**ACADEMICS**

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| **Degree**  | **Topic**  | **Year**  | **Department & University**  |
| Post Doc | Numerical Analysis of turbulent combustion in industrial applications.  | 2005  | School of Mechanical, Aerospace and Civil Engineering, University of Manchester, UK.  |
| PhD | Coal Spontaneous Ignition in Storage. | 2003  | School of Chemical Environmental & Mining Engineering, University of Nottingham, UK. |
| M.Sc Engineering  | Environmental Engineering (Subsurface Barriers for Hazardous Waste Containment)  | 1999  | School of Chemical Environmental & Mining Engineering, University of Nottingham, UK.  |
| B.Sc Engineering  | Mechanical Engineering  | 1997  | Department of Mechanical Engineering, University of Lagos, Nigeria. |

**EXPERIENCE**

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| --- | --- | --- |
| **Position**  | **Employer** | **Dates**  |
| **Associate Professor (C), Centre for Environment, Jawaharlal Nehru Technological University Hyderabad.** | Oct 2019 – till date.  |
| Subjects taught: Solid and Hazardous Waste Management; Air Pollution Control Technologies; Contaminant Transport in Environmental Systems; Water Supply Engineering and Hydrology; Environment Health and Safety.Curriculum and syllabus preparation. Board of Studies duties. Evaluation and assessment.  |
| **Associate Professor (C) Mechanical Engineering Department, GITAM (Deemed to be University), Hyderabad Campus.**  | Dec-2016 – April 2019  |
| Subjects taught: Fluid Mechanics, Engineering Graphics, Energy Conservation and Management, Power Plant Engineering, Science & Technology. |
| **Professor & Head of Civil Engineering Department, Geethanjali College of Engineering and Technology (Affiliated to JNTUH), Hyderabad** | June-2015 - Oct-2016  |
| Subjects taught: Fluid Mechanics, Building Materials & Construction Planning.  |
| **Associate Professor, Civil Engineering Department,** **Pydah College of Engineering and Technology (Affiliated to JNTUK), Visakhapatnam** | Oct-2014 - May-2015  |
| Subjects taught:Environmental Impact Assessment, Water Resource Planning & Management, Transportation Engineering  |
| **General Manager & Chief Projects Manager,** **Hydro Construction & Engineering Co. Ltd., Lagos, Nigeria** | Jan 2007 – Dec 2012 |
| Commissioning of water treatment plants, borehole construction, distribution pipeline networks, and water metering installation conforming to World Bank specifications.  |
| **Project Engineer,** **British Maritime Technology Fluid Mechanics Ltd., London, UK**  | May2006– Dec 2006 |
| Provide solutions using simulation software for gas dispersion, Ventilation systems, sunlight and daylight studies.  |
| **Postdoctoral Research Associate (Department of Trade and Industry, DTI-UK funded)** **UMIST (Department of Mechanical Aerospace and Manufacturing Engineering),** **Computational Dynamics Ltd, London &** **University of Manchester Institute of Science and Technology, UK** | Jun 2003 – Jun 2005  |
|  Developed and incorporated simulation models of turbulent combustion in industrial applications.  |
| **PhD Research Scholar (European Coal and Steel Community - ECSC funded),** **University of Nottingham, U.K**  | Dec 1999 – May 2003 |
| Investigate propensity for spontaneous combustion in coal stockpile. Laboratory study and classification of low to high risk coals. Numerical analysis of coal stockpiles in thermal power plants. |

**ADMINISTRATIVE EXPERIENCE**

✔ Head of the Department, Department of Civil Engineering, Geethanjali College of Engineering and Technology, University, Hyderabad. May 2015- Oct.2016.

✔ Board of Studies, Chairman and Member, Geethanjali College of Engineering and Technology, Hyderabad, 2015-16.

