RESUME

Dr. Nikhil John K

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Project Associate

Dept. of Civil Engg.
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Personal Profile

Address
Kollannur Alukkal (H)
Mukkattukkara
Thrissur-680651
Kerala, India

D.O.B
28th November 1987
32 years, Male

Marital Status
Married

Hobbies
Painting and Sketching, Writing, Reading, Travelling

Language Proficiency
English, Malayalam, Tamil, Hindi

Education

2014-2020	**PhD-Geotechnical Engineering** – Indian Institute of Technology Madras, Chennai, India (*CGPA 8.63*)
2010-2012	**M-Tech Environmental Geotechnology** – National Institute of Technology Calicut, India (*CGPA 8.73*)
2006-2010	**B-Tech-Civil Engineering**-Govt. Eng. College, Thrissur, Kerala, India (*75.78%*)

Work Experience

2012 Jun - 2013 Nov
Asst. Prof., Civil Engineering, IES Engineering College, Thrissur, Kerala
2014 Jan - 2018 Dec
Half Time Research Assistant, IIT Madras, India
2020 Mar - Present
Project Associate, IIT Madras, India

Fields of Interest

- Soil chemistry
- Soil stabilization
- Cationic/anionic species migration through soil
- Clay mineralogy and surface charge properties
- Geoenvironmental engineering

Academic Projects

PhD

Title: Study on surface charge modifications and calcium migration during soil electrokinetics
Supervisor: **Dr. D. N. Arnepalli**, Associate Professor, Civil Dept., IIT Madras, Chennai, India

Summary

- The significance of initial soil chemistry in temporal and spatial variation in pH and surface charge during current flow through soil was delineated
- Electro-kinetic injection of calcium through soil was assessed and understood in light of the response of soil subjected to varying pH exposure conditions

Post Graduate:

Title: Behaviour of cemented sand reinforced with plastic strips
Supervisor: **Dr. S. Chandrakaran**, Professor, NIT Calicut, India

Summary

- The study observed that shredded plastic strips could be effectively used as reinforcements in cemented sand
- Significant improvement in tensile as well as ductility behaviour was observed due to the reinforcement addition

Publications

Journals

1. Cherian, C., **Kollannur, N. J.,** Bandipally, S., Arnepalli, D. N., 2018. Calcium adsorption on clays: effect of mineralogy, pore fluid chemistry and temperature. ***Applied Clay Science***, No. 160, pp. 282-289. DOI:10.1016/j.clay.2018.02.034.
2. K**ollannur, N. J.,** Arnepalli, D. N., 2019. Electrochemical treatment and associated chemical modifications of clayey soils: a review. ***International Journal of Geotechnical Engineering*** DOI:10.1080/19386362.2019.1653513.
3. K**ollannur, N. J.,** Arnepalli, D. N., 2019. Methodology for determining point of zero salt effect of clays in terms of surface charge properties. ***Journal of Materials in Civil Engineering, ASCE,*** Vol. 31, No. 12. DOI: 10.1061/(ASCE)MT.1943-5533.0002947.

Conferences and Book Chapters

1. N**ikhil John K.,** Arnepalli D.N., 2019. Factors influencing zeta potential of clayey soils. In: Stalin V., Muttharam M. (eds*) Geotechnical Characterisation and Geoenvironmental Engineering*, Springer, Singapore
2. K**ollannur, N. J.** and Arnepalli, D. N., 2019. Influence of acid and alkali treatment on physical and surface charge properties of clayey soils *EUROCLAY-2019*, Paris.
3. Surya, S. S., Arsha, L. K. R., **Nikhil, J. K.** and Arnepalli, D. N., 2017. Coupled flow of heat and moisture through compacted geomaterials*, Geotechnical Frontiers-2017*, Florida, USA.
4. Cherian, C., Bandipally, S., **Kollannur, N. J.,** Arnepalli, D. N., 2017. Study on calcium sorption mechanisms in clay-lime system. *Scientific Research Abstracts*. Vol. 7, p. 140
5. Chandreakaran, S. and **Nikhil John, K.** (2013) "Behavior of cemented sand reinforced with plastic strips", Proceedings of IGC, Dec. 2013, Roorkee.
6. N**ikhil John, K.** and Asha, N.P. (2013) "Behavior of small scale ring footing resting on geotextile reinforced soil", Proceedings of IGC, Dec. 2013, Roorkee.

Skills

Experimental

Expertise in geotechnical experiments and geosynthetics testing. Trained user of Atomic absorption spectrometer, UV-visible spectrophotometer, Helium gas pycnometer, Thermogravimetric analyser and FTIR. Also member of Electron Microscope Society of India (EMSI) and operator of Scanning electron microscopes (FEI Quanta 200, 400) and Transmission electron microscope (Philips CM 12)

Software

OriginPro, Adobe Photoshop, Microsoft Visio, Image J, MS Office

References

1. Dr. D. N. Arnepalli

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2. Dr. Subhadeep Banerjee

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DECLARATION: I do hereby declare that the above furnished details are true to the best of my knowledge and belief

Chennai **Nikhil John K**

11-11-2020