



## **DR.S.MARIRAJ MOHAN**

Associate Professor

Government College of Engineering

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## **PROFILE**

### **Research Areas:**

Biological Treatment of wastewater; Air pollution monitoring and modelling; Physico-Chemical Treatment of water and wastewater.

### **To Potential PhD candidates:**

I have 5 PhD position in aforesaid research domain. Interested candidates can send their resume/CV to me and apply through proper channel..

### **EDUCATION:**

Ph.D. (Civil Engineering), Anna University, Chennai, Feb 2012.

M.E. (Environmental Engineering), College of Engineering, Guindy, Anna University, Jan 2002.

B.E. (Civil Engineering), Thiagarajar College of Engineering, Madurai, Apr 2000.

### **PROFESSIONAL EXPERIENCE**

Associate Professor, Government College of Engineering, Tirunelveli – 627007 Since Oct 2023

Associate Professor, Thanthai Periyar Government Institute of Technology, Vellore - 632002 since April 2023- Oct 2023

Assistant Professor, Alagappa Chettiar Government College of Engineering & Technology , Karaikudi-630003 from August 2006 to Apr 2023

Teaching Research Associate , Centre for Environmental Studies, Anna University, Chennai Sep 2003 – August 2006.

## TEACHING

### COURSES TAUGHT:

Environmental Engineering I (UG)

Environmental Engineering II (UG)

Environmental Engineering Laboratory (UG)

Biological Treatment of wastewater. (PG)

Air Pollution and Control (PG)

Unit operation and Unit process laboratory (PG)

## RESEARCH ACTIVITIES

### PUBLICATIONS

#### Journal Papers:

1. **S.Mariraj Mohan**, S.Nagalakshmi, “Enhanced membrane fouling control in a Hybrid membrane bioreactor with coarse and fine pore sponge pre-filters”, Environmental Engineering Research, Vol 29(2),2024, <https://doi.org/10.4491/eer.2023.154>; eISSN:2005-968X, pISSN : 1226-1025
2. **S.Mariraj Mohan**, T.Swathi, “Evaluation of the effect of copper on the restart of a novel combined two-stage anaerobic digester”, Water and Environment Journal, ISSN:1747-6593 Accepted for publication
3. S.Nagalakshmi, **S.Mariraj Mohan**, “Enhanced membrane fouling control through Self Forming Dynamic Membrane and sponge-wrapped membrane: A Novel membrane bioreactor”, Water Environment Research, e-ISSN:1554-7531, Vol 95(4),2023.<https://doi.org/10.1002/wer.10861>
4. **S.Mariraj Mohan**, T.Swathi, “ Enhanced degradation of the substrate using modified upflow anaerobic sludge blanket reactor-static granular bed reactor series with varying hydraulic retention time in lab-scale”, Journal of Environmental Engineering, Vol.149(1),2023 ASCE publication, 10.1061/(ASCE)EE.1943-7870.0002079
5. N.Dharsika, S.Amal Raj, **S.Mariraj Mohan**, “Evaluation of the factors affecting hydrodynamic characteristics of a hybrid anaerobic baffled reactor”, Current Science, Vol.124(2), 2023, pp. 176-182, ISSN: 0011-3891. doi: 10.18520/cs/v124/i2/176-182

