

T. Manjari, B.E., M. Tech.

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EDUCATION

- **Ph.D. in Building Technology, Civil Engineering (2015-present) [CGPA: 8.42%]**
Indian Institute of Technology Madras, Chennai
Research field: “Manufacture of artificial lightweight aggregates from overburden soil using pelletization technique with the pelletization and strengthening aids”
- **M.Tech. in Construction Technology And Management (2012-2014) [CGPA: 8.31%]**
Indian Institute of Technology Madras, Chennai
Thesis title: “Influence of lightweight aggregate on internal curing of concrete”
- **B.E. in Civil Engineering (2008-2012) [CGPA: 8.77%]**
Dr. Mahalingam College of Engineering and Technology, Pollachi, Coimbatore
Mini project: “Alternate bridge designs for Pandavaiyaru river bridge”
Main project: “Investigatory study on rectangular vertical slip-form work”
- **Higher Secondary School {XII Level} (2008) [88%]**
Bharathiya Vidya Mandir Matric Higher Secondary School, Pollachi, Coimbatore
- **Secondary School {X Level} (2006) [90.54%]**
Our Lady of Lourdes Matric Higher Secondary School, Pollachi, Coimbatore

STUDENT PROJECTS

- **Alternate bridge design for Pandavaiyaru River bridge**-Under the guidance of Dr. Ranga Palaniswamy, Professor, Department of civil engineering, Dr. MCET (2008-2012)
 - Structural analysis using STADD pro. Software and drafting using Auto CAD software
 - Designing and comparison of conventional bridge deck design and post-tensioned deck design
 - Data collection on Pandavaiyaru river flow and meandering patterns and hydraulic analysis for designing bridge structure
 - Designing of pile foundation as the substructure for new bridge
- **Investigatory study on rectangular vertical slip-form work**-Under the guidance of Dr. G. Jaisankar, Professor, Department of civil engineering, Dr. MCET (2008-2012)
 - Identification of practical problems when rectangular slip formwork was employed in construction practices
 - Stress and deflection analysis of existing rectangular slip formwork systems using ANSYS software
 - Optimized rectangular slip formwork design for damage-free concreting and for devising long-term durable formwork based on Stress-deflection analysis
- **Influence of lightweight aggregate on internal curing of concrete**-Under the guidance of Dr. K. Ramamurthy, Professor, Department of civil engineering, IIT Madras (2013-2014)
 - Artificial lightweight aggregate (LWA) manufacture from fly ash using different binders and varying pelletization parameters. Physical and mechanical characterization of fly ash aggregates
 - Utilization of fly ash LWA as minute water packets for internal curing in concrete.

PRESENT RESEARCH

Manufacture of artificial lightweight aggregates from overburden soil using pelletization technique with the pelletization and strengthening aids

- Feasibility study for manufacturing lightweight aggregate (LWA) from overburden soils from excavation site and mines
- Optimization of pelletization parameters, mineral and chemical admixture in the LWA manufacture
- Manufacture of expanded clay LWA from sand extracted mine spoils
- Clay geopolymer LWA product development
- Microwave clay lightweight aggregate manufacture

STUDENT INTERNSHIPS

- Internship at **M/s. Larsen & Toubro Limited**, ECC Division at ESIC Hospital Project involving hospital buildings, medical college students' hostels, staff quarters construction, and accessory building construction, Coimbatore (25.11.2010-05.12.2010)
- Internship at **Highways & Rural works Division, Govt. of Tamil Nadu**, experiencing O&M activities, laying bituminous roads, subsoil exploration, investigation of bridges, execution of pile & raft foundation construction/testing procedures at Thiruthuraipoondi, Tiruvarur district (01.05.2011-18.05.2011)
- Student intern at **Water resource organization, Pongalur Public Works Department, Govt. of Tamil Nadu**, experiencing operation and maintenance of irrigation structures and water management practices in the Contour canal project at Aliyar Nagar, Coimbatore district (19.05.11 -19.06.11). The project involves surveying activities for the contour canal, relaying the canal and tunnel surfaces
- Student intern at **M/s. Larsen & Toubro Limited**, ECC Division, Procurement & Construction contract for Construction and Commissioning of Dahej water supply scheme for PCPIR at Dahej, Bharuch, Gujarat (20.05.13-06.06.13). The project involved well-foundation, pipeline laying, and testing, large ground level reservoir construction

TEACHING ASSISTANTSHIP

- **Construction materials laboratory (2015-2017) & (2018-present)**
Handling laboratory courses for B.Tech., M.Tech., M.S. and Ph.D. Scholars
- **Transmission Electron Microscopy (2017-2018)**
Handling laboratory courses for M.S. and Ph.D. Scholars. Transmission electron microscopic analysis of samples of fellow research scholars
- **Scanning Electron Microscopy (2017-2018)**
Scanning Electron Microscopy analysis of samples of fellow research scholars
- **X-ray diffraction (2017-2018)**
X-ray diffraction analysis of samples of fellow research scholars

PROFESSIONAL EXPERIENCE

Senior engineer in the Water and Effluent Treatment (WET) Independent Company (IC) of L&T, ECC Division, Manapakkam Chennai Head Quarters. Worked in Management of Information Systems (MIS) (01.08.14-13.06.14), direct reporting to the IC head.

