

SREELAKSHMI. S

Research scholar

BSB 207, Integrated Construction Practice and Trimble Technology Lab

Building Sciences Block, Department of Civil Engineering

Indian Institute of Technology, Madras

Chennai 600036, India

Mobile: 99466777936

Email: sreepadaml1@gmail.com

Education

Indian Institute of Technology	Civil Engineering	PhD	Pursuing
SRM University	Civil Engineering	M. Tech	2017
Mahatma Gandhi University	Civil Engineering	B. Tech	2015

Awards and achievements

- Winner for the Project Management GAME-A-THON contest organized by the Project Management Institute (PMI), 2021
- First rank holder and gold medalist, MTech, SRM University, 2017
- Distinction with honors, BTech, Mahatma Gandhi university, 2015

Academic Projects

- Understanding BIM adoption in the Construction industry
 - PhD work – ongoing

Building Information Modeling (BIM) is a simple yet effective medium to aid the management system that can help enhance coordination, bring about innovation, speed up the work, determine interdependence and engage all participants from any part of the world. BIM offers enormous improvements in saving costs and time, accuracy in estimation, and the avoidance of errors due to information loss. Though BIM has much potential to help the industry, the adoption rate is relatively low. A process-based understanding for an effective BIM implementation is absent in the literature. It is understood that technology advances very fast while organizations absorb change very slowly. This study focuses on a perspective rooted in organizational theory where alignment between work practices and the technology requirements are held to be critical. This enables one to understand the work practices surrounding the adoption of BIM in the construction industry and contribute to the knowledge of digital work practices.
- Automation of resource management in construction projects using Building Information modelling (BIM)
 - MTech work

Uses of BIM are many. There was a need to automate the resource management in site. Through this work I intended to show how the 3d modelled generated can help to manage the material resources handled during a construction project. A user interface was developed using MATLAB where one could track the work progress and would get an understanding of the materials utilized till date. One could also get a clear idea of the requirement for the future activities and plan

accordingly that can help to curb the time overruns. This study is to enable the stakeholders to track and optimize the usage of resources.

- Study on intensity of saltwater intrusion in the shallow aquifers of Cochin Corporation
 - BTech work

Cochin corporation in Kerala is an area with water bodies surrounding it. There is sea on one side with many lakes and brackish water contributing to the water needs of the corporation. And hence, salinity in water is a major issue faced by many residents in the area. So, in this study water samples were collected from 72 wards of the corporation every two months. This was done to understand the variation in the salt content due to the changes in the climate and the tidal variations. The area with higher salt content in water was identified. The idea was to use this as an input for determining the scope of installation of salt water treatment plant.

Areas of interest

- Organizational theory
- Technological change
- IT Applications in Construction
- Infrastructure planning and management

Industry Connect

- Internship with the Digital Engineering team of L&T ECC. Study involved a close observation of BIM implementation in their projects
- Study on the Nagpur Metro project by the Maha Metro
- Helped Bentley and Trimble solutions to set up different digital tools for Construction Software lab
- In Plant Training at Cochin International Airport Limited (CIAL) during the construction of the new international terminal. Introduced MS Project in progress monitoring
- Internship at KITCO on the best practices followed in the construction of bridges
- Training at the concrete products division of Sobha Developers Ltd on pavement blocks, kerb stones and GFRC products

Teaching Assistant/ research assistant responsibilities

- As part of the TA duties I have handled classroom sessions, prepared assignment and exam question papers and evaluated the same.
 - TA for Construction Software Lab
 - TA for Construction contracts and specifications
 - TA for Infrastructure planning and management

Other responsibilities

- Worked on digitalization of data for the department of Civil Engineering
- Credentials verification committee during MS/PhD interviews
- Student member of the committee for developing the department website

