Monthly News Letter
15th August 2022
Volume 2, Issue 5

Our Patrons : Pimpri Chinchwad Education Trust

Late. Shri. Shankarrao B. Patil
Founder President

Late. Smt. Lilatai Shankarrao Patil
Ex-President

Shri. D. P. Landge
Chairman

Smt. P. M. Bhosale
Vice Chairperson

Shri. V. S. Kalbhor
Secretary

Shri. S. D. Garade
Treasurer

Shri. H. S. Patil
Trustee

Shri. Dr. G. M. Desai
Ext. Director, PCET

Inside This Issue

Samvaad Editorial : Bioreactor Landfill for Solid Waste Landfill Management

All over the world, there is tremendous increase in the amount of Municipal Solid Waste (MSW) in the cities. Population increase, economic progress, expansion in urban areas, rapid industrial development and rising standards of living have all contributed to sharp rise in solid waste generation.

The problem of MSW Management (MSWM) has acquired alarming dimensions in India, especially over the last decade due to improper management of the solid waste. This has led to public health hazard, declining quality of urban environment, unaesthetic appearance, emission of green house gases etc. Pune, which is one of the next metropolis of Maharashtra, is facing similar problems. Ground water near the landfill site in Pune located at Urali devachi is polluted and there is a serious problem of frequent fires due to emission of methane. Odor nuisance and everyday hassles due to birds and few more serious problems.

The modern sanitary landfill is truly an important component of today's integrated solid waste management system. However, in order to advance in the field of solid waste management so as to cater forever-increasing demand of MSWM, new and innovative ways of managing solid waste disposal need to be continuously evaluated. One idea that has gained significant attention in the last few years is the "Bioreactor Landfill." The concept is seen as a way to significantly increase the extent of waste decomposition, conversion rates and process effectiveness over what would otherwise occur within the landfill. Other benefits include maximization of landfill gas (LFG) capture for environmental recovery projects; increased landfill capacity; improved opportunities for leachate treatment and storage; reduction of post-closure activities; and abatement of greenhouse gases.

Apart from being a good tool for effective management of MSW, bioreactor landfill also generates energy. This peculiarity of bioreactor landfill will be of utmost importance especially in the days of energy crisis on one hand, and challenges of MSWM on other hand in the state of Maharashtra. The application of landfill bioreactor technology is logical extension of the liquid treatment process. Technical challenges remain and must be addressed by the continued funding of large scale research project. In the near future, this approach to waste management may become the norm and sustainable landfill a reality.

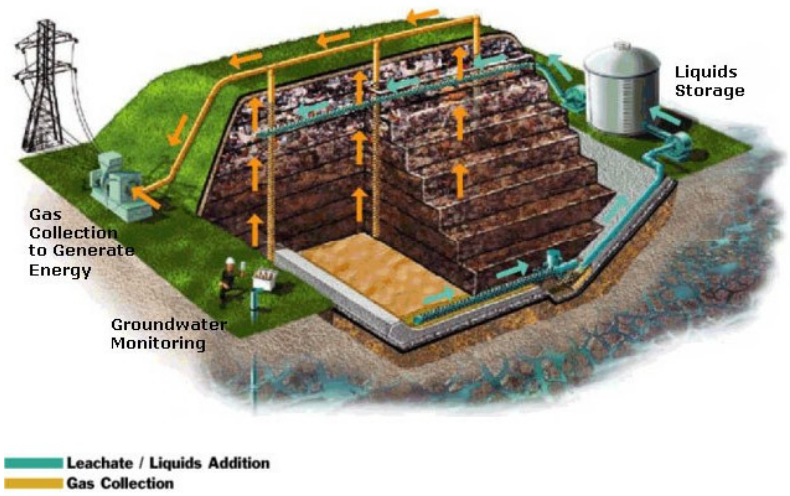


Figure - Facultative Bioreactor Landfill (Waste Management, 2000)

Dr. S. T. Mali

Professor and Head of Department ,

Civil Engineering, PCCoE.

Guest Article: HUMAN EXCRETA BASED MALAPRABHA DIGESTER – SUSTAINABLE SOLUTION TO OVERCOME FUEL CRISIS AS WELL AS WASTE MANAGEMENT ISSUES

ABSTRACT: In rural as well as urban areas, the existing waste management systems are lacking in the use of appropriate technologies and the percentage coverage of population is very low. The existing waste management systems are grossly inadequate while the arrangements in peri-urban and rural areas are either virtually nonexistent or hopelessly inadequate. Further, there is no coordination between the methodologies used for managing different kinds of wastes. Keeping in mind; the resource crunch and expected coverage of maximum possible percentage of population in low income urban, peri-urban and rural population, it is necessary to adopt methodologies appropriate to the situation, based on the following important parameters.

