

## Curriculum Vitae

---

**Saarthak Surana**  
(formerly Sheetal Surana)

BTCLM Division  
Department of Civil Engineering  
Indian Institute of Technology Madras  
Chennai - 600036, India  
(+91) 875 450 0195  
saarthak.surana@gmail.com

---

### RESEARCH INTERESTS

- Evaluation of material deterioration processes and transport mechanisms
- Microstructure characterization
- Durability assessment for infrastructure systems
- Non-destructive evaluation of concrete structures
- Sustainable materials and technologies

---

### EDUCATION

- **Master of Science (by research) in Civil Engineering** (July 2013 - Present)  
**Indian Institute of Technology Madras (IITM)**, Chennai, India; **CGPA: 8.6/10**  
Thesis title: "Performance evaluation of curing compounds using strength and durability parameters of concrete" (under review)  
Advisors: Dr. Radhakrishna G. Pillai and Prof. Manu Santhanam
- **Bachelor of Engineering in Civil Engineering** (2006 - 2010)  
Jai Narain Vyas University, Jodhpur, India  
Final Year Project: "Design of Water Treatment Plant and Distribution Network for a residential township"

---

### PUBLICATIONS

- Surana, S., Pillai, R.G., Santhanam, M., "Performance evaluation of curing compounds using durability parameters" (Communicated to Journal of Construction and Building Materials)
- Surana, S., Pillai, R.G., Santhanam, M., "Performance evaluation of field curing using durability parameters" (Communicated to Indian Concrete Journal)

---

### ACHIEVEMENTS & EXAM SCORES

- Stood among the Top 5 % of the 67,472 candidates appeared in the Graduate Admission Test in Engineering (GATE) in 2013 [GATE is the All India common entrance examination for admission to all the Graduate Programs in Engineering in India]
- Graduate fellowship from the Ministry of Human Resource Development, Govt. of India for the entire period of graduate studies (2013-2016)
- GRE Score: 314/340
- TOEFL Score: 108/120

---

## PROFESSIONAL EXPERIENCE

- **Project Associate** (Currently working)  
Department of Civil Engineering, **Indian Institute of Technology Madras**, Chennai, India
  - Study of drying shrinkage of various construction mortars
  - Study of the potential of reject materials for use in concrete to replace cement
  - Study of the use of electro-magnetically conditioned water in concrete
  - Investigation of chloride threshold values for chloride-induced corrosion for various binders using electrochemical techniques
- **Graduate Assistant** (2013 - 2016)  
Department of Civil Engineering, **Indian Institute of Technology Madras**, Chennai, India
  - Assisted in preparing the answer keys and then grading various exams/lab reports and in conducting various laboratory sessions for the following courses.
    - CE 2330 - Civil engineering materials (undergraduate, Fall 2015)
    - CE 3410 - Civil engineering materials laboratory (graduate, Spring 2014)
    - CE 5020 - Repair and maintenance of constructed facilities (graduate, Spring 2015)
    - CE 5337 - Non-destructive evaluation of constructed facilities (graduate, Spring 2016)
  - Assisted Dr. Radhakrishna Pillai in the investigation of the quality of concrete used and the causes for premature failure of a reinforced concrete sewer pipe in Chennai, India.
  - Assisted Prof. Manu Santhanam and Dr. Radhakrishna Pillai in the 3-year project on “the development of performance specifications for durable concrete construction in India”; sponsored by The Department of Science & Technology, Govt. of India
  - Supervised six interns on their experimental work during the Summer 2015
  - Assisted in coordinating the lab visits to the Concrete Durability Research Lab during the Civil Engineering Research Expo at IIT Madras.
  - Assisted in organizing the first National Concrete Canoe Competition in India
- **Senior Site Engineer** (Feb, 2011 - July, 2012)  
Larsen and Toubro Limited, Chennai, India
  - Construction site: Kakrapar Atomic Power Station 3 & 4, Gujarat, India (2x700 MW)
  - Responsibilities included the scheduling and supervision of various construction activities for the main reactor building, pressure grouting of underlying rock strata, installation and grouting of rock anchors, reinforcement scheduling and laying, and concreting works.
- **Site Engineer** (Nov, 2010 - Jan, 2011)  
Arihant Superstructure Limited, Jodhpur, India
  - Gained exposure in the area of planning/scheduling/billing/masonry/concreting etc. at three residential building construction sites (each with more than 10 storeys).

---

## SOFTWARE SKILLS

- Microsoft<sup>®</sup> Office/Excel/Powerpoint
- AutoCAD, SigmaPlot