

Curriculum Vitae

Prof. (Dr.) C.T. PUTTASWAMY. M Tech, Ph.D.
PROFESSOR

Department of Chemical Engineering.

**DIRECTOR – B.M.S. ENGINEERING CONSULTANCY
CENTRE (BMSECC)**

B.M.S. College of Engineering.

P.O Box No. 1908, Bull Temple Road, Basavangudi.

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D.O.B :01.06.1970



FELLOW & CHARTERED ENGINEER (IE(I))

Correspondance address

13, 1st Cross, 2nd Main Road, Gayathri Devi Park Extension, Vyalikaval,
Malleswaram, Bangalore–5600 03, Karnataka, India.

EDUCATION

Name of Course	Institute/University	Year of Passing	Remarks
Ph. D (Energy & Environment) <i>“Process Optimization & Ethanol production from Hemicellulose”</i>	Visvesvaraya Technological University – Belgaum. Karnataka	2017	-----
M. Tech – (“Industrial Pollution Control Engineering”)	NITK (Formerly KREC) Suratkal, Mangalore University	1998	First Class
B. E. (Chemical Engineering)	MSR Institute of Technology Bengaluru University	1994	First Class

AWARD/ACHIEVEMENT.

- 1. STATE ENVIRONMENTAL AWARD 2017-from Department of Forest, Ecology and Environment Govt. of Karnataka with citation and cash money of Rs. 1,00,000/- (One Lakh only) - Individual category.**
- 2. “EMINENT ENGINEER” Award conferred by “THE INSTITUTION OF ENGINEERS (I), Karnataka Centre on 15th September 2023 with citation.**

TECHING, RESEARCH & ADMINISTRATIVE EXPERIENCE.

Organisations	Designation	Period
Department of Chemical Engineering		
BMS College of Engineering	Professor & Director	–19 th June 2022 till date.
	BMS Engineering Consultancy Centre	
BMS College of Engineering	Professor	19 th June 2018 to till date.
BMS College of Engineering	Professor & Head	16 th January 2019-2 nd February 2022.
BMS College of Engineering	Associate Professor	31 st July 2010 to 18 th June 2018.
BMS College of Engineering	Assistant Professor	31 st July 2007 to 30 th July 2010.
BMS College of Engineering	Lecturer	11 th September 1999 to 30 th July 2007 (28.02.2000).

Objective: To Research, Administration, Advise and Teach/Guide Graduate Students of Chemical Engineering (BE) & Post. Graduate Students of Environmental Engineering (M.Tech) & Biochemical Engineering (M.Tech), subjects taught Viz.

Biochemical Engineering	Pilot Plant & Scale up Studies & Methods
Environmental Engineering	Operation Research
Chemical Equipments/ Bio Process Design & Drawing I & II	Chemical/Biochemical Process Calculations (CPC/BPC)
Process Equipment Drawing.	Advanced Wastewater Treatment.
Industrial Wastewater Treatment.	Solid & Hazardous Waste Management
Petroleum Engineering & Chemicals	Process Heat Transfer
Momentum Transfer/Fluid Mechanics	Bio-separation and Downstream processing
Chemical Plant Utilities and Safety.	Mechanical Operations
Wastewater Treatment & Engineering	Risk and Safety management in process industries.
Recycle & reuse of waste materials for sustainable development.	Solid waste management/Air pollution control and design of systems
Industrial safety and occupational health/hazard	Chemical process equipment and plant design
Introduction to Sustainable Engineering/Technology	Environmental Studies and Pollution Control Engineering.

INDUSTRIAL EXPERIENCE.

Sl. No.	Organization	Designation	Period
1	M/s. INDAVARA ENGINEERING CO. PVT. LTD. Bangalore	ENVIRONMENTAL ENGINEER	5 th June 1998 To 1 st September, 1999
2	M/s. PHOSPHATE PLASTICIZERS PVT. LTD. Bangalore	PRODUCTION ENGINEER	10 th May 1995 To 20 th July, 1996.
3	M/s. BANGALORE PETROCHEMICALS PVT. LTD. Bangalore.	TRAINEE ENGINEER– Production	1 st September 1994 To 1 st May, 1995

PATENTS

1. **“DEIGN OF BIO FERMENTER TO CONVERT BIOMASS TO ETHANOL”**
Patent application Publication No. 202341045426 A, Date of filling application 06.07.2023 and Publication date :01/09/2023.
2. **“Application for patent no. TEMP/E-1/70722/2023-CHE filed on dated 1st Day of September 2023 for the invention titled “LAB-SCALE ANAEROBIC GLOVES CHAMBER FOR FERMENTATION PROCESS”**

RESEARCH PUBLICATIONS IN NATIONAL/INTERNATIONAL/CONFERENCE JOURNALS.