The suggested technologies should be non-conventional, appropriate, as low cost as possible technologies through which, as large a section of population as possible will have to be covered

Further, these technologies may be such that resource recovery is made possible by energy recovery, recycling and reuse.

The processes need to be decentralised and 'on site' as far as possible, so as to minimize waste carriage. Thus, these could be established even in isolated peri-urban areas and remote villages. In tropical countries, biological and biochemical process would be very suitable because of appropriate ambient conditions and low capital and maintenance costs.

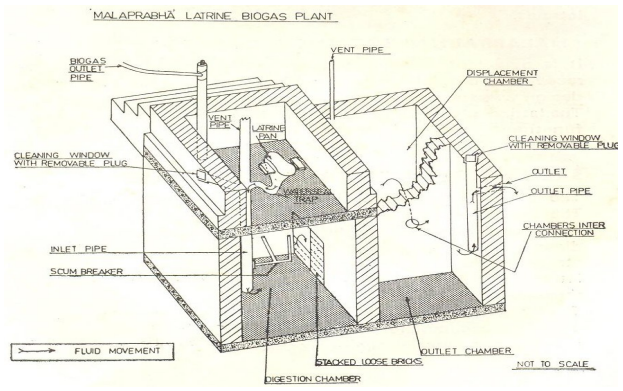
Malaprabha Digester ©

Malaprabha Digester has been developed by Padmashree Late Dr Suhas Viththal Mapuskar in the year 1981. It has been installed at many places, particularly in Rural and Peri Urban areas and for institutions. However the technology has tremendous scope in Urban Area as well. It basically comprises of 03 interconnected chambers, specially designed and constructed. The digester works on the principle of Anaerobic Digestion.

ADVANTAGES:

1. Maintenance of the plant can be easily managed by owner. It does not evoke any repulsive feeling.
2. Direct handling or carriage of nightsoil is not required at any stage.
3. Nightsoil is not exposed to surroundings it is fed directly to the plant. Hence insects and animals do not and animals do not get access to the nightsoil.
4. Aesthetically it is clean and odourless.
5. There is no contamination of surface soil or subsoil water. he effluent digested slurry is virtually free from diseased causing Organisms (Pathogens).
7. As it is harmless and hygienic. It is asset for community health.
8. It meets energy needs of the family through augmentation in fuel supply. Slurry is usable as manure.

Recently APSPTN has constructed one such Malaprabha Digester for a labour camp of 80 labours for a construction site in Lohgaon Area.



Dr. S. S. Shashtri,
Professor and Head of Dept. Civil Engg., Sinhgad College of Engineering , Vadgaon, Pune
(Director Technical, Appa Patwardhan Safai Wa Paryawaran Tantraniketan, Dehugaon, Pune)

Persistent Corner: Persistent completes Acquisition of MediaAgility

We now live in a cloud based era, where more and more businesses are migrating their on-premise infrastructure to cloud as time goes by. Hence it goes without saying that we must embrace cloud with open arms as it is already playing a big role in the corporate world.

Persistent recently acquired Princeton, New Jersey-based MediaAgility, a Google Cloud Premier Partner. MediaAgility has 31 Google Cloud Partner Expertise designations, 330+ Google Cloud certifications, and seven Google Cloud partner specializations.

Google Cloud is one of the top three cloud service providers with AWS at the top and Microsoft Azure behind AWS. The acquisition of MediaAgility lays the foundation for a dedicated Google business unit, which will help Persistent unleash their full potential across their client base.

Mr. Ritvik Bhavan
Lead Software Engineer

Other Initiatives

1. गेल्या तीन दशकांत शिक्षण क्षेत्रात स्वतःची अशी वेगळी ओळख निर्माण करणाऱ्या *पिंपरी चिंचवड एज्युकेशन ट्रस्ट अर्थात - PCET* ने सातत्याने नाविन्याचा ध्यास घेतला आणि त्याचा पुरस्कार केला .

PCET ट्रस्टने काळाबरोबर होत असलेले बदल अभ्यासून , काळाच्याही दोन पाऊले पुढे चालण्याचा नेहमीच प्रयत्न केला . त्याचाच एक मैलाचा महत्वपूर्ण टप्पा म्हणून *पिंपरी चिंचवड शहरातील पहिले कम्युनिटी रेडिओ चॅनेल - इन्फिनिटी 90.4 FM* ची घोषणा करताना PCET ला अंत्यत आनंद होत आहे .

केवळ पुस्तकी ज्ञानाबरोबरच , विद्यार्थ्यांच्या सर्वांगीण विकासासाठी PCET चे प्रत्येक इन्स्टिट्यूट कटिबद्ध असते . आपल्या इन्स्टिट्यूट मधील विद्यार्थी, शिक्षक व शिक्षकेतर कर्मचारी , माजी विद्यार्थी यांच्या सोबतच पिंपरी चिंचवड शहरातील नागरिकांच्या ज्ञान , कला व सुप्त कलागुणांना वाव देणे हा या कम्युनिटी रेडिओ स्थापना उद्देश आहे .