Publications

- Paper on ‘A study on the Barriers to the Implementation of Building Information Modelling’ got published in International Journal of Civil Engineering and Technology (IJCIET)
- Co-authored a paper titled ‘Performance Measurement of Residential Projects in India: A Balanced Scorecard Approach’, which got published in International Journal of Civil Engineering and Technology (IJCIET)

Conferences

- Paper on “Digital technology in Construction industry- An exploratory study”, was presented at the Fifth PMI India Research & Academic Conference (PMIRAC) 2019 held from 28th February - 2nd March 2019 at IIM K.
- Paper on ‘Barriers to the Implementation of BIM in India’ was presented at Sastra University in International Conference in Civil Engineering & Infrastructural issues in Emerging Economies’17
- Paper on ‘4D Automation in Construction Management using BIM’ was presented in International Conference on Emerging Trends in Engineering and Research ICETER’16 held at Vels University, Pallavaram

Workshops/ Professional trainings

- ISO 45001: 2018 Occupational Health and Safety management systems – Awareness conducted by Loyd's Register Quality Assurance Limited at IIT Madras, 2019
- ISO 9001: 2015 Quality Management Systems – Awareness conducted by Loyd's Register Quality Assurance Limited at IIT Madras, 2019
- The Second Kenyon - IITM Writing Workshop, a joint collaboration with Kenyon College, Ohio, USA, and Dept of HSS, Dept of Physics, Office of Dean Students, and Office of Dean, International and Alumni Relations, IIT Madras held during December 16 - 20, 2019 at IIT Madras.
- Attended summer school organized by IGLC, 2018

Invited Talks

- Was an invited speaker for the FDP– Construction Technology and Management – A Bird’s-eye view organized by KL University during 24-29, Aug 2020 (Virtual)
- Conducted a 2 hour hands-on workshop on BIM for the CEA fest organized by IIT Madras on March 7, 2020

Professional services

- Volunteered towards the IGLC at IIT Madras in 2018
- Organizer for activities held under the banner of PG Student association of Civil Engineering at SRM University
- Additional secretary for PG Interdisciplinary Student Association, Civil Department, SRM University
- Part of student organizing committee in 2016 and 2017, “Tech Knowledge transfer between institute and industries on concrete and construction”, SRM University, Chennai.

- Part of session management of the Sixth International Ground water Conference (IGWC-2015), SRMIST, Feb 2016.
- Organizer for events and talks organized by the student chapter of ICI at SCMS School of Engineering and Technology
- Student secretary for ICI student chapter, SCMS School of Engineering and Technology
- Part of organizing committee of the International Conference on Innovations in Civil Engineering held at SCMS School of engineering and technology in 2014

Skill set

- Software packages known
 - Autodesk products: Revit architecture, Navisworks, AutoCAD
 - Bentley products: Navigator, SynchroPro, ContextCapture, LumenRt
 - Trimble products: Tekla structures, Vico
 - MS Project
 - Primavera
 - Arc GIS
 - MatLab
- Languages known
 - English, Hindi, Malayalam, Tamil, Sanskrit

Extra-curricular Achievements

COMMUNICATION

- Was selected to represent the school for an interactive session with former president Dr. A P J Abdul Kalam
- Was adjudged 1st in quiz competition conducted by ICI Cochin Chapter
- Represented school in Jawaharlal Nehru science exhibition and my exhibit was awarded 'the best exhibit' at the cluster level and selected to the regional level
- Was adjudged the best speaker, for the motion in Debate, conducted in connection with science day celebrations

CREATIVITY

- Adjudged 'Voice of Vipanchika' for the intra college fest
- Won prizes for Drawing and painting conducted by Forests and Wildlife Department, Govt of Kerala and Fellowship of Reconciliation India (FORI)
- Was awarded certificate of merit by Power house International spelling bee based on Cambridge learner's dictionaries published by Cambridge University Press
- Bagged prize for Essay writing in intra college fest and also won the 'Hazari Prasad Dwivedi Samman' in the first international essay competition