Sl. No.	Author's Name	Title of the Paper	Name of Journal, year, volume and page.
1	C.T. Puttaswamy, L Uday Simha, K R Sree Harsha	“A case study of wastewater recycling plant at Southwestern Railways, Bangalore”	Journal of Indian Water Works Association, Page No 285-290, October-December 2009,
2	C.T. Puttaswamy, L. Udaya Simha, Vinay. R, Swathi. K. R, Rakesha. N. N	“Bench Scale Performance Study Of The UASB For The Treatment Of Biopharmaceutical Effluent.	International Conference COOLING THE EARTH Tactics for Restoring Climate Order and Saving the Living Planet November 15-17, 2010
3	L. Udaya Simha, Priya. V and C.T. Puttaswamy	“Effect Of Natural Coagulants On Water Quality Parameters	International Conference COOLING THE EARTH Tactics for Restoring Climate Order and Saving the Living Planet November 15-17, 2010
4	K R Sree Harsha, C. T. Puttaswamy, K S Lasya	“Process control by Automation of wastewater treatment facilities”	Journal of Institution of Public Health Engineers, India, Volume 2012-2013, November 3, Page 5-9
5	C.T. Puttaswamy, L Uday Simha, Roopa Subramanian	"Investigations of Natural Coagulants on Water Quality Parameters"	" International Journal of Earth Sciences and Engineering (IJEE), December-2013 Issue (Volume-06-issue-06(01)), Page No. 41-48. (IJEE);

			ISSN 0974-5904
6	C.T. Puttaswamy , K.R. Sree Harsha, Rohini.	“Common Effluent Treatment Plant Concept: A Novel Solution for Fish Meal and Oil Extraction Industries in Mangalore Karnataka”	STM Journals, Trends in Chemical Engineering, Volume 1, Issue 1, TCE (2014) 41-48 © STM Journals 28.04.2014
7	L Uday Simha, C.T. Puttaswamy , Krithika S, K R Sree Harsha	“Performance Evaluation of the Anaerobic Baffled Reactor in Treating Low and Medium Strength Wastewater”	Journal of Indian Water Works Association, India. Page No 57-65, April-June, 2014, ISSN 0970-275X, Vol. XXXXVI No.2
8	Nayak, C.A.; Usha, H.S.; Puttaswamy, C.T. ; Maitra, S	“Teaching methodology for attainment of graduate attributes”	IEEE International Conference on MOOC, Innovation and Technology in Education (MITE), Pages: 250 - 255, DOI: 10.1109/MITE.2014.7020282 (IEEE Conference Publications) Date of Conference: 19-20 Dec. 2014, Date Added to IEEE Xplore: 26 January 2015, INSPEC Accession Number: 14871583
9	C T Puttaswamy , L Udaya Simha, S Manjappa, Vinod Kumar C. S	“Enzymatic Depolymerisation of Hemicellulose into Arabinose and Xylose by Aerobic Bacteria”	International Journal of Engineering Research & Science (IJOER), Pages : 169-175, Volume –I, Issue-9, December 2015, ISSN 2395-96992.
10	C. T. Puttaswamy. , L Udaya Simha., S Manjappa., Vinod Kumar C. S	“Hydrolysis of Hemicellulosic Feed stocks by <i>Enterobacter species</i> in the production of bio-Ethanol”	International Journal of Current Microbiology and Applied Sciences, 10 th July 2016 5(7):716-724 DOI:10.20546/ijcmas.2016.507.082
11	C. T. Puttaswamy. , K R Sree Harsha., Rohini	“Waste to Energy: A Novel Concept of Producing Biogas”	Journal of the Institution of Public Health Engineers, India., ISSN-0970-3195, Page – 5-8, Volume XXXXIV, Number 3, October 2016.
12	C T. Puttaswamy. , Janhavi A Desai, L Udaya Simha & S Manjappa	“Carbon Dioxide Sequestration by mineral carbonation using steel slag and Construction & demolition waste”	Journal of the Institution of Public Health Engineering, India. Volume XXXXV, Number 2, July 2017. Page No. 12- 17, ISSN-0970-3195.
13	S. Mukherjee*, V. Parekha, C.T. Puttaswamyb	“Design and Fabrication of a Reactor for Alkaline Rich Mineral Waste Carbon Sequestration”	International Journal of Prevention and Control of Industrial Pollution. Vol. 3: Issue 2 (IJPCIP (2017) 1–15 © Journals Pub 2017)
14	C T. Puttaswamy ,	Bacteriophage as an	Asian Jr of Microbial. Biotech Env.

