulation in rice: Prospecting towards Fe-enriched Cd-free rice – Science and Engineering Research Board (SERB) – Core Research Grant (CRG), Department of Science & Technology (DST), New Delhi (Rs. 50,00,000/-) File No: EMR/2017/004804 (2018)

2. Phytoremedial assessment of metal tolerant flora in the vicinity of metal based industrial clusters of western Tamil Nadu – Ministry of Environment, Forests and Climate Change (MoEF & CC), New Delhi (Rs. 50,67,710/-) File No: 19-150/2014-RE (2016)
3. Response of non-protein thiols and polyamines in Cd and Zn defense mechanism in multi-metal hyperaccumulators *Potentialla griffithii* and *Picris divaricata* (China Postdoctoral Science Foundation 2010, Sanction # 20100470944 dated June 10, 2010 for 30,000 RMB).
4. Phytoremediation potential of trees growing on metal contaminated soils (CSIR-RA).
5. Phytoremediation: ‘onsite remediation technology’ of aluminium contaminated soils using *Prosopis juliflora* [CSIR-SRF (Ext.)].
6. Monitoring and impact assessment of aluminium addition on the fertility and productivity of selected soils of Coimbatore district (CSIR-SRF).

### Scientific visits

Sl. No.	Country	Position/Presentation	Place/Venue	Duration
1	South Korea	“2 <sup>nd</sup> International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2014)”	Kangwon National University, Chuncheon, South Korea	October 5-8, 2014
2	PR China	Post Doctoral Research Associate	School of Environmental Science and Engineering, Sun Yat-Sen University, Guangzhou, PR China	2009-2010
3	United States of America	Visiting Scientist/ Post Doctoral Research Associate	Louis B. Wyman Forestry Sciences Laboratory, USDA Forest Service, Northern Research Station, Durham, New Hampshire, USA	2005-2007
4	Thailand	"17 <sup>th</sup> World Congress of Soil Science"	Queen Sirikit National Convention Center, Bangkok, Thailand	August 14 to 21, 2002
5	Canada	"6 <sup>th</sup> International Conference on the Biogeochemistry of Trace Elements (ICOBTE, 2001)"	University of Guelph, Ontario, Canada	July 29 to August 2, 2001

### Awards/Fellowships

1. Awarded **Senior Research Fellowship (SRF)** from Council for Scientific and Industrial Research (CSIR), Ministry of Science and Technology, Government of India, New Delhi (from October 1996 to September 1999).  
CSIR Award Letter No: 9/472 (71) EMR I dated 23.08.96.
2. Awarded **Senior Research Fellowship (Extended)** from Council for Scientific and Industrial Research (CSIR), Ministry of Science and Technology, Government of India, New Delhi (from September 2002 to August 2003).

CSIR Award Letter No: 9/472 (108)/2002 EMR I dated 02.09.2002.

3. Awarded **Research Associateship (RA)** from Council for Scientific and Industrial Research (CSIR), Ministry of Science and Technology, Government of India, New Delhi (from October 2004 to January 2005).  
CSIR Award Letter No: 9/472 (113)/2004 EMR I dated 25.06.2004.
4. Received **Foreign Travel Grant** from Council for Scientific and Industrial Research (CSIR), Department of Science and Technology (DST), Committee on Science and Technology in Developing Countries (COSTED) and Bharathiar University to attend the “6<sup>th</sup> International Conference on the Biogeochemistry of Trace Elements (ICOBTE, 2001)” held on July 29 – August 2, 2001 at University of Guelph, Ontario, Canada.
5. Received **Foreign Travel Grant** from Department of Science and Technology (DST), to attend the “2<sup>nd</sup> International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR 2014) held on October 05-08, 2014 at Kangwon National University, Chuncheon, South Korea.
6. Received ‘**Best Scientist Award in Environmental Science**’ from PEARL Foundation, Madurai on December 10, 2016.

#### Academic/Administrative Experience

- ❖ Member, PFMS Committee, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (03-10-2018 to Till date)
- ❖ Member, NIRF India Rankings 2019 Committee, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (25-09-2018)
- ❖ Subject Expert for Continuous affiliation for UG course in Botany, Lakshmi Narayana Arts and Science College for Women, Dharmapuri (11-07-2018)
- ❖ Subject Expert for Continuous affiliation for UG course in Botany, Sivagamiammal College of Arts & Science, Krishnagiri (11-07-2018)
- ❖ Member, Institution of Eminence Committee, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (05-02-2018)
- ❖ Member, Registration and Certificate Committee, 41<sup>st</sup> Indian Social Science Congress, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (December 18-22, 2017)
- ❖ Member, Implementation of UGC-XII Plan Grant Assessment Committee, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (09-11-2017)
- ❖ Member, Dengue Awareness and Mitigation Committee, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (25-10-2017)
- ❖ Additional Faculty - Part Time, Environmental Science Programme for PRIDE, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (20-10-2017 to Till date)
- ❖ Member, District Level Expert Appraisal Committee (DEAC) for grant of Environmental Clearance for category “B2” projects for mining of Minor Minerals in Salem District, Tamil Nadu (08-05-2017 to Till date)
- ❖ Member, District Level Expert Appraisal Committee (DEAC) for grant of Environmental Clearance for category “B2” projects for mining of Minor Minerals in Dharmapuri District, Tamil Nadu (09-05-2017 to Till date)
- ❖ Member, Research and Development, Centre for Research, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (10-01-2017 to Till)

- ❖ Subject Expert, Question Paper Scrutiny Board, PSG College of Arts & Science, Coimbatore (07-04-2018)
- ❖ Chairman, Question paper setting for M.Sc. Environmental Science at Bharathidasan University, Tiruchirappalli – 620 024 (2016-17, 2017-18)
- ❖ Chairman, Question paper setting for University Rank Examinations at Bharathidasan University, Tiruchirappalli – 620 024 (2016, 2018)
- ❖ Member, Board of Studies in Environmental Management (UG), Thiruvalluvar University, Serkkadu, Vellore – 632 115, Tamil Nadu (11-03-2015 to Till date)
- ❖ Member, Board of Studies in Environmental Science (PG and M.Phil), Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (2013-Till)
- ❖ Member, Internal Quality Assurance Cell (IQAC), Periyar University, Periyar Palkalai Nagar, Salem, Tamil Nadu (26-05-2014 to 12-12-2014)
- ❖ Faculty in-charge for NAAC work in the Department of Environmental Science, Periyar University, Salem (2014 – Till date)
- ❖ Member, Campus Development Committee, Periyar University, Periyar Palkalai Nagar, Salem, Tamil Nadu (11-08-2014 to 09-01-2017)
- ❖ Member, Admission Verification Committee (Affiliated Colleges), Periyar University, Periyar Palkalai Nagar, Salem, Tamil Nadu (2014)
- ❖ Member, Vivekananda 150<sup>th</sup> Birth Centenary Celebrations, Centre for Vivekananda Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (2013-Till).
- ❖ Member, Doctoral Committee, Karpagam University, Coimbatore (2013)
- ❖ Member, Doctoral Committee – Department of Botany, Bharathiar University, Coimbatore (2014, 2016)
- ❖ Member, Doctoral Committee – Department of Zoology, Bharathiar University, Coimbatore (2014, 2016, 2018)
- ❖ External Examiner – Ph.D. Public Viva-voce Exam, Department of Biotechnology, Kongunadu College of Arts and Science, (Bharathiar University) Coimbatore (2018)
- ❖ External Examiner – Ph.D. Public Viva-voce Exam, Department of Biotechnology, Karpagam University, Coimbatore (2014-2016, 2017-18)
- ❖ External Examiner – Ph.D. Thesis Evaluation, Department of Environmental Science, University of Mysore, Mysore, Karnataka (2017)
- ❖ External Examiner – Ph.D. Thesis Evaluation, School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala (2017)
- ❖ External Examiner – M.Phil Dissertation Viva-voce Exam, Department of Marine Science, Bharathidasan University, Tiruchirappalli (31-10-2017)
- ❖ Examiner, M.Phil Dissertation, Department of Botany, CN College, Erode (Bharathiar University) (2017-18)
- ❖ Examiner, M.Sc Dissertation, Department of Environmental Science, Tamil Nadu Agricultural University, Coimbatore (2017, 2018)

### Professional contributions

- ❖ Editorial Board, Current World Environment (ISSN: 0973-4929, Online ISSN: 2320-8031) - 2016
- ❖ Editorial Board, Journal of Plant Science and Research - 2015
- ❖ Editorial Board (Review Editor), Frontiers in Environmental Science (Wastewater Management), Switzerland. 2013
- ❖ Editorial Board, African Journal of Agricultural Research. 2007 - Till
- ❖ Editorial Board, International Journal of Nutrition and Metabolism. 2009 - Till
- ❖ Editorial Board, International Journal of Plant Physiology and Biochemistry. 2009 - Till