**BOOK SERIES / CHAPTER / PROCEEDINGS**

✔ Ravi Varma, R. (2022). “Computational Fluid Dynamics (CFD) Modelling and Design for Computing the Internal Hydrodynamic Behaviour of Final Clarifier.” Innovative Trends in Hydrological and Environmental Systems. Lecture Notes in Civil Engineering, vol 234. Springer, Singapore. <https://doi.org/10.1007/978-981-19-0304-5_38>. ISBN 978-981-19-0303-8. ISBN 978-981-19-0304-5 (eBook) ISSN 2366-2557 ISSN 2366-2565 (electronic)"

✔ “Spontaneous Combustion of Coal and Correlation with Its Intrinsic Properties Using Adiabatic Oxidation Method.” Rambha R.V. International Conference on Emerging Trends in Engineering (ICETE). Learning and Analytics in Intelligent Systems, vol 2. Pages 278-284. Springer, Cham (2019). https://doi.org/10.1007/978-3-030-24314-2\_35. ISBN 978-3-030-24314-2. Print ISBN 978-3-030-24313-5. Electronic ISSN 2662-3455 Print ISSN 2662-3447

**JOURNAL PUBLICATIONS**

✔ “Investigation into the Propensity of Coal for Spontaneous Heating in Stockpiles”, Journal of the Institution of Engineers (India): Series D. Springer India. Ravi Varma Rambha, T.X. Ren. Google Scholar. h-index(1) DOI https://doi.org/10.1007/s40033-018-0163-6 pp1-9, Volume 99 / July 2018. Print ISSN 2250-2122. Online ISSN 2250-2130. AWARDED “Dr Rajendra Prasad Memorial Prize” 34th Indian Engineering Congress, Hyderabad, December 2019.

✔ “Study of the susceptibility of coal for spontaneous combustion using adiabatic oxidation method”, Chemical Engineering Transactions. Ravi V. Rambha , Ting X. Ren , 2018. pg. 271-276, Vol. 65, 2018. Italian Association of Chemical Engineering. DOI: 10.3303/CET1865046. ISSN:2283-9216. CiteScore 2017 (0.89); SJR 2017(0.293); SCOPUS. SNIP 2017(0.584). h-index(25).

✔ “Validation simulations of a bluff-body stabilized flame combustion process.” R.Ravi Varma. International Journal of Scientific Research in Science, Engineering and Technology (ijsrset.com), December 2016 IJSRSET, Volume 2, Issue 6, Print ISSN: 2395-1990, Online ISSN : 2394-4099. 2016. UGC Approved Journal No:47147 Google Scholar. h-index=6 Impact Factor=5.3

✔ “Subsurface Barriers for Hazardous Waste Containment”, R.Ravi Varma. International Journal of Technology; July – December, 2015; Vol. 5: Issue 2, ISSN 2231-3907 (Print) ISSN 2231-3915 (Online) DOI: 10.5958/2231-3915.2015.00020.6, 2015. **(**Indexed in: Google Scholar, CAS).

**CONFERENCES PROCEEDINGS/ PRESENTATIONS**

✔ R. Ravi Varma, “Computational Fluid Dynamics (CFD) Modeling and Design for Computing the Internal Hydrodynamic Behaviour of Final Clarifier” Presented at International Virtual Conference on Innovative Trends in Hydrological and Environmental Systems (ITHES-2021), NIT Warangal, India. April 2021.

✔ R. Ravi Varma, “Spontaneous Combustion of Coal and Correlation with its Intrinsic Properties” Presented at the 1st International Conference on Emerging Trends in Engineering (ICETE), Osmania University, Hyderabad, India. March 2019.

✔ R.Ravi Varma, “Investigation into the propensity of Coal for Spontaneous Combustion of Coal using Adiabatic Oxidation Method”, 32nd Indian Engineering Congress, Chennai, India. 21-23 Dec 2017.

✔ R. Ravi Varma, “Subsurface Barriers for Hazardous Waste Containment”, Presented at Industry Academia Conference on Construction and Management, IACCM – 2015, NICMAR, Hyderabad, 4th and 5th December 2015.

✔ R. Ravi Varma, “Propensity of Coal for Spontaneous Ignition in Coal Stockpiling Systems” Presented at the 4th UK Meeting on Coal Research and Its Applications, Imperial College, London, September 2002.

**PUBLICATIONS - INDUSTRY TECHNICAL REPORTS/ MAGAZINES**

✔ R. Ravi Varma, “Low Cost Systems for Improved Water and Sanitation”. Waterfront Magazine. Nigeria Water and Sanitation Association. June-Sept 2021.

✔ R. Ravi Varma, “Prediction of the Propensity of Coal for Spontaneous Ignition in Storage, Preparation, and Firing systems.” Final Report to the European Coal and Steel Community (ECSC), 2002.