	Vinod Kumar C S	alternative to chlorine in sewage treatment plant to disinfect multidrug resistance bacteria present in hospital wastewater.	Sc. Vol. 21, No. (2): 2019: 246-255 @ global Science Publications, ISSN-0972-3005.
15	C T Puttaswamy , Vinayak Masali, L Udaya Simha	Treatment of Gelatine based industrial effluent with de-oiled groundnut cake as natural coagulant and ozonation	International journal of research and analytical reviews (IJRAR), Volume 7, Issue 1, February 2020, Page No. 500-504, E-ISSN 2348-1269, P-ISSN 2349-5138.
16	C T Puttaswamy , Aditi R, Aditi Sreenivas, Gayathri V and Grissel Myrtle Fernandes	Treatment of metal pickling effluent and recovery of the metal.	Global Journal of Science 7 engineering, Volume 03 (2020) 12-15, ISSN: 2322-2441, Impact Factor – 0.345 (2020), Article ID: GJSE-130
17	C T Puttaswamy , Aditi R, Aditi Sreenivas, Gayathri V and Grissel Myrtle Fernandes	Carbon dioxide capture using Graphene oxide membrane and its Usage	Global Journal of Science 7 engineering, Volume 03 (2020) 16-21, ISSN: 2322-2441, Impact Factor – 0.345 (2020), Article ID: GJSE-131
18	C T Puttaswamy , L Udaya Simha, Chetan A Nayak and Hari Prasad Uppara	Mineral Carbonation studies on construction & Demolition waste, electric arc furnace dust, and seashell powder	Under review for publishing.

Partial list of Technical advisory work completed from the 2016 onwards.

Sl. No.	Name of Company (year) (Rs.Lakhs)	Nature of work
1	M/s. RL fine chemicals Pvt. Ltd. Yelahanka (2014-2015) (1.0)	Environmental Management Plan (EMP) and audit & Safety and risk assessment.
2	M/s. Sai Life Science, Bidar (2014-15) (0.5)	EMP and audit with safety advise
3	M/s. Vivimed Laboratories Pvt. Ltd. Bidar (2015) (0.25)	Advisor to plant layout preparation
4	M/s. Coramandel Fertilizers Ltd, Hospet. (2015) (0.5)	Advisor
5	M/s. Wipro Ltd. Chennai (2015) (1.0)	STP design vetting
6	M/s. Shyammaraju and Company, Chennai Project (2016) (0.25)	STP design vetting
7	M/s. Siddapura Distilleries Ltd. (2017) (0.25)	EMP advise
8	M/s. Grasim industries Ltd, Kumarapattanam, Harihara (2018)	ETP adequacy report

	(1.0)	
9	M/s. Sai Life Science, Bidar (2018) (0.5)	EMP and audit with safety advise
10	M/s. Grasim industries Ltd, Kumarapattanam, Harihara (2018) (1.0)	ETP performance evaluation report
11	M/s. Karthik Agro industries Pvt. Ltd, Bagalkot, Karnataka (2018) (1.0)	ETP adequacy and performance report
12	M/s. Shilpa Medicare Ltd, Raichur. Karnataka. (2018) (1.0)	Assessment of Ecological damage
13	M/s. SLN Distilleries Pvt. Ltd, Dharwad, Karnataka. (2018) (1.0)	ETP adequacy and performance report
14	M/s. Ravindra & Co Ltd, Bidar, Karnataka. (2018) (1.0)	ETP adequacy and performance report
15	M/s. Jamkhandi Sugars Ltd (Distillery Division), Jamkhandi, Karnataka (2018) (1.0)	ETP adequacy and performance report
16	M/s. Shilpa Medicare Ltd, Raichur (2018) (1.0)	Environmental Damage Assessment and Remediation Plant
17	M/s. Kumar Organics Ltd (2019) (1.0)	Environmental Management Plan with optimization of Industrial water use
18	M/s. Bheema Fine Chemicals Ltd, Hyderabad (KKB Envirocare Pvt. Ltd. 2021, (0.75)	Plant layout design, Risk and safety Management.
19	M/s. Sashi Chemical, Hyderabad (2020) (1.5)	Process optimization and product development
20	M/s. Embassy REIT Pune (2022) (10.0)	Sustainable Development Management.
21.	M/s. Astragen Pharma Ltd (2022) (0.75)	Environmental Management Plan (EMP)
22.	Shilpa Pharma Life Science Ltd. Raichur (2022) (0.30)	Sodium Ferrite process development.
23.	Embassy Manyata Tech Park Pvt. Ltd (2022) (0.5)	STP performance study
24	M/s. eMpower Consultant Environmental Engineers, Bangalore (2023) (0.25)	Technical Service for Establishment of Grian Based Distillery at Hyderabad
25	Embassy REIT Pune (2023) (1.0)	Environmental Compliance with annual advise 2022-2023.
26	M/s. Shri Dadani Biofuels Pvt. Ltd, Rew District, Madhya Pradesh (2023) (0.25)	Design of Zero Liquid Discharge (ZLD) system and advise on its implementation of EMP
27	Mega Agro International, Plot No. B-19, SIPCOT INDUSTRIAL PARK, Gangaikondan Village, Tirunelveli District, Tamilnadu (2023) (0.75)	Safety and Risk assessment with Environmental Management Plant

