

Dr. Hansa S. Jeswani



Dean Finance, Associate Professor
Civil Engineering Department
Sardar Patel College of Engineering
Andheri (W), Mumbai 400058

Summary

Hardworking and focused professional with experience in training, research and consultancy related to water and wastewater treatment design. Known for positive mental attitude, commitment to excellence, and demonstrated ability to communicate and working with senior management, associates, and students. Self-motivated and able to work independently or in a team. Excellent interpersonal skills, able to communicate and collaborate effectively with co-workers at all levels. Adept in Computer applications including Mathematical Analysis Software, WaterGEMS, SewerGEMS and StormGEMS, MATLAB, Statistica 8.1., Microsoft Office and Computer Programming Language: C, C++.

Multilingual and Multi-literate in English, Hindi and Gujarati languages

Highlights

- Water and Wastewater treatment design
- Waste Management
- Modeling
- Bioremediation
- Toxicity Testing
- Auditing- ISO 14001
- Green Building Design and certification
- Rain Water Harvesting
- Ultra high performance concrete
- Pervious Concrete
- Self Healing Concrete

Accomplishments

- Drafted plan of action for a soil bio-remediation project in North Dakota and Colorado regions in USA
- Drafted syllabus for waste management post graduate course to be introduced in Victoria University, Australia with collaboration of UNEP
- Participated in community challenge to develop a business model to provide clean drinking water to slum communities
- Published around 33 papers in international peer reviewed journals and conferences with three award winning papers
- Spearheaded an award winning international project related to building a sustainable structure with minimal amount

- Guided several undergraduate projects such as novel materials in water filtration, reuse of wastewater for potable and non-potable purposes and converting a nonsustainable structure into a sustainable structure
- Co-ordinated Industry Institute Interaction Cell at present work place
- Co-ordinated several training sessions, conference and examination

Professional Experience

Sardar Patel College of Engineering

August 2008- Current

Associate Professor

Mumbai, Maharashtra, India

- Testing and consultancy related to soil, air, water and wastewater treatment
- Design of effluent treatment plants for governmental organisations
- Undertake Projects related to utilization of kitchen waste and reuse of wastewater
- Conducting classes for undergraduate and postgraduate students in the core areas of environmental engineering
- Evaluation and Training of under graduate students
- Conducting sessions for Industry personnels in the area of environmental engineering
- Participation in conferences and workshops related to core field of environmental engineering

Sardar Patel College of Engineering

August 2003- August 2008

Assistant Professor

Mumbai, Maharashtra, India

- Testing and consultancy related to soil, air, water and wastewater treatment and design
- Undertake Projects related to green buildings and reuse of wastewater
- Conducting classes for undergraduate students
- Evaluation and Training of under graduate students
- Participation in conferences and workshops related to core field of environmental engineering

Paramount Consultants

January 2003- July 2003

Environmental Engineer

Vadodara, Gujarat, India

- Involved with carrying out the treatability studies for pharmaceutical wastewater and dye and dyestuff wastewater industries using physicochemical and biological treatment
- Trouble shooting at different water and wastewater treatment plants consisting of Activated sludge process, Biotowers and UASB (Namely: Bayer, Baroda; IOCL, Baroda)
- Preparation of EIA reports for Highways

Paramount Consultants

June 2002- Dec 2003

Trainee Engineer

Vadodara, Gujarat, India

Involved in the redevelopment of an effluent treatment plant for a cluster of 500 industries (mostly consisting of dye and dyestuff) of Ankleshwar, Panoli and Jhagadia.