✔ R. Ravi Varma, “Adiabatic Oxidation Studies of the Propensity for Coal to Spontaneous Combustion” Final Report to PowerGen Plc., UK. 2002.

**AWARDS**

✔ Dr. Rajendra Prasad Memorial Prize “Investigation into the Propensity of Coal for Spontaneous Heating in Stockpiles” Presented by The Institute of Engineers (India) Dec, 2019.

**ORGANIZED WORKSHOPS / GUEST LECTURES**

✔ Organizing member for Quiz contest in Tech Fest 2022 “Technomancy - The Bloom of Youth”. Centre for Environment, IST, JNTUH. 28th - 30th April 2022.

✔ Organizing member for Guest Lectures on “Risk Management & Industrial Hygiene”, Centre for Environment, IST, JNTUH. 8-9 Feb. 2021.

✔ Organizing member for Guest Lectures on “Water supply Engineering - EPANET software demonstration”, Center for Environment, IST, JNTUH. 2-3 Feb. 2021.

✔ Guest Lectures on “Best Practices in Industry, Fire Safety and Industry Hygiene”, Centre for Environment, IST, JNTUH. 11-16 Sept. 2020.

✔ Guest Lectures on “Water Transmission and Distribution”, Center for Environment, IST, JNTUH. 16-17 Sept. 2020.

✔ Organizing Committee Member, Three day International Webinar on “Waste to Energy”, Center for Environment, IST, JNTUH. 19-21 Sept. 2020.

✔ Organizing Secretary, One day workshop on “Energy Conservation and Energy Audit” GITAM School of Technology, Hyderabad. 26th December 2018.

✔ Organizing Secretary, Three days’ workshop on “Design and Detailing of Reinforced Concrete Structures” Geethanjali College of Engineering and Technology, Hyderabad. 8-10 June 2016.

**COURSERA CERTIFIED COURSES**

✔ “GIS Data Acquisition and Map Design” authorized by University of Toronto and offered through

Coursera. Verify at coursera.org/verify/FHNVKRWPHFJB . 4th Oct 2021

✔ “Introduction to GIS Mapping” authorized by University of Toronto and offered through Coursera. Verify at coursera.org/verify/R5E8K6LZM3RG . Oct 2021.

✔ “First Steps in Making the Business Case for Sustainability” authorized by University of Colorado and offered through Coursera. Verify at coursera.org/verify/9SGHH3SNY6SW. Sept 2021.

✔ “Introduction to Fecal Sludge Management” authorized by École Polytechnique Fédérale de Lausanne, Switzerland, and offered through Coursera. Verify at coursera.org/verify/W6SLVSW2S78U. August 10th 2021.

✔ “Introduction to Household Water Treatment and Safe Storage” authorized by École Polytechnique Fédérale de Lausanne, Switzerland, and offered through Coursera. Verify at coursera.org/verify/NYS47RTJSK76. July 12th 2021.

✔ “Planning & Design of Sanitation Systems and Technologies” authorized by École Polytechnique Fédérale de Lausanne, Switzerland and offered through Coursera. Verify at coursera.org/verify/4CCTSXNAD5U5. July 1st, 2021.

✔ “Municipal Solid Waste Management in Developing Countries '' by École Polytechnique Fédérale de Lausanne, Switzerland and offered through Coursera. Verify at coursera.org/verify/NNGBCJNCAX42. 16th June 2021.

✔ “Statistical Data Visualization in Python '' by Coursera Project Network. Verify at coursera.org/verify/UB629H2LS3YU. 21st June 2021.

✔ “Introduction to Indoor Air Quality” course authorized by The Hong Kong University of Science and

Technology and offered through Coursera. Verify at coursera.org/verify/RRKCZ9Z66DRC. May 2021.

✔ “Create Charts and Dashboard using Google Sheets” Verify at coursera.org/verify/RRKCZ9Z66DRC. Jan 2021

✔ “Plots (Graphics) for Data Science” offered through Coursera. coursera.org/verify/38XDDECUTLS9. Dec 2020.

✔ “Air Pollution – a Global Threat to our Health'' by the University of Copenhagen, Denmark Verify at coursera.org/verify/KX5DEAKQVYB7. Dec 2020.