6. **S.Mariraj Mohan**, S.Nagalakshmi, “Performance evaluation of membrane bioreactor coupled with self-forming dynamic membrane”, Journal of Environmental Management, Vol 322, 2022, Article no:116107;ISSN 0301-4797, <https://doi.org/10.1016/j.jenvman.2022.116107>
7. **S.Mariraj Mohan**, T.Swathi, “Enhanced biogas production and substrate degradation through the intermittent operation of modified upflow anaerobic sludge blanket-Static Granular bed reactor series”, Water Environment Research, e-ISSN:1554-7531, Vol.94(8),2022. <https://doi.org/10.1002/wer.10775>.
8. N.Dharsika, S.Amalraj, **S.Mariraj Mohan**, “Hydrodynamic behavior and treatment performance of the hybrid anaerobic baffled reactor”, Desalination and Water treatment, Vol 268, Aug 2022,pp.1-11,ISSN Print 1944-3994, ISSN online1944-3986. doi: 10.5004/dwt.2022.28720
9. **S.Mariraj Mohan**, T.Swathi, “A review on upflow anaerobic sludge blanket reactor: Factors affecting performance, modification of configuration and its derivatives”, Water Environment Research, e-ISSN:1554-7531, Vol 94(1),2022. <https://doi.org/10.1002/wer.1665>.
10. **S.Mariraj Mohan**, S.Nagalakshmi, “A review on aerobic self-forming dynamic membrane bioreactor: Formation, performance, fouling and cleaning”, Journal of Water Process Engineering, Vol 37, 2020,Article No.101541: ISSN:2214-7144,<https://doi.org/10.1016/j.jwpe.2020.101541>
11. L.M.Lalitha. **S.Mariraj Mohan**, “Performance Evaluation of Multibed adsorbent on removal of Hexavalent Chromium through various Kinetic Models”, Journal of Environmental Engineering and Landscape Management, Vol.26(4),2018, pp.285-298.ISSN:1648-6897;DOI :<https://doi.org/10.3846/jeelm.2018.6269>
12. **S.Mariraj Mohan**, “Vermicomposting of Papermill Sludge with *Eisenia fetida* for its conversion to Nutrient using different Seed Materials”, Journal of Institution of Engineers (India): Series A, Vol. 98(4),2017,pp.545-553, Springer.ISSN:2250-2149 (Bagged Prof.R.C.Singh Prize)
13. **S.Mariraj Mohan**, “An overview of particulate dry deposition: measuring methods, deposition velocity and controlling factors” International Journal of Environmental Science and Technology, Vol.13(1) 2016 pp.387-402, Springer.ISSN:1735-1472
14. R.Renuka, **S.Mariraj Mohan**, S.Amalraj, “Hydrodynamic behavior and its effects on the treatment performance of panelled anaerobic baffle-cum filter reactor” International Journal of Environmental Science and Technology, Vol.13(1) 2016 pp.307-318, SpringerISSN:1735-1472

15. R.Renuka, **S.Mariraj Mohan**, S.Amalraj, B.Sowmiya, "Performance evaluation of panelled anaerobic baffle-cum-filter reactor in treating municipal wastewater" *Ecological Engineering*, Vol. 97, pp.1-12, (2016) Elsevier.ISSN:0925-8574
16. R. Renuka, **S.Mariraj Mohan**, Sowmiya.B, Amalraj,S, "Performance and Characteristics of Panelled Anaerobic Baffle Cum Filter Reactor" *Asian journal of microbiology, biotechnology and Environmental Science*. Vol.17(3), (2015) pp 729-734 EM International.ISSN:0972-3005
17. **S.Mariraj Mohan**, "Biodegradation of garden waste, market waste using *Eisenia fetida* & *Eudrius Eugenia* and assessment of manure quality on Tomoto" *Journal of The Institution of Engineers(India):Series A* Vol 95 (2), 2014, pp 75-82, Springer.ISSN:2250-2149
18. **S.Mariraj Mohan**, "Use of naturalized coagulants in removing laundry waste surfactant using various unit processes in lab-scale", *Journal of Environmental Management*. Vol 136, 2014, pp 103-111, Elsevier.ISSN:0301-4797
19. **S.Mariraj Mohan**, "Simultaneous Adsorption and biodegradation process in a SBR for treating waste water containing Heavy Metals", *Journal of Environmental Engineering*, Vol 140(4),2014, ASCE publication CID No- 04014008-1-04014008-8.ISSN:0733-9372
20. **S.Mariraj Mohan**, and K.Hafsa, "Biodegradation of Food waste and raw vegetable peels through composting and vermicomposting using sp. *Eudrilus Eugeniae*", *The Journal of Solid Waste technology and management*, Vol 39(1), pp. 25-34, Feb 2013.ISSN:1088-1697
21. **S.Mariraj Mohan**, P.Vanalakshmi,.. "Assessment of water quality in Noyyal river through Water Quality Index", *International Journal of Water resources and Environmental Engineering*, Vol. 5(1), pp 35-48, Jan 2013.ISSN: 2141-6613
22. **S.Mariraj Mohan**, "Comparative Study of rice straw and ragi straw for the inhibition of Algal Bloom in fresh water", *International Research Journal of Biological Sciences*, Vol 1 (6), pp 31-37, Oct 2012. ISSN 2278-3202
23. **S.Mariraj Mohan** and K.Rajagopal, "Development of dry deposition velocity model for a typical medium level Indian city Karaikudi", *International Journal of Environmental Engineering*. Inderscience Publishers, Vol 4, Nos 1/2, 2012, pp 145-168. DOI :10.1504/IJEE.2012.048099.ISSN:1756-8463
24. **S.Mariraj Mohan** and K.Rajagopal, "Spatial and Seasonal Variation of Sulphur dioxide Concentration in Karaikudi", *Journal of The Institution of Engineers (India)*, Vol. 90, pp. 30-36, 2010.ISSN:0251-110X