28	M/s. Agastya Agro Lts, Plot No. 540/14, KIADB, Kadechur Industrial Area, Yadgir Talik and District, Karnataka (2023) (0.75)	Life cycle assessment for Technical Grade Pesticide products and Safety and Risk assessment with Environmental Management Plant
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Grants.

1. Global Initiatives of Academic Network Program funded by MHRD: “Energy Efficiency in Process Industries”, Amount Sanctioned: **Rs. 6 Lakhs**
2. One week ATAL-AICTE Faculty Development Program – “Technology Innovation: Wealth from Waste”, 23rd to 27th November 2020. **Rs. 2.5 Lakhs**

Affiliations to professional organizations.

Name of the Professional body	Grade of Membership	Membership number	Year of affiliation
Institution of Engineers (India)	Fellow IE (India)	F-1279242	2021
Institution of Engineers (India)	Chartered Engineer (India)	F-1279242	2021
Indian Institute of Chemical Engineers (IChE)	Life Member	LM-28247	2002
Indian Society for Technical Education (ISTE)	Life Member	LM-32807	2001
Indian water works association (IWWA)	Life member	LM-6315	2010
Indian public health engineering (I)	Life member	LM-	2010
Association of Environmental Auditors (regd)	Life Member	LM-1031	2003
ACHMM, India Chapter	Life Member		2008
Alliance of Hazardous Materials Professional	Life Member		2008

SEMINARS/EXPERT INVITED TALK/TECHNICAL PRESENTATIONS.

1. **“Environmental Regulations for Entrepreneurs”** at the Center of Bharatiya Marketing Development, Bangalore, November 2001.
2. **“Electroplating Effluent Treatment and Its management”** at Metal Finishers Associations of India, Bangalore, 1-day Workshop on May 10th, 2002.
3. Expert lecture at SJCE Mysore, **“Environmental Impact Assessment (EIA) for chemical industries and Green Buildings concepts”** Finishing school on “Environmental Impact Assessment” on 10th April, 2014.
4. Presented a paper titled **“EXTRACTION OF HEMICELLULOSIC PORTION OF LIGNOCELLULOSIC BIOMASS FOR BIOETHANOL PRODUCTION”** at AICTE Sponsored National seminar on recent research and developments in Civil Engineering during 27-28th, 2014 at Dr. Ambedkar Institute of Technology, Bangalore.

5. Expert Lecture on ***Health and Fire Safety in Laboratory*** during workshop June 5th – 9th 2017 Biomaterials in healthcare and Engineering. During 13th – 17th March 2017.
6. Invited talk on 11th January 2019. at the Symposium & Workshop at Global Academy of Technology, Bangalore Titled: ***“Roles and Responsibility of CPCB/KSPCB in E-Waste management & its Compliance.”***
7. Invited to deliver a talk on 18th January 2019, during the three-day faculty development program at Bapuji Institute of Engineering & Technology, Davangere, "Recent Trends in Environmental Impact Assessment-Proerspective and Procedures (RTEIA-PP). Titled topic: Environmental Management Plan ***“Case Study - Major Industries - Tannery and Pharmaceutical Industry”***
8. Expert lecture on ***“2G Bioethanol from Agriculture Resources”*** (Virtual) TEQIP-III, ISTE and IWWA sponsored one-week Faculty Development Program – GREEN ENERGY, between 29th June – 4th July 2020 at Dept. of Civil Engineering, BMS College of Engineering,
9. Expert lecture on 21.09.2021 ***“Environmental regulations in India – Environmental Impact Assessment Perspective”*** (Virtual) during the Five Day National level FDP for educators of Environmental Studies, 21-25 September 2020, Department of Chemical Engineering, JNTUA CEA Anantpur.
10. Expert lecture on 23.09.2021 ***“Innovative Wastewater Treatment Technologies”*** (Virtual) during the Five Day National level FDP for educators of Environmental Studies, 21-25 September 2020, Department of Chemical Engineering, JNTUA CEA Anantpur.
11. Expert lecture on 24.09.2021 ***“2G Bioethanol from Agriculture Resources”*** (Virtual) during the Five Day National level FDP for educators of Environmental Studies, 21-25 September 2020, Department of Chemical Engineering, JNTUA CEA Anantpur.
12. Expert Lecture on ***“Zero Pollution and 7Rs Rule for cleaner production, life cycle assessment with extender producer responsibility”***. Online Faculty Development Program - Technology Innovation: Wealth from Waste Five-day National Level ATAL FDP on Waste Technology: Wealth from Waste 23-27 November 2020, Department of Chemical Engineering, B.M.S. College of Engineering Bengaluru
13. Expert Lecture on ***“WEALTH DESTRUCTION WITH MARVEL INNOVATION & LOW COST”*** Online Faculty Development Program - Technology Innovation: Wealth from Waste Five-day National Level ATAL FDP on Waste Technology: Wealth from Waste 23-27 November 2020, Department of Chemical Engineering, B.M.S. College of Engineering Bengaluru.
14. Expert Lecture on Webinar on ***“Single Use Plastic & its adverse effect on our Ecological system and why we need to discourage its use”*** for Bharat Petroleum Ltd. Employees on 8th July 2022 at 3.30 PM to 5.00 PM.
15. Presented interactive technical talk on ***Metal Circularity, Critical Materials and E-Waste: A Wealth of Opportunities*** during the E waste awareness and collection drive program on 28.11.2022 at BMS College of Engineering.