Educational Background

Indian Institute of Technology, Bombay

2008-2011

Ph. D, Environmental Science and Engineering

Mumbai, Maharashtra

- The topic of doctoral research was Biological Treatment of Biomass Gasifier Wastewater and was funded by a project of Department of Biotechnology
- Specific toxicity testing procedures using standard Bioluminescence assay were also performed on effluents generated from the Rotating biological contactors.
- Well conversant with use of HPLC, GC-MS, GC and other equipments for reactor studies. Mathematic modeling using Statistica 8 and Mathematica was a part of the thesis.
- Thesis resulted into filing a patent titled Treatment of Biomass gasifier wastewater by a bacterial biofilm reactor
- Undertook project on oil bioremediation and production of biofuel from algae during my research period.
- **GPA= 9.7/10**

Maharaja Sayajirao University

Master's in Engineering (M.E.) in Civil with Environmental Engineering

2003

Vadodara, Gujarat

- Gold medalist in Master's of Engineering in Maharaja Sayajirao University
- M. E project was to treat the effluent of wastewater from over 500 industries of South Gujarat in an effluent treatment plant and suggest modification in the present plant for Paramount Consultants in Baroda
- Various subjects related to environmental engineering were taught during 1.5 years program
- GPA 4/4

Maharaja Sayajirao University

Bachelor's in Engineering (B.E.) in Civil Engineering

2001

Vadodara, Gujarat

- Basic civil engineering subjects were taught
- GPA= 3.6/4

Awards and Recognition

- Gold Medal, Master's in Engineering
- Mentor for the Tower of Babylon Project won by IIT Bombay among 5 premier institutes from all over the world
- Participated in Acara challenge in 2009 where development of clean drinking water solutions as a business plan was presented to be used for low income areas in Mumbai
- Investigator for the project on Biological Treatment of Biomass gasification wastewater using algal-bacterial system started at IIT Bombay with a total 56 lakhs grant (3 yrs project 2011-2014) for Department of Biotechnology
- Investigator for TEQIP funded project (2013-14) Use of Pervious Concrete for Filtration
- Investigator for TEQIP funded project (2014-15) Self Healing Concrete
- Investigator for TEQIP funded project (2015-16) Characteristics of Ultra High Performance Concrete
- Investigator for TEQIP funded project (2016-17) Use of Silver for Disinfection

Memberships, Affiliations and Certification

- Life member : AICTE, CEBEES, AWMA, IEA, IWA, IET
- Certification : Lead Auditor, IS 14001

Publications

Published in refereed International journals

Jeswani Hansa, Suparna Mukherji .2015.Treatment of Biomass Gasifier Wastewater in Rotating biological contactor. The Indian Journal of Technical Education, 1-7; ISSN 0971-3034, Volume 32

Jeswani H., Mukherji S., 2015. Treatment of simulated biomass gasification wastewater of varying strength in a three stage rotating biological contactor, Chemical Engineering Journal,259, 303-312. (Impact factor 4.3)

Jeswani H., Mukherji S., 2015. Comparison of Acute Toxicity of Algal Metabolites Using Bioluminescence Inhibition Assay, Nirma University journal of engineering and technology vol. 3, no. 1, July-Dec 2014 .

Jeswani H., Mukherji S., 2014. Treatment of simulated biomass gasification wastewater of varying strength in a three stage rotating biological contactor, Chemical Engineering Journal, (Impact Factor 3.69)

Jeswani H., Mukherji S., 2013. Batch studies with *Exiguobacterium aurantiacum* degrading structurally diverse organic compounds and its potential for treatment of biomass gasification wastewater, International Journal of Biodeterioration and Biodegradation, 80, 1-9. (Impact Factor : 2.442)

A. Apte, V. Cheernam, M. Kamat, S. Kamat, P. Kashikar, Dr Hansa Jeswani , 2013. Potential of Using Kitchen Waste in a Biogas Plant , International Journal of Environmental Science and Development, Vol. 4, No. 4, 370-373. (Impact Factor: 1.884)

Jeswani H., Mukherji S., 2012. Degradation of Phenolics, Nitrogen-Heterocyclics and Polynuclear Aromatic Hydrocarbons in a Rotating Biological Contactor, Bioresource Technology. 111, 12-20.(Impact Factor: 5.172)

In Preparation

Jeswani H, Oke Ninad, Choksi Parth, Sayyad Rumana, Mahapatra Niketa, Naik Amey., 2017. Filtration of Surface water using a novel media for filtration, Water Research (Impact factor 4.65)

