

ABOUT

Researcher enthusiastic about any and all areas of advancements in **Geotechnical and Geological Engineering**. Passionate about research and application of new ideas in real world problems. Driven towards gaining new knowledge and experience in diverse fields with an inherent interest towards ground modification and its geoenvironmental impact. Extensive knowledge and experimental experience on **ground improvement and environment oriented research**.

EDUCATION

High School / JUN 2008 - APR 2009

S.B.O.A Mat. Hr. Sec. School: Bio-Mathematics: 89%

Bachelors Degree / JUN 2009 - APR 2013

Anna University: Civil Engineering: 8.22/10 (CGPA)

Masters Degree / JUN 2014 - APR 2016

Indian Institute of Technology Madras: Geotechnical Engineering: 8.35/10 (CGPA)

Ph.D / MAY 2016 - Present (SEP 2020)

Indian Institute of Technology Madras: Geotechnical Engineering: Sulfate contamination on Stabilized soils.

PUBLICATIONS

Journal

Raja, P. S. K. and Thyagaraj T, (2019) "Effect of short-term sulphate contamination on lime-stabilized expansive soil", International Journal of Geotechnical Engineering, DOI: 10.1080/19386362.2019.1641665

Raja, P. S. K. and Thyagaraj T, (2020) "Sulfate effects on sulfate resistant cement-treated expansive soil", Bulletin of Engineering Geology and the Environment, DOI: 10.1007/s10064-019-01714-9

Raja, P. S. K. and Thyagaraj T, (2020) "Effect of compaction time delay on compaction and strength behavior of lime treated expansive soil contacted with sulfate", Innovative Infrastructure Solutions, DOI: 10.1007/s41062-020-0268-2

Book chapter

Raja, P. S. K. and Thyagaraj T, (2019) "Effect of Sulfate Contamination on Compaction and Strength Behavior of Lime Treated Expansive Soil", Recent Advancements on Expansive Soils, DOI: 10.1007/978-3-030-01914-3_2

Conference

Raja, P. S. K. and Thyagaraj T, (2018) "Effect of sulphate contamination on stabilized expansive soil", Next frontiers in civil engineering: sustainable and resilient infrastructure, IIT Bombay

Raja, P. S. K. and Thyagaraj T, (2019) "Sulfate effects on lime and sulfate resistant cement stabilized expansive soil", 7th Indian young geotechnical engineers conference, NIT Silchar

Raja, P. S. K. and Thyagaraj T, (2020) "Internal and External Sulfate Attack on Expansive Soil Stabilized with Calcium Based Stabilizers: A Review", Proceedings of Indian geotechnical conference, Andhra University.

ACCOMPLISHMENTS

Awarded the "iGrip-2020 Doctoral Research Award" for the work on "A Comprehensive Study of External Sulfate Contamination on Lime and Sulfate-Resistant Cement Stabilized Expansive Soil"

Awarded as the "Winners" of the "Students competition of DFI India students outreach program 'Groundwork' 2020"

EXPERIMENTAL PROFICIENCY

All basic tests for characterization soil / Consolidation / Durability testing (Impedance spectroscopy, Wet-dry cycles) / Mineralogical testing (Thermogravimetric analysis, X-ray diffraction (XRD) , Laser induced plasma spectroscopy(LIPS)) / Micro-structural testing (Scanning electron microscopy / Mercury intrusive porosimetry (MIP)) / Non-destructive testing (X-ray computed tomography XCT)

SOFTWARE PROFICIENCY

MS Excel / Plaxis 2D and 3D / Abaqus / Powerpoint / Soil vision

POSITIONS OF RESPONSIBILITY

Research Legislator

Student Legislative Council, Department of Civil Engineering
Indian Institute of Technology, Madras

Tenure: 07/2019 - 7/2020

Finance Core

Research Scholars Day- RSD 2019
Indian Institute of Technology, Madras

Tenure: 07/2018 – 07/2019

Facilities and Requirements Core

Research Scholars Day- RSD 2018
Indian Institute of Technology, Madras

Tenure: 07/2017 - 07/2018

EXPERIENCE

June 2015 - April 2016

Masters student, *Indian Institute of Technology Madras, Chennai, India*

During this period, I have assisted Prof. T Thyagaraj in conducting laboratory classes of the course "Construction materials lab" for B.Tech students

May 2016 - Present

Doctoral student, *Indian Institute of Technology Madras, Chennai, India*

During this period, I have assisted Prof. T Thyagaraj in conducting laboratory classes of the course "Construction materials lab" for B.Tech students and " Experimental geotechnics " for M.Tech, and Doctoral students

Have co-worked with Prof. T Thyagaraj for consultancy works related to Ground improvement, Sulfate bearing soils, Liquefaction, Analysis of pile loads, and design of Embankment and Fly ash ponds

OTHER PROJECTS AND RESEARCH

Currently working with Prof. R. Sarathi on "The effects of acid rain on the grounding and ageing properties of stabilized and unstabilized montmorillonite clay"