Professional Training:

LEAD AUDITOR COURSE :

- ❖ Advanced EMS (Environmental Management Systems) Auditing Course for Quality & Environmental Professionals. Conducted by Marsden International – FICCI Quality Forum – EMPRI Course Reference: MI-1/0203/UK. India, dated 27th – 31st January 2003.
- ❖ 2 Months In-plant Training @ M/s. ION EXCHANGE (I) LTD, R & D Center. Ambernath, Thane, Maharashtra. (ION EXCHANGE (I) LTD. is engaged in the production of Cation & Anion exchange resins and also a division of water & wastewater management, during training period. I have undergone training in Pilot Plant, Quality Control Dept., Product Evaluation Dept., and Technology Department etc.)
- ❖ “Study of Heat Loads During fermentation in a Brewery & Design of a Fermenter Vessel “@ M/s. Mysore Breweries Ltd., Bangalore.
- ❖ **“Validation of CFD based Air Quality Model and its sensitivity analysis** “This Project work was Sponsored by Karnataka State Pollution Control Board, Bangalore)
- ❖ **“TEAMTECH EHSMASTER CLASS ON EHS AND SUSTAINABILITY REPORTING” 30-31st March 2023**

“Validation of CFD based Air Quality Model and its sensitivity analysis” This project has been taken up to validate the Computation Fluid Dynamics (CFD) based Software Air Quality Model for finding the Ground Level Concentrations (GLCs.) of air pollutants (SPM, RSPM, CO, SO₂ & NO_x) emitted by existing, Combination of existing and Proposed major industries of their dispersion phenomena at any location/place in the study area.

The CFD base air quality model is a 3-Dimensional Computer Software Package was used to predict the pollutants concentrations in the air over complex terrain. An attempt is made to study the sensitivity analysis with varying parameters that are insignificant to bring changes to the GLCs have been neglected and the model was Validated by observing the average GLCs of monitored and simulated GLCs respectively. Subsequently, the environmental impact has been estimated by a comparison of simulated pollutant concentrations with the standards stipulated for the same pollutants (SPM, RSPM, CO, SO₂ & NO_x).

Expertise :

- a. Environmental Impact Assessment/Rapid Environmental Impact Assessment Studies (EIA/REIA)
- b. Design and Development of Water, Wastewater Treatment Plant.
- c. Environmental Quality Monitoring, Modeling, Validation & Analysis
- d. ISO EMS – 14000 Certified Lead Auditing.
- e. Solid & Hazardous Waste management.
- f. Air Pollution Control Equipment Design and its Management.
- g. Urban Planning.
- h. Thermal Design of Building Envelops with Green Building Concepts.
- i. Industrial Safety and Risk Assessment.
- j. Life cycle assessment of consumer products and pesticides.

Service Rendered:

Environmental Technical advisor freelancer decade and has provided comprehensive solutions for various pollution control related issues of various industries which includes Milk Processing Units, Pharmaceutical Industries, Herbal Extraction Units, Electroplating Dyeing Units Hot Dip Galvanizing units etc.

