Name: **Prashant R. Thawale**

Designation **Senior Technical Officer (2)**

Qualifications:

Ph.D.(Soil Science and Agriculture Chemistry)
M.Sc. (Agricultural Chemistry and soil science)

Division: **Environmental Biotechnology and Genomics Division**

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Research area/ Specialization:

- Land treatment of industrial and municipal wastewater using High Rate Transpiration System (HRTS)
- Reclamation and rejuvenation of metal contaminated soil
- Phytoremediation/Bioremediation of degraded lands/ mine spoil dump using Integrated Biotechnological Approach
- Environmental biotechnology: Process development regarding bioremediation of wastes generated by various Industries.
- Phyto-distillation of wastewater

Major project handled:

1.	Metrology in Science & Technology "MIST" : Preparation of reference materials of Cr & Pb in soil matrix
2.	Engineering of Disaster Mitigation and Health Monitoring for Safe & Smart Built Environment (EDMISSIBLE)" : Bio-engineering - A phytoremediation option for the mitigation of landslide and slope stability problems in the hilly regions
3.	Integrating Bio-Treated Wastewater with Enhanced Water Use Efficiency to Support the Green Economy in EU and India (WATER4CROPS)
4.	Land treatment and disposal of effluent from Mahindra Vehicle Manufactures Ltd (MVML), using high rate transpiration rate system.
5.	Long Term Impact Assessment Study for High Rate Transpiration System (HRTS) at M/S Orient Paper Mills, Amlai, Shahdol, Madhya Pradesh.
6.	Ecological Restoration of Palaspani : Manganese Mine Spoils at M/s. Krishana Ping Alloys Ltd.,Sausar, Madhya Pradesh.
7.	Feasibility Studies for Decontamination of abandoned Lagoons using phytoremediation approch at M/s. Jubilant Life Sciences Ltd., Pune, Maharashtra.

Publication:

1) Shingare, R. P., Thawale, P. R., Karthik Raghunathan, Mishra, A., & Kumar, S. (2019). Constructed wetland for wastewater reuse: Role and efficiency in removing enteric pathogens. Journal of environmental management, **246**, 444-461.
2) Shingare, R. P., S. V. Nanekar,Thawale P.R. et al. (2017). "Comparative study on removal of enteric pathogens from domestic wastewater using Typha latifolia and Cyperus rotundus along with different substrates." International journal of Phytoremediation **19**(10): 899-908.
3) Kadaverugu, R., R. P. Shingare, Thawale P.R et al. (2016). "The role of sand, marble chips and Typha latifolia in domestic wastewater treatment–a column study on constructed wetlands." Environmental Technology **37**(19): 2508-2515.
4) Thawale, P. R., R. Karthik, et al. (2015). "Characterisation of soil irrigated with pulp and paper mill wastewater for variation in physico-chemical, biological and enzymatic properties." International Journal of Environmental Technology and Management **18**(3): 207-217.
5) Singh, S. K., P. R. Thawale, et al. (2015). Carbon sequestration in terrestrial ecosystems. Hydrogen Production and Remediation of Carbon and Pollutants, Springer**:** 99-131.
6) Juwarkar, A. A., L. Singh, Thawale P.R et al. (2015). "Natural vs. reclaimed forests–a case study of successional change, reclamation technique and phytodiversity." International Journal of Mining, Reclamation and Environment **29**(6): 476-498.
7) Thawale, P. R., R. Karthik, et al. (2014). "Land Capability Classification for Agro-economic Evaluation of Mahadayi Dam, Karnataka, India." Journal of Agricultural Engineering and Biotechnology **2**(4): 63.
8) Thawale, P., T. Ghosh, et al. (2012). "Agro-economic Evaluation of Water Resource Project–A Modeling Approach." Environmental monitoring and assessment **184**(4): 2575-2591.
9) Wakode, R., A. A. Juwarkar, Thawale P.R et al. (2011). "Effect of gypsum on moisture availability in vertisols under soybean gram sequence." Techical Journal of Engineering and Applied Sciences **1**(3): 73-85.
10) Thawale, P. R., S. K. Yadav, et al. (2011). "Monitoring colour and COD removal capacity of soil and assessment of growth performance of crop grown with pulp and paper mill waste water: A lysimeter study." International Journal of Environmental Engineering **3**(2): 146-163.
11) Thawale, P. R., R. Karthik, et al. (2011). "Pulp and paper mill wasterwater: can it solve the irrigation water scarcity problem." Tech. J. Eng. App. Sci **1**(1): 1-9.
12) Thawale, P. R., S. S. Babu, et al. (2011). "Biochemical changes in plant leaves as a biomarker of pollution due to anthropogenic activity." Environmental monitoring and assessment **177**(1-4): 527-535.
13) Juwarkar, A. A., A. O. Varghese, Thawale P.R et al. (2011). "Carbon sequestration potential in aboveground biomass of natural reserve forest of Central India." International journal of agriculture: Research and Review **1**(2): 80-86.
14) Yadav, S. K., P. R. Thawale, et al. (2010). "Phytoremediation technology for wastewater treatment: high rate transpiration system." International Journal of Environment and Pollution **43**(1-3): 117-128.