- **Financial Roles**

1. Assisting in the budget allocation and reviewing the budget for the FY 2015-16.
2. Daily monitoring of the payment collection, invoicing and billing for all projects
3. Assisting in hosting monthly budget review meetings at headquarters inviting project managers, construction managers, and the business development teams. Recording minutes of budget review meetings
4. Constant monitoring of working capital parameters like Job Cost Report (JCR), Gross Margin (GM), Sale, Profit Before Interest and Tax (PBIT), Estimate To Complete (ETC), overheads, inventory, contingencies and Accepted Cost Estimate (ACE)

- **Non-Financial roles**

1. Monitoring execution progress against planned works
2. Organizing meetings at different administrative hierarchical levels such as Independent Company (IC), Strategic Business Group (SBG), Business Unit (BU), Clusters, North and South Segments, Project Review Meeting (PRM) and other board meetings
3. Strategic analysis of the pre-bid, post-bid, pre-tender, post-tender, and tender status. Competitor analysis both on winning and losing projects

CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

- **Undergraduate level**

1. Organized Technical symposium, MCET Techsym 2008-2012. Conducting various competitions and events during the symposium
2. Class representative for one semester
3. Active member and organizer of Dr. MCET civil engineering group, The Beavers association. Organizing and active participation in hosting lectures and events
4. Quizmaster for the Intra college quiz competition
5. An active member of the Gyan quiz club Dr. MCET

- **Masters level**

1. Active participation in the ICI-FEST 2013 and participated in a 1-Day workshop on Achieving Durable Concrete Construction Through testing Performance Testing on 3rd Feb'14 at IITM
2. Experienced in BIM-Revit Architecture and Visual basic
3. An active team member in projects with global students from North Carolina state university, U.S.A., University of Calgary, Canada, and Tianjin University, China

- **Doctorate level**

1. A volunteer for ICI-IITM National Concrete Canoe Competition (NCCC), 21-23 Aug'15
2. Completed professional education course on Corrosion Mitigation for Reinforced Structures 2.0PDH by Vector Corrosion Technologies Inc. on 4 Oct'18 at IITM
3. An organizer in the International Conference on Advances in Construction Materials and Systems, 71st RILEM Annual Week, 3-8 Sep'17, India
4. An organizer in the Advance concrete technology workshop conducted by BTCM Div, IITM, 2015

5. Active in inter-hostel and intra-hostel competitions such as throwball, basketball, cricket, badminton, football, rangoli, etc
 6. Completed Basic Life Support course by Personal Empowerment in Emergency Response (PEER) program by ALERT Simulation Lab, Chennai
 7. Completed Teaching Assistant Training Program (TATP) organized by the Teaching Learning Center, 1-2 April'16, IITM
 8. Volunteered Wipro Chennai marathon 2015 and Terry fox run Chennai 2015
- **Professional level**
 1. Attended a seminar on the new planning module in EIP
 2. Attended Quality Management System (QMS) orientation
 3. Active participation in the safety walkathon organized as a part of 26th Road safety week celebrations, 11-17 Jan'15
 4. Active participation in International Women's day celebration, 2015

DISTINCTIONS AND AWARDS

- Proficiency rank holder in the undergraduate program: Rank-I (2009-2010) & Rank-II (2009-2010)
- Awarded 'Build India Scholarship -XV' for pursuing masters in Indian Institute of Technology Madras by (2012) by M/s. Larsen & Toubro Limited

SKILL SET SUMMARY

1. Confident in experimental, instrumentation and simulation work
2. Good command over written English and presentation skills
3. Versatile at handling software packages including MS Office, Auto CAD, Visual Studio, BIM Rivet, ANSYS, STAAD Pro., Design Expert, and Origin
4. Languages: Fluent in English and Tamil; Imperfect in Telugu, Malayalam, Hindi, and French
5. Expert in handling characterization equipment, including Inspect F SEM, Panalytical XRD, and TEM CM12.

CONFERENCE

T. Manjari, Dr. K. Ramamurthy, "*Use of admixtures for enhancing pelletization and strength of aggregate manufactured using overburden soil,*" Thirty-fifth International Conference on Solid Waste Technology and Management (ICSW 2020), Annapolis, MD, United States of America, March 22 – 25, 2020. (Paper got accepted)

REFERRAL

Dr. K. Ramamurthy, Research guide at Master and Doctoral program
 Professor, Indian Institute of Technology Madras, Chennai
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 Phone: +91 44 2257 4265