परस्पर संवादातून ज्ञानसंवर्धन व नव्या टेक्नॉलॉजीशी ओळख याबरोबरच हसत-खेळत शिक्षण अशी अनेक चांगली उद्दिष्टे या रिडिओ चॅनेलच्या माध्यमातून साध्य होणार आहेत .

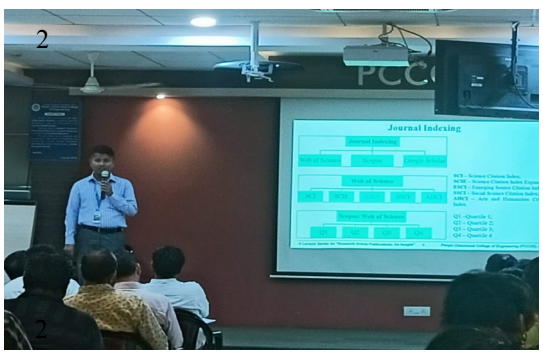
भव्य स्टुडिओ , रेकॉर्डिंग रूम अश्या तांत्रिक दृष्ट्या सुसज्ज असलेल्या इन्फिनिटी 90.4 आपल्या सेवेत दाखल आहे .

तेव्हा , ट्यून करायला विसरू नका

इन्फिनिटी 90.4 FM

पिंपरी चिंचवडचा पहिला कम्युनिटी रेडिओ https://youtu.be/cYxAakAr15I

2. **MISSION-1000**, organized by PCCoE R&D Facilitation Cell, a lecture series on "**Research Article Publication– An insight**" on every working Saturday. **Session 1: "Scopus and Web of Science—Relevant Perspective"**, on 30/07/2022 conducted by Dr. Rajkumar Patil, Asst. Prof. Mechanical Dept.



3. **ISR team of AS&H department** signed **MoU with "NFBM Jagriti School for blind girls"**. Under this many initiatives like: preparation of an innovative learning material which aids to facilitate for blind students' l for better earning and better understanding or comprehension of ideas.

PCCoE Technical Feat

1. Mr. Sagar Wankhede, Mr. Prajwal Thorat, Mr. Sanket Shisode, Mr. Swapnil sonawane, and Mr. Rugwed Wankhede published a research paper entitled, “A study of different battery thermal management system for battery pack cooling in electric vehicles” in the Heat Transfer Wiley online Library.
2. Dr. Rachana Patil delivered a lecture entitled, “Root Tracker- A proactive network forensic tool to support cybercrime investigation and evidence collection” in IEEE sponsored Faculty Development Programme on Research and Emerging Trends in Digital Forensics in Mumbai, India.
3. Dr. Amol Dhumane delivered a keynote talk entitled “Artificial Intelligence in Business” in International Conference on "Effectiveness of Artificial Intelligence in Business during Industry 4.0 Era" at St. Andrews Institute of Technology and Management, Gurgaon.
4. Dr. Manjiri Ranjanikar along with Dr S Goyal, Dr. J. Waghmare, Dr Upreti V. Kumar published a book entitled “Computer Organization and Architecture” bearing ISBN number 978-1-68576-315-2 . The book was published by INSC International Publishers.
5. Mr. Dikshant Kedare,Apoorva Jagdale and Mrs. Swati V. Patil published a research paper entitled, “Smart Driving Verification System” in the Shodhasamhita journal bearing ISSN no 2277-7067.
6. Dr. N. B. Chopade was invited as a referee for the Ph.D Thesis entitled, “Improving Efficiency of Cognitive Radio based networks using Spectrum Sensing Techniques” in Sant Gadge Baba Amravati University, Amravati and was invited to conduct Open Defence in the University on 22/07/2022.
7. Dr. N.B. Chopade worked as a subject expert on Board of Studies(Electronics Engineering) at Walchand Institute of Technology, Sholapur on 15/07/22.
8. Dr. A. K. Gaikwad and M Deshmukh published a research paper entitled, “Waste Water Management for Small Village” in YMER Digital, ISSN 0044-0477 in Volume 21 Issue 07(July 2022) (IF_ 0.10), University of Stockholm, Sweden,pp:997-1013. DOI:10.37896/YMER21.07/81.
9. Dr. A. K. Gaikwad and M Deshmukh published a research paper entitled, “Un-Interrupted Dispatching Schedule of RMC ” in YMER Digital, ISSN 0044-0477 in Volume 21 Issue 07(July 2022) (IF_ 0.10), University of Stockholm, Sweden,pp:1081-1089. DOI:10.37896/YMER21.07/88.
10. Dr. Sandip T. Mali published a book chapter entitled, “Waste to Bioenergy Perspective Through Life Cycle Inventory”, in Bio-Clean Energy Technologies Vol. 2, Clean Energy Production Technologies, Springer Nature Pvt. Ltd. 2022. ISSN 2662-6861, ISSN 2662-687X , DOI:10.1007/978-981-16-8094-6.

