

# CURRICULUM VITAE

## VARUN KUMAR REJA

### Joint Doctoral Candidate

IIT Madras & University of Technology Sydney

### Prime Minister Research Fellow (PMRF)

M.Tech, Construction Technology & Management, IIT Madras

B.Tech, Civil Engineering, NIT Calicut

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## CAREER OBJECTIVE

To dedicate my career to enhance my research skills in various aspects of Construction Technology and Management and to learn, absorb, evolve, and innovate to the best of my abilities to achieve excellence.

## ACADEMIC PERFORMANCE

Course	Year	School / Institute	Percentage / CGPA
Ph.D. (PMRF)	2018-Present	IIT Madras-UTS	9.50
M. Tech.	2016 - 2018	IIT Madras	8.79
B. Tech.	2010 - 2014	NIT Calicut	8.05
XII <sup>th</sup> (CBSE)	2009	Central Academy Police Line, Kota	80%
X <sup>th</sup> (CBSE)	2007	St. Joseph's Convent S. S. School, Sagar	87.8%

## RESEARCH DETAILS

Area of Research: Automation in Construction

Guides: Prof. Koshy Varghese, IIT Madras India and Prof. Quang Ha, UTS Australia

Research Topic: Vision-Based Automated Progress Monitoring in Construction

## PAST EMPLOYMENT DETAILS

### Larsen & Toubro Construction

**Experience** - June 2014 to July 2016 (2 years)

Senior Engineer (Civil) [PS No. : 20070298]

Water Supply & Distribution Business Unit

Training- L&T's Center for Technology and Engineering Applications (C-TEA), Mysore, Karnataka, India

**Completed Project** - Udaipura Multi Village Rural Water Supply Scheme, Raisen MP (Value 155Cr.).

Completed the execution of all the 23 structures of water treatment plant from foundation level including hydro testing.

## ACADEMIC PROJECTS

- **IIT Madras & L&T Construction**  
Cashflow Analysis of Projects in Water Supply & Distribution Scheme (M. Tech Thesis)  
Supervised by- Dr. Sivakumar Palaniappan & Dr. K. Ananthanarayanan
- **NIT Calicut**  
Treatment of poultry wastewater using cyclic photoreactor. (B.Tech Final Year Project)  
Supervised by- Dr. Mathava Kumar S & Dr. Remya Neelancherry

## INTERNSHIPS

- **IIT Madras** (May 2013 – July 2013)  
Project I - Experimental investigation on the mechanical behavior of corroded pre-tensioned beams  
Supervised by - Dr. Radhakrishna G. Pillai  
Project II - Recycling technology of construction and demolition waste and experimental study on recycled aggregates  
Supervised by - Dr. K. N. Satyanarayana
- **Monte Carlo Construction Limited** (May 2012 – June 2012)  
Supervised the canal excavation, paver lining and construction of the inline structure of canal.  
Construction Site – Barghi right bank main canal at Maihar (Satna) M.P. India

## PUBLISHED PAPERS

Papers in International Conference published as:

1. *Bhadaniya P., Reja V. K., and Varghese K. (2021). "Mixed Reality-Based Dataset Generation for Learning-Based Scan-to-BIM" Pattern Recognition. ICPR International Workshops and Challenges, January 10-15, 2021, Proceedings, Part VII.*
2. *Saxena, A. K., Reja, V. K., and Varghese, K. (2020). "IoT Enabled Framework for Real-time Management of Power-Tools at Construction Projects." 37th International Symposium on Automation and Robotics in Construction (ISARC- 2020), 992-999, at Kitakyushu, Japan.*
3. *Reja, V. K., and Varghese, K. (2019). "Impact of 5G Technology on IoT Applications in Construction Project Management." 36th International Symposium on Automation and Robotics in Construction (ISARC-2019), 209-217, at Banff, Canada*
4. *Asha, R. C., Chandra, B. S., Shukla, A., Reja, V. K., Adusumilli, K. A., Neelancherry, R., Kumar, M. "Photocatalytic Treatment of Poultry Wastewater by hectorite- TiO<sub>2</sub> aqueous suspensions" International Conference on Chemical and Environmental Research (ICCER-2014), JMC College Trichy, Tamil Nadu India, 11-12 March 2014.*

## SOFTWARE SKILLS

1. AutoCAD
2. Revit
3. Navisworks
4. MS Project
5. MS Office

## ACADEMIC ACHIEVEMENTS

### Ph.D.

1. Awarded the University of Technology Sydney Presidents Scholarship (UTSP).
2. Initiated IAARC@IITM an independent student body dedicated to spread knowledge and innovate on automation in construction at IIT Madras.
3. Selected for the Prestigious Prime Ministers Research Fellowship (PMRF) for Doctoral Research.
4. Served as a Teaching Assistance for the NPTEL course on Project Planning and Control for the duration of May 2019 – October 2019 and September 2020 - January 2021 with 9000 participants undertaking the course each time.

### M. Tech. & B. Tech.

1. Selected for Build India Scholarship Program Sponsored by L&T Construction (L&T BIS) and completed M. Tech in Construction Technology and Management at IIT Madras (2016-18 Batch)
2. Dynamically worked as Head Executive at Civil Engineering Association (CEA) NIT Calicut during 2011-2014.
3. Designed a working model of the University of Phoenix stadium (Specifications: movable ground on wheels & covered cantilever roof).
4. Presented a Seminar on Planning of Road network in new cities and change detection in the existing ones using GIS at NIT, Calicut.
5. Certified in Business Communication and Business Etiquettes.

### 12<sup>th</sup> Standard

1. Gold Medallist for securing International Rank 9<sup>th</sup> in International Maths Olympiad 2009 (IMO-09).
2. Secured AIR-827 in 11<sup>th</sup> National Science Olympiad 2008 (NSO-08).

## INTERESTS

- **Academic Interests** : Construction Planning & Control by Digitalization, Application of BIM and Sustainability in Construction.

## REFERENCES

1. **Dr. Koshy Varghese**  
Professor, IIT Madras, Tamil Nadu, India  
Email: koshy@iitm.ac.in
2. **Dr. Sivakumar Palaniappan**  
Assistant Professor, IIT Madras, Tamil Nadu, India  
Email: sp@iitm.ac.in
3. **Dr. Mathava Kumar S**  
Associate Professor, IIT Madras, Tamil Nadu, India  
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