Jeswani H., Mukherji Suparna., 2017. Characterization of wood and rice husk based gasifier wastewater and biodegradation of organics in the presence of *Exiguobacterium aurantiacum*, Journal of Industrial microbiology and Biotechnology (2.32)

Papers in conference proceedings

International Conference

Pranav Sudhir Kulkarni, Ali Akbar Bohra, Aditya Jayant Bhatambrekar, Hansa Jeswani. 2015. Techno-economic evaluation for re- designing existing hospital building to a sustainable structure; Proceedings of Third International Conference on Advances In Civil, Structural and Environmental Engineering- ACSEE 2015; 132 – 136; DOI: 10.15224/978-1-63248-065-1-94; ISBN: 978-1-63248-065-1, Zurich, Switzerland

Dr. Hansa Jeswani, Kaustubh Borole, Ashmita Sengupta, Abhishek Sarkar, Apurva Sawant, Mithil Haldankar .2016. "Water loss prevention by techno-economic use of rainwater and wastewater for non-potable purpose"; International IWA conference on Water Loss 2016; 31st Jan-3rd Feb 2016, Bengaluru, India.

Oshmi Ghosh, Pratik Patil, Hansa Jeswani. 2016. Sustainable Industrial Waste Water Management for an Industrial development cooperation in Thane, Maharashtra 13th IWA Specialized Conference on Small Water and Wastewater Systems & 5th IWA Specialized Conference on Resources-Oriented Sanitation , 14-16th September 2016; Athens, Greece

Khelurkar, Nikunj; Shah, Sunay; Jeswani, Hansa, "A review of radioactive waste management," Technologies for Sustainable Development (ICTSD), 2015 International Conference on , vol., no., pp.1,6, 4-6 Feb. 2015; doi:10.1109/ICTSD.2015.7095849

Tayde, Prashant; Shastri, Chaitanya; Shah, Bhoomi; Sankpal, Nitesh; Asabe, Nitin; Jeswani, Hansa, "Use of sullage for non-potable purpose," Technologies for Sustainable Development (ICTSD), 2015 International Conference on, vol., no., pp.1,5, 4-6 Feb. 2015doi:10.1109/ICTSD.2015.7095868

H. Jeswani, Ninad Oke, Parth Choksi, Rumana Sayyed, Amey Naik 2014. Use of Pervious concrete for filtration. 21st Century Watershed conference, University of Waikato, Hamilton New Zealand, Oral Presentation, 3rd-7th November 2014.

Jeswani H, Mukherji S 2014. Biological treatment of biomass gasification wastewater. 2nd IWA Specialized conference- Ecotechnologies for Wastewater Treatment-EcoSTP, held in Verona, Italy 23rd -27th June 2014 (**Best Paper Award**)

Mukherji, S., A. Chavan and H. Jeswani, "Algal Bacterial Biofilm in Rotating Biological Contactor for Removal of Organic Contaminants from Wastewater: Advantages and Challenges" International Conference on Algal Biorefinery: A Potential source of Food, Feed, Biochemicals, Biofuels and Biofertilizers(ICAB 2012), IIT Kharagpur, India, 10th -12th Jan, 2013. Oral presentation, Abstract No.ICAB F090Q

Jeswani H, B Sawant, A. Sengupta, A. Sarkar, A. Haldankar, M. Borole, K. Techno-economic evaluation for reuse of wastewater and rainwater, Heraklion, Greece, 23-25th March, 2012.

Madhav, V. D. Panchratna, H. Jeswani, V. Sethi, S. Mahajani, D. Giammar and J. Fortner and S. Mukherji "Gas Cleaning and Wastewater Treatment for Small Scale Gasification Systems" 4th International Symposium on Energy and Environment: Abundant, Clean, Cost Effective Energy Systems for Sustainability, Dec 9th-12th, 2012. Poster Presentation.

