Sandeep Bandipally
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ACADEMIC PROFILE

Degree/Examination	Year	Institution	Performance
M.S, Geotechnical Engineering	2017	Indian Institute of Technology (IIT), Madras	7.8/10
B.Tech, Civil Engineering	2013	Sri Datta Institute of Engineering & Sciences, Hyderabad	80.25%
Class XII (BIE, Andhra Pradesh)	2009	Sri Chaitanya Jr. College, Hyderabad	89%
Class X (BSE, Andhra Pradesh)	2007	Vikas High School, Siddipet	92.8%

PROFESSIONAL EXPERIENCE

Prof. V.S. Raju Consultants, Hyderabad **(March'2022 – Till date)**

Senior Geotechnical Engineer

Involvement in the design of Major Projects by me:

- Polavaram Dam, Andhra Pradesh.
- Kalpasar Dam, Gujarat.
- Numaligarh Refinery Limited, Assam.
- Hagari Aqueduct, Karnataka.
- High rise buildings at Delhi, Bhubaneswar, Bangalore.
- Ash pond designs for TSGENCO and APGENCO.

Roles and Responsibilities:

- Review of geotechnical investigations data.
- Site visits to study the soil conditions.
- Analysis of shallow and deep foundations- Bearing Capacity, Settlement.
- Liquefaction analysis and mitigation measures.
- Interpretation of soil parameters from SPT and ECPTs.
- Analysis of slope stability and seepage problems.
- Design of dewatering system.
- Attending client meetings and coordinate with site team.
- Preparation of technical reports for projects.
- Supervision of team of 5-6 engineers.

ACE Engineering College, Hyderabad **(September'2017 – March'2022)**

Assistant Professor

- Subjects Taught:
  - 1) Soil Mechanics
  - 2) Foundation Engineering
  - 3) Advanced Foundation Engineering
  - 4)Transportation Engineering
  - 5) Geotechnical Engineering Laboratory
  - 6) Environmental Engineering Laboratory
  - 7) Transportation Engineering Laboratory

Indian Institute of Technology Madras, Chennai, Tamil Nadu **(July'2014-July '2017)**

Teaching assistant:

- Geotechnical Engineering and Geotechnical Engineering Laboratory

ACADEMIC ACHIEVEMENTS

- **Received "IGS – Shri A.G. Dastidar Biennial Prize" for the Best paper on "Ground Improvement" for the years 2018-2019**
- **Qualified in GATE 2013 with an AIR 1243.**

PUBLICATIONS

Journals:

- Cherian, C., Kollannur. N. J., **Bandipally, S** and Arnepalli. D. N (2018). "Calcium absorption on clays: effects of mineralogy, pore fluid chemistry and temperature", ***Applied Clay Science*****,** 160, 282-289.
- **Bandipally. S**, Cherian. C, Arnepalli. D. N (2018). "Chemical characterization of lime treated sodium bentonite using thermogravimetry analysis for assessing short-term strength behaviour", ***Indian Geotechnical Journal,*** 48(3), 392-404.

Conference Proceedings:

- Cherian. C, **Bandipally. S**, Kollannur. N. J, Arnepalli. D.N (2017). "Study on calcium sorption mechanisms in clay-lime system", *International Clay Conference* (*ICC-2017*), 16-21 July, Granada, Spain.
- Cherian, C., **Bandipally, S.**, Arnepalli, D. N., Dhulipala, V. R. and Korupolu, R. N. (2016). "Reappraisal of Optimum Lime Content Determination for Lime Stabilization of Fine-grained Soils", *6th Asian Regional Conference on Geosynthetics*, 8-11 Novemebr, New Delhi, India, 260-275.
- **Bandipally, S.**, Cherian, C., Anjana, R. K. and Arnepalli, D. N. (2016). "Sorption and diffusion studies to evaluate the degree of lime stabilization", *Proceedings of Indian Geotechnical Conference (IGC-2016)*, 15-17 December, Madras, India, 1-4.
- **Bandipally, S.**, Cherian, C., Arnepalli, D. N. and Pooja, C. P. (2014). "Influence of *pH* on Long Term Performance of Lime Stabilized Fine-Grained Soils", *Proceedings of Indian Geotechnical Conference (IGC-2014)*, 18-20 December, Kakinada, India, 1-10