- Served as a **reviewer** of scientific contributions to the journals/books/research proposals:
  - ❖ *Book proposal entitled “Phytoremediation: Role of aquatic plants in environmental clean-up” from Springer.*
  - ❖ *“Development and uses of biofortified agricultural products” edited by G.S. Bañuelos and Z-Q. Lin – CRC Press, 2008.*
  - ❖ *Ministry of Environment, Forest and Climate Change (MoEF&CC) research proposals – 2014 - 2016*
  - ❖ *Indian Journal of Biotechnology, CSIR, New Delhi, India - 2016*
  - ❖ *Ecotoxicology and Environmental Safety, Elsevier, USA - 2016*
  - ❖ *Water, Air, & Soil Pollution, Springer, Netherlands - 2016*
  - ❖ *Comparative Physiology and Biochemistry Part C: Toxicology & Pharmacology, Elsevier, United States - 2016*
  - ❖ *Beni-Suef University Journal of Basic and Applied Sciences, Elsevier - 2015*
  - ❖ *Comptes Rendus Biologies, Elsevier, France - 2014*
  - ❖ *Frontiers in Environmental Science, Switzerland - 2014*
  - ❖ *International Journal of Agriculture Sciences - 2012*
  - ❖ *African Journal of Plant Science – 2011*
  - ❖ *Biology and Medicine (ISSN: 0974-8369) – 2011*
  - ❖ *Medical Practice & Reviews – 2011*
  - ❖ *International Journal of Biodiversity & Conservation - 2011*
  - ❖ *Journal of Hazardous Materials – Elsevier, UK, 2010.*
  - ❖ *International Research Journal of Plant Science – 2010*
  - ❖ *International Journal of Plant Physiology and Biochemistry – 2010*
  - ❖ *International Journal of Nutrition and Metabolism – 2009*
  - ❖ *Journal of Plant Physiology, Elsevier, UK – 2009*
  - ❖ *Biotechnology Journal, Wiley-VCH - 2008.*
  - ❖ *African Journal of Environmental Science & Technology – 2008-2009*
  - ❖ *African Journal of Microbiology Research – 2008*
  - ❖ *African Journal of Agricultural Research – 2007-2008*
  - ❖ *Environmental and Experimental Botany – Elsevier, UK, 2007.*
  - ❖ *Environmental Toxicology – A John Wiley and Sons Inc., New York, 2004.*
  - ❖ *Proceedings of the Indian National Science Academy - Reviews & Tracts, Part B, INSA, New Delhi, 2004.*

### Professional affiliations

1. American Society of Plant Biologists (ASPB), USA (Member ID: 70948)
2. Ecological Society of America (ESA), USA (Member ID: 131948)
3. International Phytotechnology Society (IPS), USA
4. PHYTONET- Phytoremediation Electronic Newsgroup Network, Italy
5. AQUAPHYTE – University of Florida, USA
6. International Serpentine Ecology Society (ISES), USA
7. Indian Network for Soil Contamination Research (INSCR), New Delhi
8. International Society of Environmental Botanists (ISEB), Lucknow
9. Indian Science Congress Association (ISCA), Kolkata

### Fields of Competence

- ❖ Soil Ecology & Phytoremediation
- ❖ Environmental Impact Assessment
- ❖ Biofuels & Biofortification

## Research Guidance

Sl. No.	Name of the candidate	Title of the Thesis/Dissertation	Year
<b>Ph. D Thesis</b>			
1	P. Vasudhevan	Heavy metal profile in paddy fields and its accumulation in different rice varieties in Salem District, Tamil Nadu	Doing
2	N. Vadivu	Identification of indigenous hyperaccumulators in metal based mine sites of western Tamil Nadu	Doing
3	E. Gowri	Identification and phytoremedial categorization of metal tolerant flora in the vicinity of metal based industries	Doing
4	D. Mohankumar	Studies on microbial diversity in selected metal contaminated environments/mining sites in western Tamil Nadu	Doing
<b>M.Phil Dissertation</b>			
1	V. Priya (M16EVS104)	Assessment of selected soil quality parameters in magnesite and limestone mine sites – Pre-requisite for mine site reclamation	2017
<b>M.Sc Dissertation</b>			
1	K. Hemalatha (P16EVS1001)	Studies on nutrient profiles of crops and soils in monocropping	2018
2	M.Pavithra (P16EVS1005)	Studies on nutrient profiles of crops and soils in intercropping	2018
3	C. Sukumar (P15EVS1003)	Identification of metallophytes and their adaptation strategies in different mine sites – A way towards mine site revegetation	2017
4	A. ArthiDevi (P14EVS1001)	Status of heavy metals and nutrients in the vicinity of metal - based steel industries in Salem, Tamil Nadu	2016
5	S.Chandrakumar (P13EVS1001)	Assessment of heavy metal contamination in agricultural soils of Salem District, Tamil Nadu, India	2015
6	Neethu Madhavan (P13EVS1012)	Heavy metals and nutrient profiles in urban soils of Salem District, Tamil Nadu, India	2015
7	J.Stephen Barnabas (P11EVS1009)	Groundwater quality and rainfall studies in Omalur Taluk of Salem District, Tamil Nadu, India	2014
8	S.Rajeswari (P12EVS1006)	Restoration potential of <i>Portulaca oleracea</i> Linn. stem cuttings under individual cadmium and zinc exposures – A tool for biomonitoring and phytoremediation studies	2014
9	K.Sivaraj (P12EVS1008)	Interaction between cadmium and zinc on the restoration potential responses of <i>Portulaca oleracea</i> Linn. stem cuttings	2014
10	S.Nithya (P11EVS1005)	Heavy metal accumulation in paddy soils and its transfer to different rice varieties in Northwestern zone of Tamil Nadu	2013
11	C.Latha (P11EVS1002)	Assessment of soil heavy metals in magnesite and limestone mine sites at western Tamil Nadu, India	2013
12	S.Malathi (P11EVS1004)	Soil heavy metal profiles in abandoned bauxite mine site at Shevaroy hills, Eastern Ghats	2013
13	Tamthingla Shatsang (P11EVS1011)	Influence of lead sulphate and lead nitrate on the restoration potential of stem cuttings of <i>Portulaca oleracea</i> Linn. as a biomonitoring tools of freshwater aquatic environment	2013



**Research experience:** 15 Years (after Ph.D)

Research Publications in Journals = **38**; Book Chapters = **9**; Books = **6**

Cumulative Impact Factor = **55.945**

Cumulative SNIP Factor (CWTS Journal Indicators) = **22.883**

Cumulative SJR Factor = **20.566**

h index = **14**; i-10 index = **20**

Number of citations = **718** (Based on Google Scholar Citations)

### Research Publications (in Journals)

1. Naser A. Anjum, Pallavi Sharma, Sarvajeet S. Gill, Mirza Hasanuzzaman, Ekhlague A. Khan, Amal A. Mohamed, Kiran Kachhap, **Palaniswamy Thangavel**, Gurumayum Devmanjuri Devi, Palanisamy Vasudhevan, Adriano Sofo, Nafess A. Khan, Amarendra Narayan Misra, Alexander S. Lukatkin, Harminder Pal Singh, Eduarda Pereira, Narendra Tuteja (2016) Catalase and ascorbate peroxidase – representative H<sub>2</sub>O<sub>2</sub>-detoxifying haeme enzymes in plants. Environ. Sci. Poll. Res. 23:19002-19029 [ISSN: 0944-1344 (Print); 1614-7499 (Electronic)] **IF: 2.800**
2. Maruthupandian, A., V. Gowthami, M. Kumutha, C. Santhosh and **P. Thangavel** (2015) Physico-chemical, phytochemical and bioactive characterization of *Dipteracanthus prostrates* (Poir) Nees – an antidote medicinal plant. Bot. Rep. 4 (2): 1-7. [ISSN: 2319-8230]
3. Maruthupandian, A., P. Geethambiga, K. Saranya and **P. Thangavel** (2015) Bioactive potential of red seaweed (Rhodophyceae) against human pathogenic bacteria. Int. J. Eng. Technol. Sci. Res. 2 (5): 44-48 [ISSN: 2394-3386]
4. Naser A. Anjum, Mirza Hasanuzzaman, Mohammad A. Hossain, **Palaniswamy Thangavel**, Aryadeep Roychoudhury, Sarvajeet S. Gill, Miguel A.M. Rodrigo, Vojtěch Adam, Masayuki Fujita, Rene Kizek, Armando C. Duarte, Eduarda Pereira, Iqbal Ahmad (2015) Jacks of metal/metalloid chelation trade in plants – an overview. Front. Plant Sci. [ISSN: 1664-462X (Electronic)] **IF: 3.678**
5. Arulbalachandran, D., J. Veerapandian, S. Alagendran, **P. Thangavel** (2012) Biochemical and antioxidant enzyme alteration in three *Vigna* species induced by NaCl stress. Int. J. Cur. Tr. Res. 1: 31-39 (ISSN: 2278-8042)
6. Wu, Q., S.Wang, **P.Thangavel**, Q.Li, H.Zheng, J.Bai, R.Qiu (2011) Phytostabilization potential of *Jatropha curcas* L. in polymetallic acid mine tailings. Int. J. Phytorem. 13: 788-804 [ISSN: 1522-6514 (Print) 1549-7879 (Online)] **IF: 1.886**
7. Qiu, R., **P.Thangavel**, P-J.Hu, P.Senthilkumar, R-R.Ying, Y-T.Tang (2011) Interaction of cadmium and zinc on accumulation and sub-cellular distribution in leaves of hyperaccumulator *Potentilla griffithii*. J. Hazard. Mater. 186: 1425-1430 (ISSN: 0304-3894) **IF: 6.434**
8. Minocha, R., S.Long, **P.Thangavel**, S.C.Minocha, C.Eagar and C.T.Driscoll (2010) Elevation dependent sensitivity of northern hardwoods to Ca addition at Hubbard Brook Experimental Forest, NH, USA. For. Ecol. Manag. 260: 2115-2124 (ISSN: 0378-1127) **IF: 3.169**
9. Mohapatra, S., S.Cherry, R.Minocha, R.Majumdar, **P.Thangavel**, S. Long, S.C.Minocha