✔ “How to Write and Publish a Scientific Paper (Project-Centered Course)” by École Polytechnique, France and offered through Coursera. coursera.org/verify/7ZWCR88AZD5T. Nov. 2020.

✔ “The Data Scientist’s Toolbox” authorized by Johns Hopkins University, USA and offered through Coursera. coursera.org/verify/M8J6NBH33JFY. Oct 2020.

**NPTEL CERTIFIED COURSES**

✔ Air Pollution and Control. (12 Weeks course) - Topper Certificate (Top 1%). Equivalence of NPTEL with regular 1.5 FDP. Jan-Apr 2022.

✔ Waste to Energy Conversion. (8 Week course) - Topper Certificate (Top 5%). Equivalence of NPTEL with regular 1.0 FDP. Jan-Mar 2022.

✔ Integrated Waste Management for Smart City. (12 Week course) - Elite certificate. Equivalence of NPTEL with regular 1.5 FDP. Dec. 2020.

✔ Environmental Quality Monitoring and Analysis.(12-week course) – Elite certificate. Equivalence of NPTEL with regular 1.5 FDP. Jan-Apr 2020.

✔ Advanced Fluid Mechanics (12 Week course) – Elite certificate. Equivalence of NPTEL with regular 1.5 FDP. May 2018.

**OTHER CERTIFIED COURSES**

✔ Green Rating for Integrated Habitat Assessment (GRIHA). E-course on GRIHA v.2019”. November 2022.

✔ Air Dispersion Modeling for Environmental Management online course conducted by Academia de Meio Ambiente & Udemy. 30th May 2021

✔ Data Science and Statistics for Environmental Professionals. Conducted by Mateus Amorim on Udemy. 4th December 2021.

**CONFERENCES / COURSES / WORKSHOPS ATTENDED**

✔ IGBC’s Green Building Congress 2022, Hyderabad. Indian Green Building Council. 20-22 October 2022.

✔ Selection of Nanomaterials for Energy Harvesting and Storage Applications. NPTEL Workshop. July 16-17, 2022.

✔ Envirotech Asia (Theme - Water & Waste Management Technology) Online Exhibition & Conference 2021. Virtual Exhibition & Webinar On Environmental Technology. 7-13 March 2021.

✔ International workshop on “Environment and Energy” organized by Centre for Environment, Institute of Science and Technology, JNTUH, Kukatpally, Hyderabad on 1st – 3rd March-2021.

✔ Short Term Training Program on EIA, Green & Environmental Audit. Organized by the Centre for Environment, IST, JNTUH, sponsored by TEQIP-III, IST, JNTUH. 19th – 25th February, 2021

✔ Five Day National SPARC Workshop On Fuel Cell Technology And Its Research Opportunities. Organized by the Department of Mechanical Engineering, NIT Warangal, India. 4–8th January, 2021. (Virtual Event).

✔ Soft Computing Techniques - Renewable and Electrical Systems; Organized by UGC – Human Resource Development Center, Jawaharlal Nehru Technological University Hyderabad, Kukatpally, Hyderabad. 1st–6th June 2020.

✔ National Level ONE-WEEK FDP on "SCILAB-An Open Source Substitute for MATLAB " JNTUH College of Engineering Sultanpur, In Association with IIT BOMBAY. 25-30 May 2020.

✔ MOOCs, e-content development, and Open Educational Resources, UGC sponsored short-term course, JNTUH, Hyderabad. Feb 2020.

✔ Speed and Safety Measures in Construction Projects. Institution of Engineers. Hyderabad. July 2019.

✔ MATLAB Simulation, GITAM University, Hyderabad. Feb 2018

✔ Entrepreneurship Development Workshop on Solar Energy, 2016, NIESBUD, Ministry of Skill Development and Entrepreneurship, Govt. Of India. Nov 2016.

✔ Gender Sensitization, Conducted by Jawaharlal Nehru Technological University, Hyderabad (JNTU-H), Dec 2015.

✔ Outcome Based Education (OBE), One Day National Level workshop, Conducted by School of Information Technology, JNTUH, 2015.

✔ Green Building Congress, Conducted by Indian Green Building Congress, Hyderabad, 2014.

✔ CD-Adapco User Conference, Computational Fluid Dynamics User Conference, London, Feb 2005.