PROJECTS

BTech Projects guidance **(September'2017 – March'2022)**

- Estimation of soil bearing capacity and foundation design for fly over at LB Nagar.
- Assessment of utilization of construction waste as subgrade material.
- Utilization of agricultural waste for enhancing the engineering properties of geo materials.
- Stabilization of soil using plastic waste

M.S Project

Project Title: Role of Ion Migration in Lime Stabilization of Fine-Grained Soils **(July'2013 – May'2016)**

Description:

- Attempted to elucidate the possible mechanisms of lime stabilization which contribute to enhancement of long-term strength and durability of treated soil.
- Studied the influence of soil properties such as clay mineralogy, specific surface area, soil pH, cation exchange capacity, soil acidity, base saturation capacity, and buffer capacity.
- Identified and quantified the formation of reaction products by incorporating advanced tools like X-Ray Diffraction, Thermo Gravimetric Analysis, Mercury Intrusion Porosimetry, Scanning Electron Microscopy with Energy Dispersive Spectrometry, Fourier Transform Infrared Spectroscopy.

B Tech Projects

Project Title: Planning and Designing of G+5 Commercial Building **(July'2012 – March'2013)**

Description:

- Collected preliminary data such as land area and boundary line and various provisions available at the site.
- Developed architectural drawings based on the data collected, and calculated various loads by consideringIS 456 and 1893.
- Determined final bending moments by conducting structural analysis.
- Manually designed the structural elements such as slab, beams, columns, footings and staircases.

Title: Estimation of Soil Bearing Capacity for Hyderabad Metro Rail **(May'2012 - July'2012)**

Description:

- Estimated Soil bearing capacity of soils at different locations along the proposed Metro Rail project from Nagole to Habsiguda over a stretch of 8 kms (45 t/m^2 - 70 t/m^2).
- Recommended shallow foundations, as hard terrain was encountered along the proposed corridor.

SKILLS

Software : Basic knowledge in C, Python, MS Office, Auto CAD, Geo Studio – SLOPE/W and SEEP/W.

Soft Skills : Passion, Communication (Oral and Written), Critical Thinking, and Patience

Languages :

English - Proficient
Hindi - Proficient
Telugu - Native Language

PROFICIENCY IN OPERATION OF SOPHISTICATED ANALYTICAL INSTRUMENTS

- X-ray diffraction, XRD
- Fourier Transform Infrared Spectroscopy, FTIR
- Scanning electron microscopy, SEM
- Atomic absorption spectroscopy, AAS
- Gas Chromatograph, GC
- UV-vis Spectrophotometer

- Ultra gas pycnometer
- Mercury intrusion porosimetry, MIP.
- Laboratory geotechnical centrifuge.
- Flexible wall permeability apparatus
- Differential scanning calorimeter, DSC and Thermal gravimetric analysis, TGA
- Time domain reflectometry (TDR) setup
- Dew-point potentiometer, WP-4
- Data acquisition systems
- Environmental test chamber
- Water quality analyzer, Elico, India Ltd
- Melt Flow Indexer (MFI)

ACADEMIC AND RESEARCH CONTRIBUTIONS

- Design and in-house fabrication of column test setups for establishing the suitability of locally availablegeomaterials as a liner material for hazardous waste disposal.
- Design and in-house fabrication of gas diffusion and permeation test setup for determination of gasdiffusion and permeation characteristics of geomaterials.
- Actively involved in the development of **Geoenvironmental Engineering Laboratory at IIT Madras.**
- Development of a **Laboratory Thermal probe** for determining thermal properties of geomaterials.
- Development of a test setup for determining the Impedance Response of cement, concrete and the rockmass.

REFERENCE

V. S. Raju
Formerly: Director IIT Delhi,
Prof & Dean, IIT Madras
Email: vsraju_b@yahoo.com

Dr. Dali Naidu Arnepalli
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