- (2010) The response of high and low polyamine-producing cell lines to aluminum and calcium stress. *Plant Physiol. Biochem.* 48: 612-620. (ISSN: 0981-9428) **IF: 2.718**
10. **Thangavel, P.**, K.Sumathiral, S.Maheswari, S.Rita and M.Ramaswamy (2010) Hormone profile of an edible, freshwater teleost, *Sarotherodon mossambicus* (Peters) under endosulfan toxicity. *Pestic. Biochem. Physiol.* 97: 229-234. (ISSN: 0048-3575) **IF: 3.440**
  11. Minocha, R., **P.Thangavel**, O.P.Dhankher and S.Long (2008) Separation and quantification of monothiols and phytochelatins from a wide variety of cell cultures and tissues of trees and other plants using high performance liquid chromatography. *J. Chromatogr. A* 1207: 72-83. (ISSN: 0021-9673) **IF: 3.716**
  12. **Thangavel, P.**, S.Long and R.Minocha (2007) Changes in phytochelatins and their biosynthetic intermediates in red spruce (*Picea rubens* Sarg.) cell suspension cultures under cadmium and zinc stress. *Plant Cell Tiss. Org. Cult.* 88: 201-216. [ISSN: 0167-6857 (Print) 1573-5044 (Online)] **IF: 2.004**
  13. **Thangavel, P.**, K.Sumathiral, S.Karthikeyan and M.Ramaswamy (2005) Endocrine response of the freshwater teleost, *Sarotherodon mossambicus* (Peters) to dimecron exposure. *Chemosphere* 61 (8): 1061-1214. (ISSN: 0045-6535) **IF: 4.427**
  14. **Thangavel, P.**, M.Ramaswamy, K.Sumathiral and K.Amutha (2005) Individual and combined effects of dimecron-ziram on the levels of serum prolactin and selected minerals of an edible freshwater fish, *Oreochromis mossambicus* (Peters). *Pestic. Biochem. Physiol.* 81: 24-31. (ISSN: 0048-3575) **IF: 3.440**
  15. **Thangavel, P.**, H.Nivedhitha and M.Ramaswamy (2004) Comparative study on individual and synergistic effects of dimecron and ziram on some parameters of carbohydrate metabolism in different tissues of a freshwater teleost, *Sarotherodon mossambicus* (Peters). *Bull Environ. Contam. Toxicol.* 72 (2): 365-372. [ISSN: 0007-4861 (Print) 1432-0800 (Online)] **IF: 1.480**
  16. **Thangavel, P.** and C.V.Subbhuraam (2004) Phytoextraction: role of hyperaccumulators in metal contaminated soils. *Proc. Indian Natn. Sci. Acad. B* 70 (1): 109-130. (ISSN: 0073-6600) Indian National Science Academy, New Delhi.
  17. Anandi, S., **P.Thangavel** and V.Subburam (2002) Influence of aluminium on the restoration potential of a terrestrial plant, *Portulaca oleracea* L. as a biomonitoring tool of fresh water aquatic environments. *Environ. Monit. Assess.* 78 (1): 19-29. [ISSN: 0167-6369 (Print) 1573-2959 (Online)] **IF: 1.804**
  18. Nivethitha, P., **P.Thangavel**, SPM.Prince W and V.Subburam (2002) Identification of heavy metal accumulating plants and their use in reclamation of soil contaminated with heavy metals. *Eco. Env. & Cons.* 8 (3): 249-251. (ISSN: 0971-765X)
  19. Shanmughavel, P., **P.Thangavel** and R.S.Peddappaiah (2001) Growth performance and economic returns of *Leucaena leucocephala* in agroforestry. *Ind. J. Forestry* 24 (4): 480-483. (ISSN: 0971-9431)
  20. Karuppiyah D., **P.Thangavel** and M.Ramaswamy (2000) Toxicity of a carbamate pesticide, sevin to a freshwater, edible, air-breathing fish, *Channa striatus* (Bloch.). *J. Ecol. Res. Biocon.* 1 (2): 14-19.



21. Shanmughavel, P. and **P.Thangavel** (2000) Influence of environment on physiology of plantation forests. *Advances in Forestry Research in India* 22: 80-101. (ISSN: 0971-2704)
22. **Thangavel, P.**, P.Shanmughavel and V.Subburam (2000) Effect of aluminium on early seedling growth of *Acacia holosericea* A. Cunn. Ex. G. Don. *Ind. J. Forestry* 23 (4): 397-400. (ISSN: 0971-9431)
23. Ramaswamy, M, **P.Thangavel** and N.Panneer Selvam (1999) Glutamic oxaloacetic transaminase (GOT) and glutamic pyruvic transaminase (GPT) enzyme activities in different tissues of *Sarotherodon mossambicus* (Peters) exposed to a carbamate pesticide, carbaryl. *Pestic. Sci.* 55: 1217-1221. [ISSN: 1526-4998 (Print) 1526-498X (Online)] **IF: 3.249**
24. **Thangavel, P.**, A.Shahira Sulthana and V.Subburam (1999) Interactive effects of selenium and mercury on the restoration potential of leaves of the medicinal plant, *Portulaca oleracea* Linn. *Sci. Total. Environ.* 243/244: 1-8. (ISSN: 0048-9697) **IF: 4.610**
25. Shanmughavel, P. and **P.Thangavel** (1999) Effect of pre-sowing treatment on germination of seeds growth of *Acacia holosericea* A. Cunn. Ex. G. Don. *J. Non-Timber Forest Products* 6(3/4):139-140. (ISSN: 0971-9415)
26. Nivedhitha,H., **P.Thangavel**, A.Shaik Dawood and M.Ramaswamy (1998) Adaptive changes in the patterns of carbohydrate metabolites in blood, liver, muscle and heart tissues of *Sarotherodon mossambicus* (Peters) exposed to a carbamate fungicidal product, cuman L. *Pestic. Sci.* 52: 133-137. [ISSN: 1526-4998 (Print) 1526-498X (Online)] **IF: 3.249**
27. **Thangavel, P.** and V.Subburam (1998) Effect of trace metals on the restoration potential of leaves of the medicinal plant, *Portulaca oleracea* Linn. *Biol. Trace Elem. Res.* 61 (3): 313-321. [ISSN: 0163-4984 (Print) 1559-0720 (Online)] **IF: 2.361**
28. Thilagamani, K.B., **P.Thangavel** and V.Subburam (1998) Effect of zinc and cadmium on the regeneration ability of the earthworm, *Lampito mauritii* (Kinberg). *Journal of Environment & Pollution* 5 (1): 7-11. (ISSN: 0971-4871)
29. Shyamala Subramaniam, **P.Thangavel** and V.Subburam (1997) Behavioural, morphological and toxic effects of zinc in the earthworm *Lampito mauritii* (Kinberg) in water and soil media. *Indian Biologist* 29 (1): 1-7. (ISSN: 0302-7554)
30. Sreelatha, S., **P.Thangavel** and V.Subburam (1997) Aerobic nitrate reductive efficiency of *Pseudomonas sp.* under varying pH, temperature, hardness and heavy metal content in water medium. *Indian J. Environmental Protection* 17 (5): 349-359. (ISSN: 0253-7141)
31. Shaganas Banu, B., **P.Thangavel** and V.Subburam (1997) Toxicity of neolan grey to *Vigna radiata* Co. 3. *Poll. Res.* 16 (1): 25-28. (ISSN: 0257-8050)
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### Books Edited

1. Book of Abstracts in “*Frontiers in Ecobiological Sciences and its Applications (FESA 2018) Theme: Water-Food-Energy Nexus*” edited by A. Nareshkumar, **P. Thangavel**, A. Maruthupandian and R. Arivuchudar Printed at Kaandhal Acchu Kalaiyagam, Salem – 4. Total Pages 117.
2. Book of Abstracts in “*Frontiers in Ecobiological Sciences and its Applications (FESA 2017) Theme: Environmental Security*” edited by A. Maruthupandian, **P.Thangavel** and A. Nareshkumar, Printed at Kaandhal Acchu Kalaiyagam, Salem – 4. Total Pages 194.
3. Book of Abstracts in “*Frontiers in Ecobiological Sciences and its Applications (FESA 2016)*” edited by **P.Thangavel**, A. Maruthupandian and A. Nareshkumar, Printed at Kaandhal Acchu Kalaiyagam, Salem – 4. Total Pages 166.
4. “*Environmental Sustainability: Role of Green Technologies*” edited by **P.Thangavel** and G. Sridevi (2015), Springer ISBN: 978-81-322-2056-5 (eBook); 978-81-322-2055-8 (Hardcover).
5. Book of Abstracts in “*Frontiers in Environmental Research and Applications (FERA 2014)*” edited by S.Venkatesan, **P.Thangavel**, L.Sivakumar, P.Senthilkumar and P.Jayanthi, Printed at Kaandhal Acchu Kalaiyagam, Salem – 4. Total Pages 116.
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### Book Chapters

