

GREENA MARIA SUNNY

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Nationality: Indian

EDUCATION

Institute	Indian Institute of Technology, Madras	Aug 2021 – Present
Degree	PhD in Transportation Engineering	
Institute	Birla Institute of Technology and Science, Pilani - Hyderabad campus	Aug 2019 – May 2021
Degree	M.E. in Transportation Engineering	
CGPA	9.92/10	
Institute	Mar Baselios College of Engineering and Technology, Thiruvanthapuram	Aug 2014 – May 2018
Degree	B.E in Civil Engineering	
CGPA	8.6/10	
Institute	Vidhyadhiraja Vidhyabhavan Senior Secondary School, Angamaly	Jun 2012 – May 2014
Degree	Class 12	
Percentage	90.4%	

RESEARCH EXPERIENCES

Assessment of Thermal Degradation of SBS polymers in Bio-Based Encapsulated Bitumen <ul style="list-style-type: none">Developed an encapsulation technique that helps in the transportation of bitumen in its cold formCompared the short term ageing properties of encapsulated and non-encapsulated bitumenStudied the loss of properties in SBS modified bitumen due to thermal degradation of SBS polymersCalculated the cost and environmental benefits associated with encapsulation of bitumen	Aug 2020 – May 2021
Design of Concrete Overlay over a Railway Platform <ul style="list-style-type: none">Back-calculated the modulus of elasticity of the existing asphalt pavementDesigned the thickness of a concrete overlayCalculated the spacing of dowel and tie bars	Jun 2020 – Aug 2020
Evaluation of Performance of Thin Layer SMA using Waste Plastic as an Overlay layer <ul style="list-style-type: none">Explored the usage of different percentages of waste plastic materialWaste plastic was added into stone matrix asphalt (SMA) in a dry process	Feb 2020 – Mar 2020

- Estimated the Marshall parameters of the bituminous mixtures

Analysis of Characteristics of Reclaimed Asphalt Pavement with Styrene-Butadiene-Styrene Polymer Modified Bitumen

Dec 2019 – Mar 2020

- Usage of RAP materials with varying percentages of SBS modified bitumen
- Volumetric properties of the mixtures were determined
- Rheological analysis of the different SBS modified bitumen were carried out

Stabilisation of Subgrade Soil using Demolished Concrete Aggregates

Oct 2017 – Apr 2018

- Improved the bearing capacity of red soil - found in parts of Kerala
- Utilised sustainable materials like demolition waste in stabilisation
- Designed the thickness of the asphalt pavement

AREAS OF INTEREST

- Pavement Materials & Design
- Pavement Asset Management System
- Sustainable Construction Materials
- Numerical Modelling
- Statistical Modelling

COURSES

Pavement Analysis and Design, Pavement Material Characterisation, Pavement Asset Management System, Airport Planning and Design, Highway construction practices, Highway Geometric design

Mathematics: Linear Regression, Geometry and Calculus, Linear Algebra and Complex Numbers, Partial Differential Equations, Probability and Statistics

TECHNICAL SKILLS

- FAARFIELD
- KENPAVE
- KENSLABS
- MS Office
- AutoCAD
- Python
- R Programming
- MATLAB

POSITION OF RESPONSIBILITY

Graduate Teaching Assistantship	Birla Institute of Technology & Science Pilani, Hyderabad Campus <ul style="list-style-type: none"> • Guided undergraduate students in highway materials laboratory • Assisted professors in conducting tests, correction of answer sheets and grading of students 	Aug 2018 – Present
Technical Head	Mar Baselios College of Engineering and Technology <ul style="list-style-type: none"> • Conducted various workshops and conferences • Organised an Inter-Collegiate Technical fest 	Aug 2017 – Mar 2018

WORK EXPERIENCE

Civil Trainee, Mansions Builders

Jul 2018 – Dec 2018

- Worked on quantity estimate of a residential project
- Gained insight into how to integrate design and drawings onto a site

LANGUAGES

English, Hindi, Malayalam