15) Juwarkar, A. A., S. K. Yadav, Thawale P.R et al. (2010). "Biotechnological approach for ecosystem restoration of mine spoil dump in India." International Journal of Environment and Pollution **43**(1-3): 251-263.
16) Yadav, S. K., A. A. Juwarkar, Thawale P.R et al. (2009). "Bioaccumulation and phyto-translocation of arsenic, chromium and zinc by Jatropha curcas L.: impact of dairy sludge and biofertilizer." Bioresource Technology **100**(20): 4616-4622.
17) Juwarkar, A. A., S. K. Yadav, Thawale P.R et al. (2009). "Developmental strategies for sustainable ecosystem on mine spoil dumps: a case of study." Environmental monitoring and assessment **157**(1-4): 471-481.
18) Kumar, G. P., S. K. Yadav, Thawale P.R et al. (2008). "Growth of Jatropha curcas on heavy metal contaminated soil amended with industrial wastes and Azotobacter–A greenhouse study." Bioresource Technology **99**(6): 2078-2082.
19) Singh, S. K., A. A. Juwarkar, Thawale P.R et al. (2007). "Mitigation Studies on Utilization of Biologically Treated Distillery Wastewater through High Rate Transpiration System." Sustainable Resource Management **2**: 80.
20) Thawale, P. R., A. A. Juwarkar, Thawale P.R et al. (2006). "Resource conservation through land treatment of municipal wastewater." Current Science: 704-711.
21) Gajghate, D. G., P. R. Thawale, et al. (2005). "Ambient respirable particulate matter and toxic metals in Kolkata City." Bulletin of environmental contamination and toxicology **75**(3): 608-614.
22) Juwarkar, A. A., A. S. Juwarkar, Thawale P.R et al. (2002). "Land Treatment and Disposal of Wastewater-An Ecofriendly Management Approach." Ecology of polluted waters **1**: 185.
23) Thawale, P. R., A. S. Juwarkar, et al. (1999). "Lysimeter studies for evaluation on changes in soil properties and crop yield using wastewater." International Journal of Tropical Agriculture **17**(1/4): 231-244.
24) Juwarkar, A. S., P. R. Thawale, et al. (1995). "Sustainable crop production through Integrated Plant Nutrition System: Indian experience." RAPA Publication (FAO).
25) Juwarkar, A. S., P. R. Thawale, et al. (1994). Reclamation of coal mine spoil dump through integrated biotechnological approach. The impact of mining on the environment: problems and solutions.
26) Juwarkar, A. S., P. R. Thawale, et al. (1993). "Improvement in soil and mine spoil productivity through pressmud utilization." RAPA Publication (FAO).
27) Juwarkar, A. S., A. Shende, Thawale P.R et al. (1992). "Biological and industrial wastes as sources of plant nutrients." Fertilisers, organic manures, recyclable wastes and biofertilisers: 72-90.
28) Juwarkar, A. S., P. R. Thawale, et al. (1988). "Management of wastewater through crop irrigation–an ecofriendly approach." Ecotechnology for Pollution Control and Environmental Management. Karad, Environmental Media: 25-48.

Patents:

- Phyto-distillation of colored waste water to recover pure water. Juwarkar, A. A., Thawale, P. R, S.K. Singh, T. Chakraborti & Satish Wate. Filed in India, on 22 June 2015.
- Phyto-hydraulic system for treatment of wastewater. Thawale, Prashant Ramchandra, Raghunathan, Karthik, Purohit, Hemant Jyothiswarup. Filed in on Dated 25-Jul-2017 Ref. No. 0166NF2017

Achievements/Awards/honors:

- Received Diamond Jubilee Commemoration Medal in M.Sc., 1988-89
- Received Foundation Day Award, 1993 for conspicuous technical support for R&D excellence of the Institute during 1992-93
- Received Gold medal for best poster presentation on advanced technique of extraction of aromatic and essential oils at agrotech exhibition 2005-2006