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#### Presentations in Conferences/Symposium/Seminars/Congress

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2. P. Vasudhevan, M. Ayyandurai, K. Hemalatha, M. Pavithra and P. Thangavel (2018) Mycorrhizoremediation – A sustainable way to increase the agricultural productivity. National Conference on “*Bioresource Utilization for Sustainable Food and Energy Production* (BioSFEP – 2018) held on February 01 and 02, 2018 at Department of Botany, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Abstract No: AO48; Page 48)
3. P. Vasudhevan and **P.Thangavel** (2017) Heavy metal accumulation in paddy soils and different rice varieties: an Asian perspective. 2<sup>nd</sup> National Conference on “*Frontiers in Ecobiological Sciences and its Applications* (FESA – 2017) Theme: Environmental Security” held on March 16 and 17, 2017 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Abstract No: AEO29; Pages 150-151)
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54. **Thangavel, P.**, and M.Ramaswamy (1992) Synergistic effect of dimecron-cuman L on acetylcholinesterase (AChE) activity of different tissues of *Sarotherodon mossambicus* (Peters). “11 th National Symposium on Life Sciences” held on 9-11 September 1992 at Quaid-E-Millat Government Arts College for Women, Madras. Abstract No: 65 Page 48.

#### Participations in Conferences/ Workshops

1. Two Days Workshop on “Air Water Quality Monitoring & Analysis” held on March 27 and 28, 2018 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India.

2. One Day Workshop on “*Renewable Energy Resources - 2018*” held on March 26, 2018 at Centre for New and Renewable Energy Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India.
3. National Conference on “*Frontiers in Ecobiological Sciences and its Applications (FESA – 2018) Theme: Water-Food-Energy Nexus*” held on February 07-09, 2018 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Joint Secretary)
4. National Conference on “*Bioresource Utilization for Sustainable Food and Energy Production (BioSFEP – 2018)*” held on February 01 and 02, 2018 at Department of Botany, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Session chair)
5. Two Days National Seminar on “*Recent Advances in Microbial Technology for Renewable Energy, Bioremediation, Health and Sustainable Agriculture (RAMT for REBHSA – 2018)*” held on January 24 and 25, 2018 at Department of Microbiology, School of Biosciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Session chair)
6. One Day Workshop on “*Innovative Approaches on Herbal Products*” held on October 13, 2017 organized by Department of Botany, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India.
7. One Day Seminar on “*Environmental Compliance Management at Mines & Quarries*” held on September 23, 2017 organized by Department of Geology, School of Physical Sciences, Periyar University, Salem in association with The Institute of Engineers (India) – Salem Local Centre and Global Lab and Consultancy Services, Salem.
8. National Conference on “*Frontiers in Ecobiological Sciences and its Applications (FESA – 2017) Theme: Environmental Security*” held on March 16 and 17, 2017 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Joint Secretary)
9. “National Science Day Celebrations – 2017 Theme: Science and Technology for Specially Abled Persons” held on February 28, 2017 at Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee & Evaluator in Essay Writing)
10. Science Academies Lecture Workshop on “*Plant Diversity and Phytoremediation*” held on February 06 and 07, 2017 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Coordinator)
11. Hands-on Workshop on “ELISA Technique” held on January 10, 2017 organized by the Department of Zoology, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu.
12. International Conference on “Food, Energy and Water Microbiology” (ICFEWM 2016) held on December 21 – 23, 2016 organized by the Department of Microbiology, School of Biosciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (Session Chair)
13. International Conference on “Contaminated Site Remediation (CleanUp India 2016)” held on December 13 – 15, 2016 organized by Tamil Nadu Agricultural University, Coimbatore,

Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE), Australia and The University of New Castle, Australia.

14. National Conference on “*SMART SUMMIT – 2016 (Science, Medicine, Agriculture, Research and Technology)*” held on December 10, 2016 organized by the PEARL – A Foundation for Educational Excellence, Madurai – 625 021, Tamil Nadu.
15. International Conference on “*Environmental Sustainability for Food Security (ENFOSE 2016)*” held on September 22-24, 2016 organized by Sree Ayyappa College for Women, Chunkankadai, Nagercoil, Kanyakumari Dt., Tamil Nadu (Invited Speaker)
16. International Seminar on “*Perspectives in Modern Biology*” held on September 02, 2016 organized by Department of Zoology, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu.
17. 9<sup>th</sup> NABS National Conference on “*New Biological Researches: Opportunities and Challenges for Sustainable Development (Agriculture, Biology, Energy, Environment, Health and Climate Change)*” held on August 11 and 12, 2016 organized by School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021, Tamil Nadu & National Academy of Biological Sciences (NABS), Chennai (Invited Speaker)
18. DBT and SERB sponsored National Conference on “*Biotechnology in Environment Welfare (NCBEW 2016)*” held on July 20 and 21, 2016 at Department of Biotechnology, Karpagam University, Coimbatore – 641 021, TN, India (Invited Speaker)
19. NAAC sponsored Workshop on “*Curriculum Enhancement in Higher Education*” held on March 28 and 29, 2016 organized by Internal Quality Assurance Cell (IQAC), Periyar University, Periyar Palkalai Nagar, Salem – 636 011.
20. National Conference on “*Frontiers in Ecobiological Sciences and its Applications (FESA – 2016)*” held on March 17 and 18, 2016 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Secretary)
21. National Conference on “*New Horizons in Plant Biotechnology: Innovative Products and Applications*” held on March 11 and 12, 2016 organized by the Department of Biotechnology, School of Bio Sciences and Technology, VIT University, Vellore – 632 014, Tamil Nadu, India (Invited Speaker)
22. Seminar on “*World Wildlife Day*” held on March 03, 2016 organized by Internal Quality Assurance Cell (IQAC), Periyar University, Periyar Palkalai Nagar, Salem – 636 011.
23. National Conference on “*Advances in Biological and Environmental Sciences (NCABES – 2016)*” held on February 25 and 26, 2016 organized by the Department of Biology, The Gandhigram Rural Institute – Deemed University, Gandhigram – 624 302, Dindigul, Tamil Nadu, India (Session Chair & Invited Lecture)
24. DST sponsored 4<sup>th</sup> National Conference on “*Emerging Trends and New Challenges in Biotechnology – Bioenergy: A Step Towards Sustainable Future (NCETNCB – 2016)*” held on February 18-19, 2016 organized by the PG and Research Centre in Biotechnology, M.G.R College, Hosur – 635 109, Tamil Nadu, India (Invited Speaker)

25. National Conference on “Public Health and Hygiene (NCPHH – 2016)” held on February 04-05, 2016 organized by the PG and Research Department of Zoology, Periyar Government Arts College, Cuddalore – 607 001, Tamil Nadu, India (Invited Speaker)
26. National Seminar on “Biodiversity of Microbes and Climate Change Mitigation” held on February 03-05, 2016 organized by the Research and PG Department of Botany, Catholicate College, Pathanamthitta – 689 645, Kerala, India (Invited Speaker)
27. National Workshop on “*Advances in Geoinformatics*” held on January 11-12, 2016 organized by the Centre for Geoinformatics and Planetary Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011.
28. National Seminar on “*Research Trends in Plant Sciences and its Societal Impact*” held on January 05-06, 2016 organized by Department of Botany, PSGR Krishnammal College for Women, Coimbatore – 641 004 (Invited Speaker & Session Chair)
29. One Day National Level Seminar on “*Emerging Trends in Biosciences*” held on December 08, 2015 organized by PG & Research Department of Zoology, Kongunadu Arts and Science College, Coimbatore – 641 029 (Invited Speaker)
30. International Seminar on “*Soil Health for Sustainable Future (SHSF – 2015)*” held on December 03, 2015 organized by Department of Environmental Science, Periyar University, Periyar Palkalai Nagar, Salem – 636 011 (Organizing Secretary)
31. National Seminar on “*Earthworms – from Vermitechnology to Regenerative Biology*” held on October 30, 2015 organized by Department of Zoology, Periyar University, Periyar Palkalai Nagar, Salem – 636 011.
32. National Conference on “*Challenges and Future Perspectives of Plant Sciences (NCP 2015)*” held on October 7 and 8, 2015 organized by Department of Botany, Periyar University, Periyar Palkalai Nagar, Salem – 636 011.
33. National Seminar on “*Biodiversity Products and Industrial Applications (BPIA 2015)*” held on September 28 and 29, 2015 organized by Centre for Biodiversity and Forest Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011.
34. NABS National Seminar on “*Biological products for crop, animal and human health – Problems and prospects*” held on August 21 and 22, 2015 organized by Department of Studies in Biotechnology, University of Mysore, Karnataka and National Academy of Biological Sciences (NABS), Chennai, Tamil Nadu (21-08-2015)
35. “*Earth Day – 2015 Celebrations*” – Interschool and Intercollegiate competitions on Clean Earth – Green Earth held on June 23 and 26, 2015 organized at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
36. Interaction Programme on “*DST Schemes for Researchers*” held on June 12, 2015 organized by the Centre for Nanoscience and Nanotechnology, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India.
37. National Seminar on “*Turning Wastes into Resources for Sustainable Future*” held on April 09, 2015 at Department of Environmental Science, School of Life Sciences, Periyar