Technical services provided for industries include preparation of Rapid Environmental Impact Assessment Reports (REIA), Environmental Management Plans (EMP), Onsite Emergency Plans and Techno-commercial Feasibility studies for establishment of Wastewater/Effluent Treatment Plants and Air pollution/fume extraction systems, Solid Waste Management & Disposal and Hazardous waste management issues. Risk Assessment and Safety audits for Drug and Intermediate industries

Carried out Environmental Impact Assessment/Rapid Environmental Impact Assessment (EIA/REIA) studies for various Industries, Residential and Construction, Development Projects.

Design of Water, Wastewater/Effluent Treatment Plants for various Industries and Construction/Development projects from concept to commissioning (Turnkey Project: Design, Development, Construction, Installation, Commissioning, Operation & Transfer)

Partial Industrial Projects involved as Technical Advisor earlier 2016

- ✓ Successfully designed and established Oil Water Separation System for M/s. Bharat Electronics Jalahalli Bangalore which was first of its kind in BEL to separate oil and other physical impurities from Bus Wash Water to reuse treated water for Bus Washing.
- ✓ Designed and Established 250 M³/Day Capacity Effluent Treatment Plant for M/s Eastern Silk Industries Anekal, Bangalore.
- ✓ Designed and Established 50 M³/Day Capacity Electroplating Effluent Treatment Plant for M/s Proseal Closures Ltd Anekal Bangalore
- ✓ Designed and Established 250 M³/Day Capacity Effluent Treatment Plant for M/s Dhanvantri Botanicals Malur, Karnataka.
- ✓ Advisor for Operation and Maintenance of 1 MLD Capacity water recycling plant for M/s. Southwestern Railways Bangalore.
- ✓ Preparation of Environmental Impact Assessment (REIA) for M/s. Proseal Closures Ltd Anekal.
- ✓ Preparation of EIA studies for M/s. Karnataka Chemsyn Ltd Jigani
- ✓ Environmental Compliance Studies for M/s. Essilor Industries Doddabalapur
- ✓ Environmental Management Studies for industries of M/s. Veerasandra Industrial Estate Bangalore.
- ✓ Compliance Studies for M/s. Muradeshwara Ceramics M/s. Naveen Hotels at Muradeshwara. Coastal Regulation Zone (CRZ) Project.
- ✓ Preparation of EIA studies for Kalyani Steels Limited, Koppal, Karnataka.
- ✓ Preparation of EIA Studies for Sai Adventium, Bidar.
- ✓ Preparation EIA Studies for Vivimed Labs Limited, Bidar.
- ✓ Preparation of EIA Studies for Raichem Limites Raichur.
- ✓ Preparation of EIA Studies for Biogen Extracts Limited, Bangalore.
- ✓ Preparation of EIA Studies of the proposed expansion of Pipavav Port, Gujarat

- ✓ Preparation of EIA Studies for Sri Basaveswara Sugars Ltd. Bijapur.
- ✓ Preparation of EIA Studies for M/s. RL Fine Chem Pvt. Ltd. Gowribidanur.

Rapid Environmental Impact Assessment Studies (REIA) Studies for Residential, Commercial and Mixed use Developments which included Baseline Studies, Ambient Air Quality Monitoring, Traffic Studies, Prediction and evaluation of Impacts, Impact Matrix. Preparation of Rainwater harvesting and Ground Water Recharge structures, Storm Water Management and Disposal, Solid Waste Management and Disposal.

As freelancer successfully prepared and presented Impact Assessment projects before Environmental Advisory Committee (EAC) MoEF New Delhi.

Conversant with Environmental Protection Act. Water Prevention and Control of Pollution Act, Air Prevention and Control of Pollution Act, Hazardous waste Management and Handling Rules, CPCB and MOEF guidelines etc.

Projects Guided at undergraduate and postgraduate level.

