

## CURRICULUM VITAE

### **DEVAPRIYA A.S**

Research Scholar, Geotechnical Engineering  
Dept. of Civil Engineering  
Indian Institute of Technology Madras, India



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### PERSONAL STATEMENT

I am an enthusiastic Geoenvironmental engineering researcher pursuing an integrated Ph. D in the geotechnical engineering division. Honoured to be a research scholar in the Indian Institute of Technology, Madras, the best engineering institute in the country, I have experience working in a highly regulated laboratory environment. My current work involves employing experimental investigations to understand the long-term hydro-mechanical behaviour of compacted clay liners.

### EDUCATION DETAILS

2016-2020	<b>MS (By Research)</b> <b>Indian Institute of Technology Madras, Chennai, India</b>	<b>Current CGPA:</b> <b>8.72/10</b>
2011-2015	<b>Bachelor of Technology - Civil engineering</b> <b>(First Class with Honours)</b> <b>Government Engineering College, Kozhikode, India</b>	<b>CGPA:8.15/10</b>
2011	<b>Senior secondary school (CBSE Board)</b> <b>Jawahar Navodaya Vidyalaya, Kannur</b> <b>Class 12</b>	<b>93.4 %</b>
2009	<b>Secondary school (CBSE Board)</b> <b>Jawahar Navodaya Vidyalaya, Kannur</b> <b>Class 10</b>	<b>95.6 %</b>

### RESEARCH EXPERIENCE

<b>MS Project</b>	<b>Title:</b> Behaviour of red soil enhanced with bentonite for liner applications  <b>Objective:</b> To evaluate the efficiency of compacted red soil enhanced with bentonite as a clay liner when subjected to alternate wet-dry cycles and chemical contamination. Cyclic swell-shrink tests were conducted in the laboratory using one-dimensional oedometer swell set-ups using DW, 0.4M NaCl and 0.4M CaCl <sub>2</sub> solutions to study the effect of inundating fluid on the volume change and hydraulic behaviour of the soil. The change in the microstructure of the compacted soil from the as-compacted state was studied using SEM analysis.  <b>Guide:</b> Prof. T. Thyagaraj, Indian Institute of Technology Madras, India
<b>B. Tech Project</b>	<b>Title:</b> Comparison of strength characteristics of plate girders using LSM and WSM techniques

**Objective:** The strength characteristics of plate girders of various dimensions were compared using the LSM and WSM method of designs. The codes of practise for general construction in steel, IS 800:1984 and IS 800:2007, based on the working stress method and the limit state method respectively, have been used in the study. A program is generated for determining the bending strength, shear strength and the compressive strength of stiffeners for both LSM and WSM design criteria and the results were analysed.

**Guide:** Dr. Dileep Kumar P.G., Government Engineering College, Kozhikode

## **PUBLICATIONS**

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### **Journal Paper:**

A. S. Devapriya and T. Thyagaraj, “Combined Effect of Wet-Dry Cycles and Physicochemical factors on Volume Change and Hydraulic Behaviour of compacted Red Soil-Bentonite mixtures” (To be communicated)

### **International Conference proceedings:**

A. S. Devapriya and T. Thyagaraj (2020) “Swell-shrink and hydraulic behaviour of compacted red soil-bentonite mixture” BSGC2020, Helsinki, Finland (Accepted, to be published in IOP conference series: Earth and Environmental Science)

### **National Conference proceedings:**

A. S. Devapriya and T. Thyagaraj (2019) “Effect of induced osmotic suction and bentonite content on swell behavior and hydraulic conductivity of compacted red soil” IGC 2019 GeoINDUS, SVNIT Surat, Gujarat, India (To be published in Springer book series)

## **TECHNICAL SKILLS**

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Laboratory experiments	Basic geotechnical laboratory tests, cyclic swell-shrink tests, flexible wall permeability tests
Image analysis techniques	ImageJ
Modelling	GeoStudio: Slope stability using Slope/W Plaxis: Analysis of stability and deformation of a diaphragm using Plane strain model
Data science tools	Basics of Python, SQL

## **COURSE WORKS COMPLETED**

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CE5310 Advanced Soil Mechanics  
CE5330 Advanced Foundation Engineering  
CE5300 Applied Soil Mechanics  
CE5350 Geosynthetics & Reinforced Soil Structures  
CE5360 Soil Exploration & Field Tests  
CE5280 Hazardous Waste Management  
CE6350 Critical State Soil Mechanics  
CE6420 Ground Improvement Techniques

CE5430 Geotechnical Engineering Design Studio

### **ONLINE COURSES (Coursera)**

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Experimental Design Basics  
Data science methodology  
Python for Data science and AI  
Databases and SQL for Data science

### **FELLOWSHIPS**

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Aug 2016-Aug 2020      **MHRD GATE scholarship (All India percentile-97.76) for graduate studies at IIT Madras**

### **AWARDS**

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May 2017      **Best Coordinator**  
Research Scholars' Day (RSD-2017)

### **WORK EXPERIENCE**

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Aug 2016-Aug 2020      **Teaching assistant**  
Indian Institute of Technology Madras  
June 2014      **Industrial Trainee**  
Uralungal Labour Contract Cooperative Society (ULCCS) Ltd, Calicut  
Streamline Consortium, Calicut

### **POSTIONS OF RESPONSIBILITY**

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Sept 2016-May 2017      **Events Coordinator**  
Research Scholars' Day (RSD-2017)  
June 2012-Nov 2012      **Class Representative**  
Bachelor of Technology, Government Engineering College, Kozhikode

### **DECLARATION**

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I hereby declare that the details stated above are true and correct to the best of my knowledge

Date: 24-Dec-2020

Place: Chennai