University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)

38. National Seminar on “*Life Science for Nation Building*” organized by Department of Zoology, School of Life Sciences, Periyar University, Salem on 27<sup>th</sup> and 28<sup>th</sup> February 2015 (Member – Organizing Committee)
39. National Seminar on “*Biodiversity and Conservation: Present Status and Future Perspectives*” held on February 12-13, 2015 organized by Department of Zoology, St. Xavier’s College (Autonomous), Palayamkottai – 627 002, Tamil Nadu, India. Abstract Page 4 & Session chair (13-02-2015).
40. Workshop on “*Project Writing Skills and Funding Agencies*” held on February 12, 2015 organized by School of Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu, India.
41. International Seminar on “*Emerging Contaminants and Environmental Remediation (ECER 2015)*” held on January 27, 2015 organized by Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu, India. (Member – Organizing Committee)
42. International Conference on “*Physiology and Medicine (ICPM)*” held on October 15-17, 2014 organized by Department of Zoology, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu, India. (Member – Scientific Advisory Committee)
43. UGC sponsored One Day National Seminar on “*Water Management: A Solution for Urban and Rural India*” held on October 17, 2014 organized by Government College for Women, Mandya – 571 401, Karnataka, India (17-10-2014).
44. UGC & WWF-India sponsored National Seminar on “*Biovision 2014 – Recent Trends and Future Perspectives of Biosciences*” held on September 05-06, 2014 organized by Department of Zoology & Botany, Arumugam Pillai Seethai Ammal College, Thirupatur, Tamil Nadu, India. Abstract Page 37 (06-09-2014).
45. National Seminar on “*Water Crisis – The Challenges Ahead of Global Governance WC-CAGG 14*” held on August 27-28, 2014 organized by Post Graduate & Research Department of Chemistry, PSGR Krishnammal College for Women, Peelamedu, Coimbatore – 641 004, Tamil Nadu, India. Abstract Pages 28-29 & Poster session chair (28-08-2014).
46. National Workshop on “*Renewable Energy Sources: Indian Scenario (NWRES -14)*” held on August 22, 2014 organized by Department of Civil Engineering, K.S. Rangasamy College of Technology, Tiruchengode, Namakkal, Tamil Nadu, India (22-08-2014).
47. UGC-CPE Sponsored National Seminar on “*Impact of Urbanization in Biota and the Role of Governmental and Non-Governmental Organizations in their Conservation*” held on August 01, 2014 organized by Department of Zoology & Genetics, Government Science College, Bangalore – 560 001, Karnataka, India. Abstract Page 3-4 & Session Chair (01-08-2014).
48. International Seminar on “*Nanobiotechnology in Cancer Research (NCR – 2014)*” held on July 21, 2014 organized by Department of Biotechnology, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu.

49. UGC Sponsored National Level Conference on “*Recent Innovation and Future Trends in Biology*” held on July 24 and 25, 2014 organized by PG & Research Department of Botany, National College, Tiruchirapalli – 620 001, Tamil Nadu, India. Abstract Pages 4-5 (25-07-2014).
50. National Conference on “*Modern Trends in Biodiversity Conservation and its Sustainable Utilization (NCBCSU - 2014)*” held on July 17 and 18, 2014 organized by PG & Research Department of Botany, Periyar Arts College, Cuddalore – 1, Tamil Nadu, India. Book of Abstracts Pages 14-15.
51. Seminar on “*Advanced Technologies and Innovations in Energy and Environment (ENERGY FEST '14)*” held on March 28, 2014 organized by School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021, Tamil Nadu, India (28-03-2014)
52. National Conference on “*Cultural landscapes, indigenous knowledge and biotechnological tools for biodiversity conservation*” held on March 07 and 08, 2014 organized by PG and Research Departments of Botany, Zoology & Biotechnology, Kongunadu Arts and Science College (Autonomous), Coimbatore – 641 029, Tamil Nadu (Acted as a session chair)
53. National Conference on “*Recent Advances in New and Renewable Energy (RANRE-2014)*” held on February 27, 2014 organized by Centre for New and Renewable Energy Studies (CNRES), Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu. Abstract No. IL03, Page 5 (27-02-2014)
54. National Conference on “*Innovative Approaches in Biosciences*” organized by Department of Microbiology, Sree Narayana Guru College, K.G. Chavadi, Coimbatore – 105, Tamil Nadu (26-02-2014)
55. International Conference on “*Environmental Technology and Sustainable Development: Challenges & Remedies (ET & SD 2014)*” organized by Department of Environmental Science, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow – 226 025, Uttar Pradesh (21-02-2014 to 23-02-2014)
56. National Seminar on “*Biodiversity Conservation and Sustainable Utilization*” organized by Department of Botany, Bharathiar University, Coimbatore – 641 046, Tamil Nadu (29-01-2014)
57. National Seminar on “*Current Zoology*” held on January 21, 2014 organized by Department of Zoology, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu.
58. National Conference on “*Current Trends in Biodiversity Conservation and Forest Management (CTBCFM 2014)*” held on January 07, 2014 organized by Centre for Biodiversity and Forest Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu.
59. Workshop on “*Scientific Usage of Electron Microscopes: SEM and TEM*” held on January 06, 2014 organized by Centre for Instrumentation and Maintenance Facility (CIMF), Periyar University, Periyar Palkalai Nagar, Salem, Tamil Nadu, India.

60. National Conference on “*Heavy Metals in the Environment (HME 2013)*” held on November 28-30, 2013 organized by School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala.
61. Seminar on “*Trends in Protein Engineering*” held on November 21, 2013 at Department of Zoology, Periyar University, Periyar Palkalai Nagar, Salem, Tamil Nadu, India.
62. National Workshop on “*Fluorescent Microscopy*” held on October 10, 2013 at Department of Zoology, Periyar University, Periyar Palkalai Nagar, Salem, Tamil Nadu, India.
63. National Conference on “*Biotechnological Solutions for Sustainable Environmental Management*” organized by Karnataka State Higher Education Council in association with Centre’s for Bioinformation/Bioscience and Innovation, Tumkur University, Tumkur, Karnataka on January 22, 2013.
64. International Conference on “*Anthropogenic Impact on Environment and Bioremediation*” held on November 26-28, 2012 organized by Department of Zoology, Sri Venkateswara University, Tirupati, Andhra Pradesh.
65. State Level Seminar on “*Environmental Pollution and Sustainable Development*” held on April 02, 2012 organized by Department of Zoology, SVN College of Arts and Science, Nagamalai Pudukkottai, Madurai.
66. National Seminar on “*Cheminformatics*” held on August 26, 2011 at DBT Bioinformatics Center, Department of Bioinformatics, Bharathiar University, Coimbatore.
67. National Workshop on “*Intellectual Property Rights – Opportunities, Issues and Challenges*” held on August 11 and 12, 2011 at Department of Botany, Bharathiar University, Coimbatore.
68. National Seminar cum Workshop on “*Computational Biology*” held on March 10-11, 2011 at DBT Bioinformatics Center, Department of Bioinformatics, Bharathiar University, Coimbatore.
69. “*44<sup>th</sup> Annual Meeting of Hubbard Brook Cooperators*” held on July 10-11, 2007 at Hubbard Brook Field Office, Thornton, NH, USA.
70. “*Northeastern Ecosystem Research Cooperative (NERC)*” Conference 2006 held on October 26-27, 2006 at New England Center, Durham, New Hampshire, USA.
71. “*43<sup>rd</sup> Annual Meeting of Hubbard Brook Cooperators*” held on July 11-12, 2006 at Hubbard Brook Field Office, Thornton, NH, USA.
72. “*42<sup>nd</sup> Annual Meeting of Hubbard Brook Cooperators*” held on July 6-7, 2005 at Hubbard Brook Field Office, Thornton, NH, USA.
73. “*16<sup>th</sup> Annual Harvard Forest Ecology Symposium*” held at Fisher Museum, Harvard Forest, USA on February 23, 2005.
74. One-day National Level Symposium on “*Bioinformatics*” held on October 5, 2004 at Bharathiar University, Coimbatore, Tamil Nadu, India.

75. National Seminar on "*Environmental Management*" held at Department of Environmental Sciences, Bharathiar University, Coimbatore, Tamil Nadu on March 27, 2003.
76. National Seminar on "*Current Environmental Issues (Ecovision 2003)*" held at Department of Environmental Sciences, Bharathiar University, Coimbatore, Tamil Nadu on March 5, 2003.
77. Workshop on "*Clean Technologies for Industries*" held on October 3, 2002 at Centre for Water and Environmental Studies, Kumaraguru College of Technology, Coimbatore-6, Tamil Nadu, India.
78. Seminar on "*Problems in Incineration of Wastes*" conducted by Environmental Training Institute and Tamil Nadu Pollution Control Board, Coimbatore, Tamil Nadu held at CODISSIA Hall, Coimbatore on August 9, 2002.
79. Regional Conference on "*Biomass Gasification for Thermal and Power Applications*" held on March 31, 2000 at Brandis Hall, Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore, Tamil Nadu, India.
80. Seminar on "*Genetics, Health and Disease*" held on 16 th March, 2000 at Department of Zoology, Bharathiar University, Coimbatore, Tamil Nadu, India.
81. Workshop on "*Environmental Awareness on Quality Management of Irrigation Water*" held on February 17-18, 2000 at Department of Environmental Sciences, Bharathiar University, Coimbatore, Tamil Nadu, India.
82. Workshop on "*Environmental Status of Rivers in Tamil Nadu*" held on March 26-27, 1999 at Department of Environmental Sciences, Bharathiar University, Coimbatore, Tamil Nadu, India.