Jeswani, H. and Mukherji, S., "Treatment of simulated biomass gasification wastewater using an algal-bacterial system", International conference on "Ecotechnologies for Wastewater Treatment", Santiago de Compostela, Spain, organized by University of Santiago de Compostela, Santiago de Compostela, Spain and International Water Association, 25-27th June 2012. (Won the best poster award)

Mukherji, S. and Jeswani, H., "Treatment of biomass gasifier wastewater in a rotating biological contactor" International conference on "Processes in Biofilms", Shanghai, China, organized by Tonji University, Shanghai, China and International Water Association, 27-30th Oct, 2011.

Jeswani, H. and Mukherji, S., "Treatment of biomass gasifier wastewater in bench-scale bioreactors by waste activated sludge and *Exiguobacterium aurantiacum*" International conference on "Microbes in Wastewater Treatment", Goa, India, organized by BITS Pilani, Goa, India and International Water Association, 24-26th Jan, 2011.

Jeswani H., Mukherji S., Treatment of Biomass Gasifier Wastewater in Bench-Scale Bioreactors by Waste Activated Sludge and *Exiguobacterium aurantiacum*, MWT 2011, Jan 26-29, 2011.

Jeswani, H. Treatment of Wastewater from the Gujarat Industrial Development Cooperation Estate, Ankleshwar, Gujarat Using Two Step Biological Processes, Proceedings., IGC 2006.1st-3rd of Feb, 2006.

B Bhatti, R Mehta, V. Panchal, A Qureshi, H Sohu, H Jeswani. 2012. Techno-economic analysis for the re-design of an existing structure to a sustainable structure, AARCV, 21-23rd June, 2012, Bangalore, India.

National Conferences

Ninad Oke, Parth Choksi, Rumana Sayyed, Nikita Mahapatra and Hansa Jeswani A review on use of pervious concrete as a rapid gravity filter and for storm water management, 4th National conference on environment and biodiversity, Pune, 4-5th October 2013.

Kishan Pai, Gyanprakash Sharma, Hansa Jeswani. 2012. Solution: Nuclear waste disposal India. Racee 2012, NIT, Rourkela, held on 20-21, 2012.

Kishan Pai, Gyanprakash Sharma, Hansa Jeswani. 2012. Solid Waste Management in Mumbai. Racee 2012, NIT, Rourkela, held on 20-21, 2012.

Jeswani H., Mukherji S. 2012 Comparison of Acute Toxicity of Algal Metabolites Using Bioluminescence Inhibition Assay, Proceedings of 27th National Convention of Environmental Engineers, organized by Institution of Engineers, Mangalore, held on 24-25 January, 2012

Jeswani H., Mukherji S. 2010. Comparison of coal gasifier and biomass gasifier wastewater. Proceedings, Enviroenergy 2010, 27-29th November, 2010.

Jeswani H., Mukherji S. 2009. Feasibility Study for Treatment of Gasification Wastewater Using an Algal – Bacterial System. Proceedings, NUCONE 2009, 27-29th November, 2010.

Jeswani, H., 2008., Advance Wastewater Treatment For Economical Non Potable Reuse SWRDAM 2008.

Bhosale, S., Sawant, P., Shrivastav, P., Jeswani, H. 2008. Bio-Composting of Distillery Waste to Save Fresh Water. Proceedings, SWRDAM 2008.

Bhoir R., Sawant P., Jeswani, H. 2008. Wastewater Management : An Overview. SWRDAM 2008.

Zope, P., Sawant P., Jeswani, H. 2008. Design Criteria, Protocol and Selection of Model for Urban Storm Water Management, Proceedings, SWRDAM 2008.

Zope, P., Sawant P., Jeswani, H. 2008. Pollution Prevention in Urban Storm Water Management, Proceedings, SWRDAM 2008.

Rao, C., Sawant P., Jeswani, H.2008 Review of Wastewater Management in Fertilizer Industry, SWRDAM, 2008.

References

	<u>Referee 1</u>	<u>Referee 2</u>	<u>Referee 3</u>
Name	Prof. Suparna	Prof. Anuradda	Prof. P. H. Sawant
Designation	Mukherji	Ganesh	Principal, SPCE
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