Sl. No.	Project Title	Year/Period
1.	Study of Electroplating, design of ETP and chrome recovery technologies.	2004-2005
2.	Bench scale performance study of the UASB for the Treatment of Biopharmaceutical Effluent.	2004-2005
3.	Validation of the nature of bio sanitizer biocatalyst in altering the BOD, COD, and other characteristics of wastewater.	2005-2006
4.	Drying & Grinding Characteristics of Garlic.	2003-2004
5.	Determination of Kinetic Parameters of the Activated sludge process @ Performance study of 60 MLD Hebbal Sewage Treatment Plant.	2003-2004
6.	Supersonic flow over flat plate solution using Navier-Stroke Equation.	2004-2005
7.	Bio-Diesel from waste used Vegetable oil.	2005-2006
8.	Recovery of Chrome and Zinc from Electroplating Effluents via Evaporation	2007-2008
9.	Water, Wastewater treatment using Moringa Oleifera Natural coagulants”	2008-2009
10.	Used oil reclamation using direct heating with vacuum distillation	2008-2009
11.	Design and Development of model “Decentralised Wastewater Systems (DEWATS) & Analysis with variable input parameters”	2009-2010
12.	Recovery of chrome from metal plating effluent by direct heating with vacuum distillation	2009-2010
13.	Carbon sequestration	2013-2014
14.	Performance evaluation of Anaerobic baffled reactor with wastewater and its treatment with and without using micro mix	2013-2014
15.	Removal of Hexavalent Chromium (Cr^{6+}) from Contaminated ground water using synthetic and natural adsorbent”	2012-2013
16.	Synthesis of ceramic metal matrix Nano composite by Cryomilling and its Consolidation”	2011-2012
17.	Performance evaluation of the anaerobic baffled reactor (ABR) for the	2011-2012

	treatment of Wastewater”	
18.	Optimisations of curing cycle using carbon laminates G-939”	
19.	Fluoride removal studies of ground water using Natural materials	2010-2011
20	Analysis of thermo-mechanical & chemical Properties due to variation in heat up rates during curing of Carbon composite(C939)	2010-2011
21	Extraction & Characterisation of hemicellulose and design of extractor	2011-2012
22	Adsorption of heavy metal ions from aqueous solutions using sugarcane bagasse	2014-2015
23	“Effect of Natural Coagulants on selected water quality parameters” (September 2009, PG Project by Priya V)- M Tech	2009-2010
24	Experimental investigations on natural coagulants” (July 2010, PG Project by Roopa S) M Tech	2010-2011
25	Extraction of hemicellulosic portion of lignocellulosic biomass for bioethanol production (Ashwini R – 1BM12CEE03) M Tech	2014-2015
26	Production of Bioethanol from Lignocellulosic Biomass, BIPIN R SAGAR (USN: 1BM13BCE02) M Tech	2014-2015
27	Carbon dioxide sequestration by mineral carbonation using steel slag and construction & demolition waste” JANHAVI A DESAI (1BM13CEE04) M Tech	2014-2015
28.	Optimisation of downstream process and study the properties of various industrial important enzymes (Shruti Deshpande V 1 BM14BCE11) M Tech	2015-2016
29.	Validation of CFD based Air Dispersion Model FLUIDYN-PANCHE using Prairie Grass Experimental Datasets.	May 2016
30.	Design & Fabrication of a Reactor for Alkaline Rich Mineral Waste Carbon Sequestration.	May 2016
31.	Aerobic Degradation of Toulene and Ethyl Benzene by <i>Pseudomonas putida</i> Immobilized in Polyvinyl Alcohol (PVA) gel (USN 1BM15BCE05- Shweta S Gawade) M Tech	May 2017
32.	CO ₂ Sequestration by Mineral carbonation technique using EAF dust, Construction & Demolition waste and Sea-shell powder (1BM15CEE03-Jagadeesh N B) M Tech	May 2017

CONFERENCES, SHORT-TERM COURSES PARTICIPATED/ORGANISED

Sl. No.	Descriptions	Participated/ Organised	Number of Days	Dates
1	National Workshop on Environmental Management Frame Work-2016. Organised in association with SPFU, GoK, NPIU, GoI and BMS College of Engineering, Bangalore.	Co-ordinator and Delegate	5 Day	29 th February – 04 th March, 2016
2	International conference on Transformations in Engineering Education, ICTIEE-2015, Bangalore, Jointly organized by BMS College of Engineering and Indo-US Collaboration for Engineering Education (IUCEE)	A Technology a Generation ahead	1 Day	January 5, 2015