#### **Training / Soft Skills development Programmes**

1. One day Orientation Programme on "*Lesson Writing*" organized by PRIDE, Periyar University, Periyar Palkalai Nagar, Salem (14-06-2018)
2. Training Programme on "*Biodiversity Act 2002*" held at Institute of Forest Genetics and Tree Breeding (IFGTB) (Indian Council of Forestry Research and Education), Coimbatore from February 01-03, 2017 sponsored by National Biodiversity Authority (NBA), Ministry of Environment, Forest & Climate Change (MoEF &CC), Government of India, New Delhi.
3. One day Training programme on "*Solid Waste Management*" held at Hotel Shevaroy's, Salem on February 27, 2013 organized by Tamil Nadu Pollution Control Board (TNPCB), Salem.
4. Short Term Training Programme on "*Commercial Plant Tissue Culture and Agrobacterium mediated Gene Transfer Technique*" held at PG & Research Department of Botany, Government Arts College (Autonomous), Coimbatore from November 24 to December 7, 2010 sponsored by Department of Biotechnology, Ministry of Science & Technology, Government of India, New Delhi.
5. "*NRA Home Firearm Safety Course*" conducted by National Rifle Association of America held at USDA Forest Service, Durham, NH, USA on July 1, 2005.

6. Training programme on "*Rural Energy Entrepreneur Development Programme*" held at Centre for Energy Studies, Kumaraguru College of Technology, Coimbatore from August 7 to August 31, 2002 sponsored by Ministry of Non-Conventional Energy Sources, Government of India, New Delhi.
7. Awareness Programme on "*Rain water harvesting*" held at Centre for Water and Environmental Studies, Kumaraguru College of Technology, Coimbatore from August 20 and 21, 2002 sponsored by Tamil Nadu State Council for Science and Technology (TNSCST), Chennai and National Council for Science and Technology Communications (NCSTC), New Delhi.
8. "*Science Communication Workshop*" (Sponsored by NCSTC, Department of Science and Technology, Govt. of India, New Delhi) held on September 4-8, 2000 at Thiagarajar Polytechnic, Salem, Tamil Nadu, India.

#### Conference/Seminar/Workshop Organized

1. International Conference on "*Extremophilic microbes for sustainable development in agriculture, environment and health*" to be held on December 19-21, 2018 at Department of Microbiology, School of Biosciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Joint Secretary)
2. International Conference on "*Impact of Climate Change on Water Resources (ICWR – 2018)*" held on July 12-13, 2018 at Centre for Geoinformatics and Planetary Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
3. 3<sup>rd</sup> National Conference on "*Frontiers in Ecobiological Sciences and its Applications (FESA – 2018) Theme: Water-Food-Energy Nexus*" held on February 07-09, 2018 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Joint Secretary)
4. National Workshop on "*Promising Bio-geotechnologies for Mine Site Reclamation*" held on December 13-15, 2017 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011 in association with Tamil Nadu Magnesite Limited (TANMAG), Salem and SAIL Refractory Company Limited, Salem (Organizing Secretary)
5. Science Academies Lecture Workshop on "*Perspectives in Climate Change and Biodiversity*" held on October 03 and 04, 2017 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Coordinator)
6. 2<sup>nd</sup> National Conference on "*Frontiers in Ecobiological Sciences and its Applications (FESA – 2017) Theme: Environmental Security*" held on March 16 and 17, 2017 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Joint Secretary)
7. Science Academies Lecture Workshop on "*Plant Diversity and Phytoremediation*" held on February 06 and 07, 2017 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Coordinator)

8. 9<sup>th</sup> NABS National Conference on “*New Biological Researches: Opportunities and Challenges for Sustainable Development*” held on August 11 and 12, 2016 at School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021, TN, India (Member - Organizing Committee)
9. “*Earth Day – 2016 Celebrations*” – Interschool and Intercollegiate competitions on Save our Mother Earth held on June 21 and 24, 2016 organized at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
10. National Conference on “*Frontiers in Ecobiological Sciences and its Applications (FESA – 2016)*” held on March 17 and 18, 2016 at School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Secretary)
11. Hands on Training in “*R Statistical Tools for Life Science Researchers*” held on January 21 and 22, 2016 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
12. International Seminar on “*Soil Health for Sustainable Future (SHSF – 2015)*” held on December 03, 2015 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Secretary)
13. “*Earth Day – 2015 Celebrations*” – Interschool and Intercollegiate competitions on Clean Earth – Green Earth held on June 23 and 26, 2015 organized at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
14. National Seminar on “*Turning Wastes into Resources for Sustainable Future*” held on April 09, 2015 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
15. National Seminar on “*Life Science for Nation Building*” organized by Department of Zoology, School of Life Sciences, Periyar University, Salem on February 27-28, 2015 (Member – Organizing Committee)
16. International Seminar on “*Emerging Contaminants and Environmental Remediation (ECER 2015)*” held on January 27, 2015 at Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Member - Organizing Committee)
17. National Workshop on “*Green Initiatives in Energy and Environment (GIEE 2014)*” held on September 11, 2014 at Department of Environmental Science, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Secretary)
18. National Seminar on “*Frontiers in Environmental Research and Applications (FERA 2014)*” held on February 18, 2014 at Department of Environmental Science, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Secretary)



19. National Seminar on “*Global Environmental Issues and Remediation Technologies (GEIRT 2012)*” held on February 03, 2012 at Department of Environmental Science, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (Organizing Secretary)

#### Environmental Awareness Programme Organized

1. Environmental Awareness Programme on “*World Soil Day 2017*” held on December 08, 2017 at Panankadu, Omalur, Salem in association with Department of Agriculture, Government of Tamil Nadu and Mangalore Chemicals and Fertilizers (MCF) Limited (Organizing Secretary)
2. Environmental Awareness Programme on “*World Soil Day 2016*” held on December 05, 2016 at School of Life Sciences, Periyar University, Salem in association with Department of Agriculture, Government of Tamil Nadu and Krishak Bharathi Cooperative Limited (KRIBHCO), Chennai (Organizing Secretary)
3. Environmental Awareness Programme on “*Soil Conservation*” held on December 05, 2014 at Kottagoundanpatti Panchayat, Omalur Taluk, Salem District (Organizing Secretary)
4. Environmental Awareness Programme on “*International Mountain Day*” held on December 11, 2014 at Anna Park, Yercaud, Salem District (Member – Organizing Committee)

#### Special Lecture Programme Organized

1. Inauguration of Periyar University Environmental Science Association (PENGREEN) and First Special Lecture Programme on “*Global Climate Change – Where We are & What to do?*” by **Prof. Dr. K. Muthuchelian**, Vice-Chancellor, Periyar University, Salem on 03.11.2011.
2. Special Lecture Programme on “*Air and Water Quality Management – A Practical Approach*” by **Mr. P.P. Chandrasekaran**, Assistant Director (Lab), Tamil Nadu Pollution Control Board (TNPCB), Salem and **Mr. A. Manisekar**, Scientist, Advanced Environmental Laboratory, Tamil Nadu Pollution Control Board (TNPCB), Salem on 12.01.2012.
3. Special Lecture Programme on “*Disaster of India with special reference to Tamil Nadu*” by **Dr. K. Kumaraswamy**, Professor and Head, Department of Geography, Bharathidasan University, Thiruchirapalli – 620 024 on 26.03.2012.
4. On the eve of ‘Ozone Day’ celebration Special Lecture Programme on “*Ozone Depletion*” by **Dr. K. Muthuchelian**, Vice-Chancellor, Periyar University, Salem on 13.09.2012.
5. Special Lecture Programme on “*Genetically Modified Crops and Biosafety Concerns*” by **Dr. G. Sridevi**, Assistant Professor, Department of Plant Biotechnology, School of Biotechnology, Madurai Kamaraj University, Madurai – 625 021 on 04.10.2012.
6. Special Lecture Programme on “*Toxicodynamics*” by **Dr. G. Jagadeesan**, Professor, Department of Zoology, Annamalai University, Annamalainagar on 12.10.2012.
7. Special Lecture Programme on “*Water Conservation*” by **Dr. S. Kannan**, Associate Professor, School of Energy Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021 on 05.02.2013.

