# DIVYA DARSINI T | CE18S017 | 55/CE/21/003

# **Indian Institute of Technology Madras**



EDUCATION					
Program	Institution	%/CGPA	Year of Completion		
MS (by research) - Transportation Engineering	Indian Institute of Technology, Madras	9.43/10	2021		
BE - Civil Engineering	College of Engineering-Guindy, Anna University	9.35/10	2017		
Class XII - Matriculation	DAV Matriculation Higher Secondary School	96.8	2013		
Class X - CBSE	The Hindu Senior Secondary School	10/10	2011		
SCHOLASTIC ACHIEVEMENTS					

- Outstanding Performer (2011) and Best Turn Out (2009) at The Hindu Senior Secondary School
- Received 6 endowment awards during under graduation for meritorious academic performance (2013-2017)
- Secured a GATE (2018) score of **680** and ranked among top **1.5%** of the undergraduates in India

### PROFESSIONAL EXPERIENCE

## Technip India Limited | Summer Internship

(June '16 - July '16)

- Designed a Pipe Rack module for a Liquified Natural Gas project
- Analyzed different pipe rack structures with varying member arrangement in STAAD.Pro, to arrive at an optimal design
- Proposed a cost-effective design with reduced structural weight, without compromising on structural integrity

#### Chennai Metro Rail Limited | Inplant Training

May'16

- Exposed to the construction technologies and safety measures adopted at the CMRL project site
- Inspected various elevated and underground metro stations at different levels of construction
- Explored the **Tunnel** stretches, cross passages and the tunnel boring machine mechanism

### Rampon Infratech Pvt Ltd. | Inplant Training

*Mav'15* 

- Visited ongoing construction projects at different stages of construction
- Learned various practices, which includes Placing of shuttering, bar splicing, placing reinforcement grid, concrete pouring, compacting and curing

#### Highway Research Station | Inplant Training

June'15

- Conducted **spot speed studies** for different class of vehicles at the Avadi CTH road junction
- Analysed accident data at the surrounding site and developed a map for the area with optimum lighting to minimize accidents

#### **KEY PROJECTS**

# Characterization of Fatigue resistance of Bitumen | Master's Thesis | Dr. Atul Narayan

(Jul'19 – Present)

- Determined the viscoelastic properties of bitumen and surface free energies (SFE) of bitumen and aggregates
- Estimated the energy stored and the energy required to produce fatigue cracks in bitumen
- Based on these, a fatigue failure criterion will be proposed which can be used to rank binders and predict their contribution in the fatigue life of asphalt mixtures

# Analysis of Corrugated Web Steel Girders | BE Mini Project | Dr. Jane Helena

(Jul'16 – Nov'16)

- Designed Plate Girders with **Trapezoidal corrugated webs** to enhance its buckling resistance and strength to weight ratio
- Analysed the effect of Corrugation angle on the Load carrying capacity using ABAQUS
- Recommended an optimum Corrugation angle which resulted in 38% higher strength

## Plain Concrete Column cast in stay in place FRP formwork | BE Main Project | Dr. Rahima Shabeen

(Dec'16 – Apr'17)

- Studied the applicability of Glass Fibre Reinforced Polymer as a replacement to the conventional steel reinforcement
- Determined the axial strength of GFRP infilled concrete columns using ANSYS and Compression Testing Machine
- GFRP infilled plain concrete columns showed 49% increase in axial strength compared to plain concrete columns

# Mode Choice Modelling and Analysis | Course Project | CE5810

(4ug'18 - Nov'18)

- Estimated a multinomial logit model of mode choice using SST software for the travellers of Chennai city
- Analysed the influence of several variables on mode choice

## **POSITIONS OF RESPONSIBILITY**

## Organizer Workshop Team (2015-2016)

- Organized Connective Convergence workshop in Kurukshetra'16<sup>1</sup> which had 600+ participants
- Led a team of 10+ coordinators and volunteers

	Organized Seismic Design of Buildings and ETABS workshop in Civilisation'16 <sup>2</sup>		
Core Member	Conceptualized and conducted an innovative hands-on session for 700+ participants		
Civilisation'16	• Led a team of 15+ coordinators and volunteers		
(2015-2016)	• Achieved a 15% increase in participation over Civilisation'15		
	• Coordinated with <b>hospitality</b> team and provided the best facilities to participants from all over the country		
Executive	• Part of a 6 member team in the <b>Society of Civil Engineers</b> , CEG responsible for organizing Civilisation <sup>2</sup>		
	• Involved in <b>direct marketing</b> and provided hostel accommodation for 3000+ participants of		
<b>Member</b> (2014-2015)	Civilisation'15		
(2014-2013)	Arranged several guest lectures from industries throughout the academic year		
<b>CEG Captain</b>	• Instrumental in forming <b>Women's Throwball team</b> at College of Engineering, Guindy		
Throwball &	• Led the Basketball team to win <b>silver</b> in the Intercollege tournament (2017)		
Basketball	• Part of the 8 member team responsible for organizing <b>Annual Sports Day</b> (2016-2017), Anna University		
(2016-2017)	Take of the comment term respondent for organizing raminal operation and (2017), ramin of the converse		

# COURSE WORK AND SKILLS

Pavement Materials	Pavement Management System	Pavement Analysis and Deign	Pavement Construction Technology
Urban Transportation	Analytical Techniques in	Traffic Engineering and	Mechanics of Viscoelastic
Planning	Transportation	Management	Materials

**Relevant Labs:** Pavement Materials and Evaluation lab, Transportation Engineering Studio

Relevant Skills: AutoCAD, STAAD.Pro, ANSYS, KENPAVE, RHEA, VISSIM, Origin, MS office

CO-CURRICULAR AND EXTRA CURRICULAR ACTIVITIES				
SPORTS	• Emerged as Winners in the under 19 State level Inter school Throwball tournament (2009)			
	• Represented <b>Chennai district</b> in sub-junior <b>State</b> Throwball championship (2009) – 4 <sup>th</sup> position			
	• Secured silver and bronze in under 19 Zonal level Basketball tournaments (2009-2011)			
	• Placed <b>Second</b> in <b>Shotput</b> and <b>Discus Throw</b> events in Sportsfest'18 <sup>3</sup> , at IIT Madras			
	• Won <b>three gold</b> and <b>one silver</b> in throwing events in Athletics Schroeter <sup>4</sup> (2018 and 2019)			
	• Won three gold and one silver in shotput and discus throw events in PG league (2018 and 2019)			
	Winners in Inter Hostel Basketball tournament (2020)			
	• Runners in Inter Hostel Throwball and Basketball tournaments (2019)			
	Won Bronze in Inter Department Basketball league (2019)			
	Represented IIT Madras at the Inter IIT Sports Meet for two consecutive years			
SOCIAL	Active member of National Service Scheme (NSS), CEG			
	• Took part in a 10 day village camp held at velliyur and enthusiastically participated in the following activities			
	■ Tree plantation			
	■ Organizing one day free <b>medical camp</b>			
	<ul> <li>Arranging sports day and science exhibition at Velliyur Government School</li> </ul>			
	■ General school <b>cleaning</b>			
	■ Awareness rally on hazards of tobacco usage			

<sup>1–</sup> Annual Techno-management fest, College of Engineering Guindy (CEG); 2– National level symposium conducted by department of civil engineering, CEG; 3– Annual Inter College sports competition, IIT Madras; 4– Annual Inter hostel sports competition, IIT Madras