✔ ERCOFTAC SIG28 Summer School, “Large Eddy Simulation of Reacting Flows”, Aristotle University of Thessaloniki, Greece, Sept 2004.

**ACADEMIC/RESEARCH PROJECTS**

✔ TEQIP-III Project: Study of Mitigation Measures for Spontaneous Combustion in Coal Stockpiles at Thermal Power Plants – KTPS (Palwancha). Oct’19- Oct’20.

✔ Post Doc Research Project: Evaluated performance of existing CFD methods for predicting flow & combustion characteristics in burners. Implemented and validated Large Eddy Simulation methods, June ’03- June ‘05.

✔ PhD. Research Project: Prediction of the Propensity of Coal for Spontaneous Ignition in Storage Preparation and Firing Systems, Oct’99 - May ‘03. Field study of coal stockpiles for the propensity towards spontaneous combustion. Design and Fabrication of adiabatic oxidation apparatus for analysis of heat release from 20 coal samples in controlled experimental conditions.

✔ Rambha, R.V. “Prediction of the Propensity of Coal for Spontaneous Ignition in Storage, Preparation, and Firing systems.” Final Report to ECSC, 2002.

✔ Rambha, R.V. “Adiabatic Oxidation Studies of the Propensity for Coal to Spontaneous Combustion” Final Report to PowerGen Plc., 2002.

✔ M.Sc. Project: “Design of an Alternative Barrier Wall for Ground Water Containment”, Sept 1999.

**M.TECH STUDENT GUIDANCE (COMPLETED: 05)**

✔ “Prediction of flow and combustion characteristics in an industrial scale burner using CFD methods”. A. Ranjan. May 2017. M.Tech (Mechanical). School of Technology, GITAM, Hyderabad.

✔ “Improving compressive strength of fly ash amended concrete by addition of bacterium culture rhodovulum viride.” M. Vamshi. Jan 2022. M.Tech (Env. Management). Center for Environment, IST, JNTUH, Hyderabad.

✔ “A Study on Textile Waste as Building Material” G. Ramakrishna. Jan 2022. M.Tech (Env. Management). Center for Environment, IST, JNTUH, Hyderabad.

✔ “Investigation of Plastic Waste utilization in bituminous mix for application in construction of roads.” G.Shashank Reddy. Jan 2022. M.Tech (Env. Management). Center for Environment, IST, JNTUH, Hyderabad.

✔ “Coal Spontaneous Oxidation Inhibition with Chemical Additives.” L. Rakshan Kumar. Feb 2022. M.Tech (Env. Management). Center for Environment, IST, JNTUH, Hyderabad.

**PROFESSIONAL BODY MEMBERSHIPS**

✔ Member of Indian Green Building Council (IGBC) Mem. No.: IGBC - IM - 10000144

✔ Member of the Institute of Engineers India (IEI) Mem. Num.: M1548721

✔ Life Member of Indian Society for Technical Education (ISTE) Mem. Num.: LM113575

**SKILLS**

✔ Plots (Graphics) for Data Science using Python.

✔ Data Science - R Programming.

✔ MOOCS online course, quiz, assessment, e-content development.

✔ CFD Software: ANSYS-CFX 18.0, Fluent, STAR-CD.

✔ CFD Pre-processing Software: ProSTAR, ProAM, GAMBIT.

✔ CAD Software: AutoCAD 2018, ProE Wildfire, CATIA.

✔ Q-Blade: Wind Turbine Design and Simulation.

✔ MNRE Certified Solar PV Engineer, 2016, Surabhi Educational Society, Hyderabad.

✔ SCILAB, and MATLAB.

**OTHER INTERESTS**

✔ Accomplished at Billiards and Snooker with many trophies.

✔ Badminton and Golf.

✔ Certified Reiki Therapist and Healer.

**CONTACT DETAILS**

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VIDWAN ID: 120109; ORCID ID: 0000-0002-5063-068X; Scopus ID: 57202785330, Web of Science ResearcherID: AAW-1109-2020. LinkedIn profile: https://www.linkedin.com/in/ravivarma2005

Dr. R. Ravi Varma, Post Doc. (Manchester University, UK.); Ph.D (Nottingham University, UK.); M.Sc (Nottingham University, UK.), B.Sc – Mechanical Engineering (University of Lagos).