8. Special Lecture Programme on “*Particulate Matter and its Impacts on Health*” by **Dr. P. Rajaguru**, Professor and Head, Department of Biotechnology, Anna University – BIT Campus, Tiruchirapalli – 620 024 on 08.02.2013.
9. Special Lecture Programme on “*Biomass Energy*” by **Dr. P. Shanmughavel**, Assistant Professor, Department of Bioinformatics, Bharathiar University, Coimbatore – 641 046 on 11.10.2013.
10. Special Lecture Programme on “*Bioinoculants – Reclamation of wastelands*” by **Dr. T. Muthukumar**, Assistant Professor, Department of Botany, Bharathiar University, Coimbatore – 641 046 on 11.10.2013.
11. Special Lecture Programme on “*Environmental Impact Assessment – Tools and Techniques*” by **Dr. B. Anjan Kumar Prusty**, Scientist, EIA Division, Salim Ali Centre for Ornithology & Natural History (SACON), Coimbatore – 641 108 on 07.11.2013.
12. Special Lecture Programme on “*Environmental Awareness*” by **Dr. Shun Iijima**, Tsukuba University, Ibaraki, Japan on 18.11.2013.
13. Special Lecture Programme on “*Environmental Applications of Nanotechnology*” by **Dr. G. Annadurai**, Sri Paramakalyani Centre for Excellence in Environmental Science, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu on 26-08-2016.
14. Special Lecture Programme on “*Role of Stem Cells in Regenerative Medicine*” by **Dr. P. Ekambaram**, Department of Biotechnology, Bharathiar University, Coimbatore, Tamil Nadu on 26-08-2016.

#### Invited Talks

Participated as a *resource person* and *delivered lectures* in various institutions.

1. *Phytomanagement of metal contaminated soils* – Invited Lecture in the Department of Environmental Management, Faculty of Natural Sciences, Matej Bell University, Tajovskeho 40, 974 01 Banska Bystrica, Slovakia (10-10-2018)
2. *Phytomanagement of metal contaminated soils* – Invited Lecture in the Department of Ecology, Faculty of Humanities and Natural Sciences, University of Presov, 081 16 Presov, Slovakia (11-10-2018)
3. Refresher Course in Environmental Science (ID) held on July 16, 2018 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (16-07-2018)
4. *Phytomining and Agromining: Promising strategies for phytomanagement of metal contaminated sites* – Invited Lecture in the Refresher Course in Environmental Science (ID) held on July 16, 2018 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (16-07-2018)
5. *Impact of climate change and ecosystem disturbances on biodiversity resources* – Invited Lecture in the National Symposium on “*Effect of Climate Change, Habitat Alteration and Pollution on Freshwater and Coastal Ecosystem*” held on February 01 and 02, 2018

- organized by the Department of Zoology, A.P.C. Mahalaxmi College for Women, Thoothukudi – 628 002, Tamil Nadu, India (02-02-2018)
6. *Promising bio-geotechnologies for reclamation of metal contaminated soils* – Invited Lecture in the Refresher Course in Biotechnology held on December 02, 2017 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (02-12-2017)
  7. *Global environmental issues with reference to climate change and Impact of climate change on biodiversity resources* – Invited Lecture in the 117<sup>th</sup> and 118<sup>th</sup> Orientation Programme held on December 01, 2017 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (01-12-2017)
  8. *Global environmental issues* – Guest Lecture for B.Tech graduates organized by School of Advanced Sciences, VIT University, Vellore, Tamil Nadu (07-11-2017)
  9. *Phytomanagement of metal contaminated soils – Prospects for sustainable development* – Invited Lecture in the Academic Staff College, VIT University, Vellore, Tamil Nadu (07-11-2017)
  10. *Influence of climate change on biodiversity resources* – Lecture delivered in the Science Academies Lecture Workshop on “*Perspectives in Climate Change and Biodiversity*” held on October 03 and 04, 2017 organized by Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (04-10-2017)
  11. *Global climate change scenario: An overview* – Lecture delivered in the Science Academies Lecture Workshop on “*Perspectives in Climate Change and Biodiversity*” held on October 03 and 04, 2017 organized by Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (03-10-2017)
  12. *Global warming and its impact worldwide* – Invited Lecture on the eve of ‘Ozone Day Celebration 2017’ in School of Environmental Sciences, Mahatma Gandhi University, Priyadarsini Hills, Kottayam – 686 560, Kerala, India (22-09-2017)
  13. *Role of energy crops for environmental sustainability* – Invited Lecture in UGC sponsored One Day National Seminar on “*Plant Bio-fuel as a Sustainable Energy Conservation*” held on August 08, 2017 organized by the Department of Botany, Bharathi College, Mandya – 571 422, Karnataka, India (08-08-2017)
  14. *Phytomanagement of metal contaminated soils – Prospects for sustainable development* – Invited Lecture in the Refresher Course in Life Science (Interdisciplinary) held on July 10, 2017 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (10-07-2017)
  15. *Counseling and Guidance* - for Undergraduate Students from Science disciplines at Padmavani Arts & Science College for Women, Salem – 636 011, Tamil Nadu, India (19-06-2017)

16. *Influence of climate change on biodiversity resources* – Invited Lecture in the 115<sup>th</sup> and 116<sup>th</sup> Orientation Programme held on June 03, 2017 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (03-06-2017)
17. *Climate change impacts on biodiversity resources* – Invited Lecture in UGC sponsored National Seminar on “*Biodiversity Conservation and Sustainable Utilization (NSBCS – 2017)*” held on March 20 and 21, 2017 organized by Department of Botany, School of Life Sciences, Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (21-03-2017)
18. *Glimpses of Wildlife Conservation* – Invited Lecture in CSIR sponsored National Conference on “*Wildlife Biodiversity Conservation (NCWBC – 2017)*” held on February 23 and 24, 2017 organized by PG and Research Department of Zoology, Periyar Government Arts College, Cuddalore – 607 001, Tamil Nadu, India (24-02-2017)
19. *Metal defense mechanism in plants* – Lecture delivered in the Science Academies Lecture Workshop on “*Plant Diversity and Phytoremediation*” held on February 06 and 07, 2017 organized by Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (07-02-2017)
20. *Role of hyperaccumulators in phytomanagement of metal contaminated soils* – Lecture delivered in the Science Academies Lecture Workshop on “*Plant Diversity and Phytoremediation*” held on February 06 and 07, 2017 organized by Department of Environmental Science, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, TN, India (06-02-2017)
21. *Human Population Change and Environment* – Guest Lecture for B.Tech graduates on November 10, 2016 organized by VIT University, Vellore, Tamil Nadu (10-11-2016)
22. *Phytomining and Agromining – Key Phytotechnologies for Sustainable Environmental Management* – Plenary Lecture in International Conference on “*Environmental Sustainability for Food Security (ENFOSE 2016)*” held on September 22-24, 2016 organized by Sree Ayyappa College for Women, Chunkankadai, Nagercoil, Kanyakumari Dt., Tamil Nadu (Abstract No: BDY 04) (23-09-2016)
23. *Phytotechnologies for Global Sustainable Environmental Management* – Invited Lecture in 9<sup>th</sup> NABS National Conference on “*New Biological Researches: Opportunities and Challenges for Sustainable Development (Agriculture, Biology, Energy, Environment, Health and Climate Change)*” held on August 11 and 12, 2016 organized by School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021, Tamil Nadu & National Academy of Biological Sciences (NABS), Chennai (Abstract No: CCO1) (12-09-2016)
24. *Phytoremediation Technologies for Sustainable Environmental Management* – Invited Lecture in DBT and SERB sponsored National Conference on “*Biotechnology in Environment Welfare (NCBEW 2016)*” held on July 20 and 21, organized by the Department of Biotechnology, Karpagam University, Coimbatore – 641 021, Tamil Nadu, India (20-07-2016)
25. *Innovative Approaches in Phytotechnologies for Remediation of Contaminated Sites* – Invited Lecture in National Conference on “*New Horizons in Plant Biotechnology:*

- Innovative Products and Applications” held on March 11 and 12, 2016 organized by the Department of Biotechnology, School of Bio Sciences and Technology, VIT University, Vellore – 632 014, Tamil Nadu, India (11-03-2016)
26. *Global Climate Change Issues* – Invited Lecture in National Conference on “Advances in Biological and Environmental Sciences (NCABES – 2016)” held on February 25 and 26, 2016 organized by the Department of Biology, The Gandhigram Rural Institute – Deemed University, Gandhigram – 624 302, Dindigul, Tamil Nadu, India.
  27. *Renewable Energy Resources – Sustainable tool for climate change mitigation* – Invited Lecture in DST sponsored 4<sup>th</sup> National Conference on “Emerging Trends and New Challenges in Biotechnology – Bioenergy: A Step Towards Sustainable Future (NCETNCB – 2016)” held on February 18-19, 2016 organized by the PG and Research Centre in Biotechnology, M.G.R College, Hosur – 635 109, Tamil Nadu, India (19-02-2016)
  28. *Environmental Quality and Public Health* – Invited Lecture in National Conference on “Public Health and Hygiene (NCPHH – 2016)” held on February 04-05, 2016 organized by the PG and Research Department of Zoology, Periyar Government Arts College, Cuddalore – 607 001, Tamil Nadu, India (05-02-2016)
  29. *Influence of climate change on biodiversity resources* – Invited Lecture in National Seminar on “Biodiversity of Microbes and Climate Change Mitigation” held on February 03-05, 2016 organized by the Research and PG Department of Botany, Catholocate College, Pathanamthitta – 689 645, Kerala, India (03-02-2016)
  30. *Issues of Global Climatic Changes* – Invited Lecture organized by Biological Science Association and Eco-Club at Sri Sarada College for Women (Autonomous), Salem – 636 016, Tamil Nadu, India (13-01-2016)
  31. *Remediation Technologies* – Invited Lecture in National Workshop on “Nanotechnology for Biologists” held on January 06-08, 2016 organized by Department of Zoology, School of Life Sciences, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu, India (08-01-2016)
  32. *Remediation of metal contaminated soils using phytotechnologies – From lab to field* – Invited Lecture in DST sponsored National Seminar on “Research Trends in Plant Sciences and its Societal Impact” held on January 05-06, 2016 organized by Department of Botany, PSGR Krishnammal College for Women, Coimbatore – 641 004, Tamil Nadu, India (05-01-2016)
  33. *Phytotechnologies for management of metal contaminated soils* – Invited Lecture in One Day National Level Seminar on “Emerging Trends in Biosciences” held on December 08, 2015 organized by PG & Research Department of Zoology, Kongunadu Arts and Science College, Coimbatore – 641 029, Tamil Nadu, India (08-12-2015)
  34. *Global environmental issues with special reference to climate change* – Invited Lecture in the 110<sup>th</sup> Orientation Programme held on November 25, 2015 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (25-11-2015)