3	International conference on Transformations in Engineering Education, ICTIEE-2015, Bangalore, Jointly organized by BMS College of Engineering and Indo-US Collaboration for Engineering Education (IUCEE)	Delegate	3 Day	January 6-8, 2015
4	International conference on Transformations in Engineering Education, ICTIEE-2015, Bangalore, Jointly organized by BMS College of Engineering and Indo-US Collaboration for Engineering Education (IUCEE)	Industry Academia Partnership	1 Day	January 6, 2015
5	“Intellectual Property Rights: Significance for Academia” at BMS College of Engineering in Association with Visvesvaraya Trade Promotion Centre (GoK Centre for export promotion), Bangalore.	Participated	1 Day	25 th March, 2015
6	Modeling Using MS Office Excel	Participated.	5 Day	21st July to 25th July 2014
7	Process Simulation: Advanced Process Modeling using UniSim ^R Design	Participated	1 Day	16 th June, 2014
8	“GIS and Modeling – Applications in Environmental Engineering.	Participated.	2 Days	28 th – 29 th March 2014.
9	“Green and Clean Technologies in Chemical Engineering and Biotechnology”	Participated.	2 Days	14 th – 15 th February 2014.
10	Process Simulation: Advanced Process Modeling using UniSim ^R Design	Participated	3 Day	18 th -20 th September, 2013
11	Sustainable development through sugar industry VGST & VTU Sponsored program at Davangere.	Participated	4 Day	28 th to 31 st July 2013
12	Academic Leadership Programme, Organised by Shruth & Smith Foundation under TEQIP-II.	Participated	4 Day	4 th -7 th June 2013
13	NBA Workshop on Process of Accreditation.	Participated	3 Day	9 th – 11 th May 2013
14	Safety & Health Issues in Industrial Environment, Organized by Dept. of Chemical Engg, BMSCE, Bangalore.	Organized and Delivered Talk	5 Day	17-22 nd , April, 2013
15	NBA Workshop on Process of Accreditation.	Participated	1 Day	29 th April 2013
16	International Workshop on “Green Nanotechnology -2012” Organized by VTU, Belgaum.	Participated	2 Day	26-27 th November, 2012
17	Technological Updates on Advances in	Participated	1 Day	15 th

	Chromatography and Environmental Analysis.			September 2012.
18	Indio- US Seminar on Hazardous Waste Management. @ BIT, Bangalore.	Participated	2 Day	27 th – 28 th July, 2012
19	Research Methodologies and Latex, Organised by SJBIT, Sponsored by VTU.	Participated	2 Day	9 th - 10 th May, 2011
20	International Conference Cooling Earth, PB Pant Agri and Technical University, Pantnagar.	Paper presentation	3 Day	15 th – 17 th November, 2010
21	“Student-Teachers Relationship in the changing world”	Participated	2 Day	8 th & 9 th , February 2010
22	AERMODE Air Dispersion Modeling in Hyderabad, India.	Participated	3 Day	10-11 th August, 2009
23	National conference on urban water management “Challenges and options”	Participated	3 Day	13-15 th December 2009.
24	National conference on “Green Management – Vision 2020 Presented paper on Leadership on energy and environment design-green buildings perspective	Presented	2 Day	14-15 th November 2008
25	ACHMM – 2008 National Conference, Minneapolis, MN, USA	Participated	4 Day	7-10 th September, 2008
26	Chemical Engineering Perspective Scenario and Strategies to 2020 –BIO-ENERGY-INFO-MATERIALS-NANO	Participated	2 Day	8-9 th December 2006
27	TEQIP, GOK, One day workshop on Occupational Safety & Health, at BMSCE	Organised	1 Day	02.09.2006
28	TEQIP, Two-day Symposium on “Advances in Catalysis” at BMS College of Engineering	Organised	2 Day	19-20 th Sept 2006
29	TEQIP, BMSCE Organized Two-day training program on GIS & SPATIAL DATA MINING”	Participated	2 Day	08-09 th Sept 2006
30	ISTE BMSCE Chapter organized 15-day workshop on “Software Testing”	Participated	15 Day	19 th Aug – 01 st Sept 2006
31	Green Technologies for Sustainable Development	Organised	1 Day	25.11.2005
32	Environmental & Pollution Awareness – Innovative Technologies for Cleaner Environment	Organised	1 Day	04.09.2004
33	Advanced EMS audit course for Quality & Environmental Professionals	Participated	5 Day	27-31 st , January 2003
34	ISTE, BMSCE Chapter organised Short term training program on “Biotechnology for Engineers”	Organised	15 Day	6 – 20 th January, 2003
35	ISTE BMSCE Chapter organised 15 day	Participated	15 Day	7-21 st January

	Winder school on :Object Oriented Programming”			2002
36	ISO 9000:2000 “A Process approach for effective quality management”	Participated	3 Day	5-7 th Nov - 2001
37	Certificate course on “Enterprise Resource Planning” organised by ISTE BMSCE chapter	Participated	15 Days	30 th April to 13 th May 2000

COMPETENCE/SKILL: M S Office, Excel, C & C⁺ Programming, MAT Lab, UNISIM/PROSIM/DWSIM, Air Pollution Dispersion Modeling studies using CFD module for Point and Area sources and its sensitivity analysis etc.

Area of Specialisation and Interest: Possess a sound knowledge of modeling & simulation of air pollution dispersion model, Design & optimisation of Air Pollution Control Equipment’s and Industrial/Domestic Effluent treatment units.

Yours Truly.



(Prof. (Dr.) C.T. Puttaswamy)