Faculty Achievements

1. Dr. K. Rajeswari was awarded the Innovative Technological Research & Dedicated Excellent Academician Award Specialization: Computer Science and Engineering by by The Society of Innovative Educationalist & Scientific Research Professional Chennai.
2. Dr. Sandip T. Mali, coordinated Baby Conference on ‘Waste Management and Recycling for Smart Cities’ with theme ‘The 3Rs of managing Solid Waste Reduce, Reuse, Recycle’ and organized by FYMTech. Civil (Construction Management) on 22nd July 2022, Twelve papers were presented in the conference. Sponsored by Aarsiddh Realities Pune and Kshirsagar Associates Pune.
3. Anita Devkar attended 5 Days Online FDP on “ Inculcating Universal Human Values in Technical Education” Organized by AICTE
4. Anita Devkar and Mukta Jamage attended online FDP on “Recent Trends in Computations” Organized by Department of Computer Engineering, VIT, Pune Maharashtra
5. Dr. D.S.Khurge received " Vidyabhushan Puraskar " from Mahakali Sikshan Sanstha , Wardha , Maharashtra for her Ph.D from Rashtrasant Tukdoji maharaj University Nagpur
6. Dr. D.S.Khurge is Elected as Member Board of studies at Indus University , Ahmedabad.

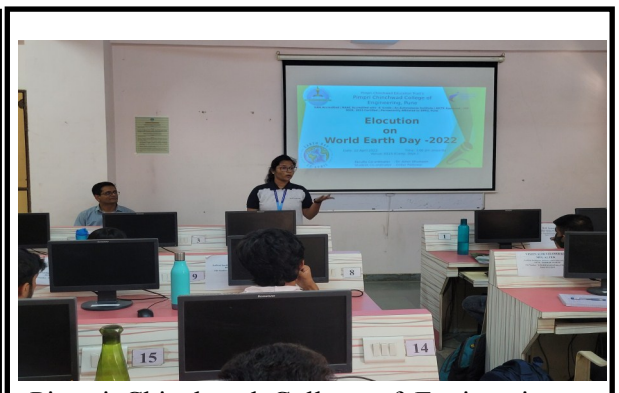
Students’ Achievements

1. Team Ambush, mentored by Prof. Ishan Sathone bagged the runner-up award for best sale and marketing team in SAFE TITAN. Heartiest Congratulations to Team Ambush and Prof. Ishan Sathone.
2. Team Automations qualified for the DD ROBOCON semifinal. Heartiest congratulations to Team Automation and best wishes for the next round.

Other Initiatives

The inauguration Ceremony of Embedded System Laboratory (PCCOE PUNE – E&TC Dept.) In association with Capgemini Engineering was held on Friday, 29/07/2022 at 10.30am in the presence of Dr. N. B. Chopade (Deputy Director, PCCOE), Dr. S. A. Rawandale (Dean III, PCCOE), Dr. M. T. Kolte (HOD, E&Tc,, PCCOE) and Mrs. Swati Jagtap (SPoC Capgemini) at the hands of Mr. Prasad Shetye (Executive Vice President Capgemini Engineering), Mr. Sanjeev Gupta (Vice President, ER&D, Capgemini Engineering), Mr. Ravindra Peerannawar (Program Manager, ER&D, Capgemini Engineering), Mr. Rahul Deshpande (Program Manager, ER&D, Capgemini Engineering), Mr. Rajesh Kosalram (Senior Director – Engineering), Mr. Mahesh Sawant (Senior Director - Project Management) and Mr. Dinesh Rode (Automotive, Capgemini Engineering).

Dr. Girish Desai-Executive Director PCET invited Hon. Dr. Vinay Sahasrabuddhe-President, ICCR, Ex-MP-Rajya Sabha for the PCCoE-IJBC Know Japan Event with Mr. Siddharth Deshmukh-President IJBC, Dr. Govind Kulkarni, Director PCCOE & Dr. Roshni Raut, Associate Dean International Relations.



Pimpri Chinchwad College of Engineering Pune celebrated the "**Earth Day**" in association with Ministry of Education and Institute Innovation Council (IIC).

PCCOE Pune had organized a Session on "**Out of Box Thinking for Problem Solving**" by Prof. V. Kamakoti- Director, IIT Madras.

PCCoE Ranking

PCCoE Announcement