BALAJI SAI KUMAR BANDARU
First Year Ph.D. student,
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ACADEMIC DETAILS

Degree	Institution	CPI/%	Year
Ph.D.	Indian Institute of Technology, Madras	-	2021 - Present
M.Tech.	Indian Institute of Technology, Palakkad	9.03	2019 - 2021
B.Tech.	Mahindra Ecole Centrale, Hyderabad	9.20	2015 - 2019
Class XII	Nano Junior College, Hyderabad	93.5	2014 - 2015
Class X	Kendriya Vidyalaya O.N.G.C, Rajahmundry	9.40	2011 - 2012

INTERNSHIPS

Trainee, Offshore Structures, I.E.O.T, Oil and Natural Gas Corporation   **May 2018 - June 2018**

- Analysed the offshore structure at Bombay High, and performed soil-pile interaction; Performed simulation of the joint to understand the effect of flexibility of the joint on the offshore structure; Designed a jacket structure based on the observations of the analysis

Trainee, Green building, Rail Vikas Nigam Limited   **May 2017 - July 2017**

- Reviewed the project blueprints and structural specifications of the Indian Railway Institute of Financial Management at Moula Ali, and conceptualized a sustainable model to decrease the energy usage intensity of the structure

PROJECTS

Time-dependent response of soft sensitive soil, Dr. Rakesh J. Pillai   **July 2020 - June 2021**

- Implemented elasto-viscoplastic modelling to study the time-dependent behaviour of soft sensitive clay in python and also performed analysis like strain rate dependence, stress relaxation; Analysed the effect of ground improvement techniques on time-dependent behaviour using soft soil creep model, and developed an empirical relation

Effect of 3D printed geogrid on soil response, Dr. Divya P. V.   **Jan 2020 - June 2020**

- Effect of 3D - printed geogrid on soil response was performed using PLA as the geogrid; Response of soil with varying dimensions of geogrid was also captured

Finite element analysis of strip footing, Dr. Anil Kumar   **Jan 2020 - June 2020**

- Performed finite element analysis of strip footing using plane strain condition in python and obtained stresses, strains developed in strip footing

Stress distribution in pavement using PLAXIS 2D, Dr. Hari Prasad   **Jan 2019 - May 2019**

- Studied the effect of material properties on stress distribution in the pavement; Performed analysis for WBM and DMB to obtain stress distribution on top layer

Load settlement analysis of square footing in PLAXIS 2D, Dr. Hari Prasad   **Dec 2018 - May 2019**

- Effect of placement of geogrid, stiffness parameters of soil, material properties of geogrid and size of finite elements on bearing capacity and settlement of soil were quantified

Crack detection using image processing, Dr. Dilip Kumar and Dr. Prafulla K.   **Aug 2018 - Nov 2018**

- Using image processing models like Canny edge detection and Sobel filter to perform crack detection using python

Deformation of notch due to thermo-elasticity, Dr. Jagan Mohan P.   **Jan 2017 - May 2017**

- Used COMSOL multiphysics to quantify the evolution of stress concentration as function of temperature, specimen dimensions and material properties; The relation between stress, strain, and temperature at the notch was obtained

POSITIONS OF RESPONSIBILITIES

Coordinator, RConnect IIT Madras   **Aug 2021 - Present**

Teaching assistant, IIT Palakkad   **Jan 2021 - June 2021**

- Finite element method for structural engineers (CE5001)

- Finite element method for geotechnical engineers (CE5615)

- Soil dynamics and earthquake engineering (CE5611)

Database manager, alumni cell, IIT Palakkad   **May 2020 - April 2021**

Hostel representative at Nila campus, IIT Palakkad   **Aug 2019 - July 2020**

M.Tech. representative for ACE council, IIT Palakkad   **July 2019 - June 2020**

College representative for E-Cell   **July 2016 - June 2017**

ACHIEVEMENTS

MHRD scholarship   **2019, 2020, 2021**

Merit scholarship   **2016, 2017, 2018**

Building performance analysis, Autodesk   **2017**

Student expert at Autodesk design academy, Autodesk   **2016**

Third in fifty shades of code, AETHER-2016   **2016**

SKILL SUMMARY

- Programming Languages - Python, C, LaTeX, HTML, CSS

- Mathematical Tools - MATLAB, Veusz

- Technical software - PLAXIS 2D, PLAXIS 3D, FreeFEM, AutoCAD, STAAD Pro, Fusion 360, Revit, Insight 360, COMSOL

EXTRA-CURRICULAR ACTIVITIES

Tennis ball cricket tournament - Winner, IIT Palakkad   **Sept 2019**

Tennis singles, AERO sports fest - Runner-up, Mahindra Ecole Centrale   **Jan 2018**

Tennis singles state and national level competition, KVS Nationals   **2008, 2009**

REFERENCES

Prof. R. G. Robinson

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