35. *Phytomanagement of metal contaminated soils* – Invited Lecture in the Department of Botany, Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (19-10-2015)
36. *Ecoinformatics* – Invited Lecture in the Department of Bioinformatics, Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (19-10-2015)
37. *Influence of climate change on faunal biodiversity* – Invited Lecture in the 109<sup>th</sup> Orientation Programme held on September 12, 2015 organized by UGC - Human Resource Development Centre (HRDC), Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India (12-09-2015)
38. *Innovation in Education* – Invited Lecture in the Inaugural Function of PG Programme at Padmavani Arts & Science College for Women, Salem – 636 011, Tamil Nadu, India (10-07-2015)
39. *Climate change on faunal biodiversity resources: Threats and Challenges*– Invited Lecture in the National Seminar on “Biodiversity and Conservation: Present Status and Future Perspectives” held on February 12-13, 2015 organized by Department of Zoology, St. Xavier’s College (Autonomous), Palayamkottai – 627 002, Tamil Nadu, India (13-02-2015).
40. *Climate change impacts on water scarcity and food security: Threats and Challenges*– Invited Lecture in the UGC sponsored One Day National Seminar on “Water Management: A Solution for Urban and Rural India” held on October 17, 2014 organized by Government College for Women, Mandya – 571 401, Karnataka, India (17-10-2014).
41. *Heavy metal accumulation in paddy soils and its transfer to different rice varieties in Northwestern zone of Tamil Nadu, India* – Invited Lecture in 2<sup>nd</sup> International Conference on “Contaminated Land, Ecological Assessment and Remediation (CLEAR 2014)” held on October 05-08, 2014 organized by Kangwon National University, Chuncheon, Korea (07-10-2014).
42. *Phytoremediation technologies with successful field trials in contaminated environments* – Invited Lecture in the UGC & WWF-India sponsored National Seminar on “Biovision 2014 – Recent Trends and Future Perspectives of Biosciences” held on September 05-06, 2014 organized by Department of Zoology & Botany, Arumugam Pillai Seethai Ammal College, Thirupatur, Tamil Nadu, India. (06-09-2014).
43. *Influence of climate change on water scarcity and food production* – Invited Lecture in the National Seminar on “Water Crisis – The Challenges Ahead of Global Governance WC-CAGG 14” held on August 27-28, 2014 organized by Post Graduate & Research Department of Chemistry, PSGR Krishnammal College for Women, Peelamedu, Coimbatore – 641 004, Tamil Nadu, India (28-08-2014).
44. *Renewable energy status in India: An overview* – Plenary Lecture in the National Workshop on “Renewable Energy Sources: Indian Scenario (NWRES -14)” held on August 22, 2014 organized by Department of Civil Engineering, K.S. Rangasamy College of Technology, Tiruchengode, Namakkal, Tamil Nadu, India (22-08-2014).
45. *Urbanization impact on faunal biodiversity resources and strategic conservation action plans* – Lead Lecture in UGC-CPE Sponsored National Seminar on “Impact of Urbanization in Biota and the Role of Governmental and Non-Governmental

- Organizations in their Conservation” held on August 01, 2014 organized by Department of Zoology & Genetics, Government Science College, Bangalore – 560 001, Karnataka, India (01-08-2014).
46. *Phytoremediation: An innovative eco-friendly technology for remediation of contaminated environments* – Invited Lecture in UGC Sponsored National Level Conference on “Recent Innovation and Future Trends in Biology” held on July 24 and 25, 2014 organized by PG & Research Department of Botany, National College, Tiruchirapalli – 620 001, Tamil Nadu, India (25-07-2014).
  47. *Faunal biodiversity resources and strategic conservation action plans* – Special Lecture in the National Conference on “Modern Trends in Biodiversity Conservation and its Sustainable Utilization (NCBCSU - 2014)” held on July 17 and 18, 2014 organized by PG & Research Department of Botany, Periyar Arts College, Cuddalore – 1, Tamil Nadu, India.
  48. *Biofuels: Potential renewable energy source for sustainable environment* – Plenary talk in the Seminar on “Advanced Technologies and Innovations in Energy and Environment (ENERGY FEST ‘14)” held on March 28, 2014 organized by School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai – 625 021, Tamil Nadu, India. (28-03-2014)
  49. *Biofuels: A potential sustainable source of energy* – Plenary talk in the National Conference on “Recent Advances in New and Renewable Energy (RANRE-2014)” held on February 27, 2014 organized by Centre for New and Renewable Energy Studies (CNRES), Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (27-02-2014)
  50. *Phytoremediation Technologies: An overview* – Plenary talk in the National Conference on “Innovative Approaches in Biosciences” organized by Department of Microbiology, Sree Narayana Guru College, K.G. Chavadi, Coimbatore – 105, Tamil Nadu (26-02-2014)
  51. *Role of phytotechnologies for sustainable environmental management* – Plenary talk in the International Conference on “Environmental Technology and Sustainable Development: Challenges & Remedies (ET & SD 2014)” organized by Department of Environmental Science, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow – 226 025, Uttar Pradesh (22-02-2014)
  52. *Conservation strategies of faunal diversity* – Plenary talk in the National Seminar on “Emerging Trends in Biodiversity Conservation and Sustainable Utilization (NSBCS)” organized by Department of Botany, Bharathiar University, Coimbatore – 641 046, Tamil Nadu (29-01-2014)
  53. *Faunal diversity and its conservation* – Plenary talk in the National Conference on “Current Trends in Biodiversity Conservation and Forest Management (CTBCFM 2014)” organized by Centre for Biodiversity and Forest Studies, Periyar University, Periyar Palkalai Nagar, Salem – 636 011, Tamil Nadu (07-01-2014)
  54. *Phytoextraction – a strategy for remediation of metal contaminated soils* – UGC Refresher Course in Environmental Studies (Multidisciplinary) organized by UGC Academic Staff College, Bharathiar University, Coimbatore – 641 046 (03-12-2013)

55. *Metal defense mechanisms in plants* – UGC Refresher Course in Life Sciences organized by UGC Academic Staff College, Bharathiar University, Coimbatore – 641 046 (02-12-2013)
56. *Plant Based Remediation Technologies: An overview* – UGC Refresher Course in Life Sciences organized by UGC Academic Staff College, Bharathiar University, Coimbatore – 641 046 (02-12-2013)
57. *Phytotechnologies for Sustainable Environmental Management* – Invited talk in the National Conference on “Heavy Metals in the Environment (HME 2013)” organized by School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala (29-11-2013)
58. *Phytoremediation – A way towards sustainable environmental management* – UGC Refresher Course in Environmental Studies organized by Department of Environmental Studies, School of Energy, Environment and Natural Resources and UGC Academic Staff College, Madurai Kamaraj University, Madurai – 625 021 (05-03-2013)
59. *Phytotechnologies for remediation of metal contaminated soils: An overview* – Plenary lecture in the “National Conference on Biotechnological Solutions for Sustainable Environmental Management” organized by Karnataka State Higher Education Council in association with Centre’s for Bioinformation/Bioscience and Innovation, Tumkur University, Tumkur, Karnataka (22-01-2013)
60. *Role of sulfur containing metabolites in plant metal stress tolerance* – Plenary lecture in the “International Conference on Anthropogenic Impact on Environment and Bioremediation” organized by Department of Zoology, Sri Venkateswara University, Tirupati, Andhra Pradesh (27-11-2012)
61. *Role of hyperaccumulators in phytoremediation* – Lead lecture in the State Level Seminar on “Environmental Pollution and Sustainable Development” organized by Department of Zoology, SVN College of Arts and Science, Nagamalai Pudukkottai, Madurai (02-04-2012)
62. *Metal defense mechanisms in plants* – UGC Refresher Course in Life Sciences organized by UGC Academic Staff College, Bharathiar University, Coimbatore – 641 046 (15-03-2012)



## Scientific Talks in Media

Talked to several Environmental Awareness topics in All India Radio, Coimbatore.

1. *Noise Pollution* (19.2.2001)
2. *Deforestation - An interview* (09.10.2000)
3. *Environmental hygiene and our task* (24.4.2000)
4. *Proliferation of industries and pollution in Coimbatore District* (25.10.1999)
5. *Effects of wastewater in environment* (12.7.1999)
6. *Environment threat to the globe* (16.11.1998)