25. **S.Mariraj Mohan** and K.Rajagopal, “Dry deposition flux of atmospheric particles and its Concentration in Karaikudi”, Journal of The Institution of Engineers (India), Vol. 89, pp. 3-8, 2008. ISSN:0251-110X
26. **S.Mariraj Mohan**, “Development of Dissolved oxygen model and estimation of water quality in Noyyal river”, International Journal of Environmental Pollution Control and Management, Vol 4, No.1, pp 39-55. 2012, ISSN 0975-3842.

#### Conference papers:

S.Kaliappan, S.Mariraj Mohan, “Influence of Tannery Effluent on Engineering Characteristic of Fine Grained Soil”, An International Conference on Geo- Environmental Engineering, 9-10 DEC 2003,Singapore

#### Awards

“Prof.R.C Singh Prize from Institution of Engineers (India)” (2017) - @ Udaipur, India.

#### Online Courses Attended

S.No	Name of the course	Organiser	Duration	Credit
1.	Solid and Hazardous Waste Management	UGC	July-October 2019. (16 weeks)	4 credit course
2.	Water Supply Engineering	NPTEL	Jan-Apr 2020 (12 Weeks)	Topper 5%
3.	Pedagogical Innovations And Research Methodology	AICTE	Oct2019-Jan2020	16 weeks
4.	Ecology and Environment	NPTEL	Sep-Nov 2020 (8 Weeks)	Topper 5%
5.	Bioreactor design and Analysis	NPTEL	Jan-Mar 2021(8 Weeks)	Topper
6.	Water and Wastewater5. Treatment	NPTEL	Jan- Apr 2021 (12 Weeks)	Topper
7.	Air Pollution and Control	NPTEL	Jan- Apr 2022(12 Weeks)	Topper 1 %

## **OUTREACH ACTIVITIES**

### **Seminars/Workshop/Conferences Organized**

Organized TEQIP II Sponsored National Conference on “Recent Trends in Environmental and Structural Engineering” held on 08/05/2015 at ACGCET, Karaikudi.

Organised TEQIP II Sponsored International Conference on Recent Developments in Civil and Environmental Engineering’16 held from 24/10/2016 to 25/10/2016 at ACGCET , Karaikudi .

### **Invited Talk:**

1. Two Day Virtual National Conference on Recent Advances in Civil Engineering Infrastructure (rACEi-2021) 30th & 31st July, at ACE Engineering College, Hyderabad

## **ADMINISTRATIVE ACTIVITIES**

### **Institute Level**

**NSS Program Officer from 2015 to 2018 at ACGCET , Karaikudi**

### **Department Level**

Faculty Advisor - 2008,2010,2014,2016,2018,2020 - M. E. Environmental Engineering at ACGCET, Karaikudi

Faculty Advisor - (2017-2021) B.E. Civil Engineering

## **STUDENTS**

### **PhD students: Thesis Submitted**

T.Swathi (2023) Experimental Studies on Combined Modified Upflow Anaerobic Sludge blanket Reactor- Static Granular Bed reactor series in Treating Wastewater

S.Naga Lakshmi (2023) Performance Evaluation of Modified Membrane Bioreactor for Treating Synthetic Wastewater