

Name: Dr. Suresh Kommu
Designation: Sr. Assistant Professor
Department: Civil Engineering
Mail.ID: Suresh_k@vnrvjiet.in



Experience (in years): Teaching: 16 Research: 4 years Others: Nil

1. Educational / Technical qualifications:

| S.No | Level (UG / PG / Ph.D) | Year of passing | Specialization |
|------|------------------------|-----------------|--------------------------|
| 1. | Ph. D | 2020 | Geotechnical Engineering |
| 2. | M.E | 2003 | Geotechnical Engineering |
| 3. | B. Tech | 1999 | Civil Engineering |

2. Teaching and Learning:

- 2.1 Teaching Interests: Geotechnical Engineering, Geosynthetics and soil reinforcement, Landslides and ground Improvement Techniques.
- 2.2 Novel Teaching & Learning Techniques adopted: Story Board, WIT & WIL, and Lab Initiative Protocol.
- 2.3 Involvement in curriculum updating / Design:
Framed M. Tech GTE syllabus and B.Tech GTE1, GTE-2, Soil Mechanics and Engineering Geology Syllabus.

NPTEL COURSES COMPLETED

- 1. Successfully completed the NPTEL course “soil mechanics/geotechnical engineering-1” (12-week course), July –October 2021 conducted by IIT Kharagpur.
- 2. Successfully completed the NPTEL course “foundation engineering-1” (12-week course), July –October 2021 conducted by IIT Kharagpur.
- 3. Successfully completed the NPTEL course “geotechnical engineering laboratory” (4-week course), July – August 2021 conducted by IIT Bombay.

3. Co-curricular and Extra-Curricular Activities

- 3.1. Interests and Hobbies: NA
- 3.2. CCA/ECA Organized: Nil

3.3. CCA/ECA participated: Nil

3.4. Counselling and Mentoring Activity: Department Student counselling in-charge and Counsellor for III, and IV B.Tech Students (20 Students)

3.5. Committees involved in:

Department level: DAC, BoS, NBA, NAAC, Dept. SPOCs for admissions and Mentoring in charge

Institute Level: Member for prevention and mitigation of COVID-19

4. Conference / Workshop / Seminar / Guest Lectures: *Guest lecture on “Design of Embankment on Soft Soils” in the FDP program, Organised by St. Martin’s college, Secunderabad.*

4.1 Conducted: 1

4.2 Attended: 05

4. Academic Contribution and Research & Consultancy:

Patents Granted:

1. An Industrial design patent was *granted* entitled “**Handheld Faucet sprayer**” in the month of June-2022. Inventors: **Dr. Suresh Kommu**, Krishna Karthika Gorla.
2. An Industrial design patent was *granted* entitled “**Solar Desalinator**” in the month of June- 2022. Inventors: **Dr. Suresh Kommu**, Krishna Karthika Gorla, Dr.Ajay Kumar Kaviti.
3. An Industrial design patent was *granted* entitled “**Interlocking Paver Block**” in the month of January-2023. Inventors: **Dr. Suresh Kommu**, Krishna Karthika Gorla.
4. An Industrial design patent was *granted* entitled “**Digital Soil Sensor**” in the month of May-2023. Inventor: **Dr. Suresh Kommu**.

Patent Papers Published:

1. A Patent was published entitled “**Geo composite Liner Systems**” Inventors: **Suresh, Kommu**, Siva Sankar, Asadi, Patent number: 201911028963A and published date: 26/07/2019.
2. “**Device and method to measure active earth pressure of back-to-back mechanically stabilized earth walls**” Application No.202141056943 A, Inventors: **Dr. Suresh Kommu**, Krishna Karthika Gorla, and Publication Date: 17/12/2021.

3. A Patent was published entitled “**Method for prediction of embankment failure on soft soils**” Inventors: **Dr.Suresh Kommu** and Sandhya Boda., Patent number: 202241042220 A and published date: 29/07/2022
4. A Patent was published entitled “**Piled Embankment Reinforcement Systems**” Inventors: **Dr.Suresh Kommu** and Raikanti Amulya, Patent number: 202241042334 A and published date: 19/08/2022

Copyrights:

1. “Digital Smart Soil Tensiometer Cum IoT Device”
2. “SPT Correlation”
3. Design of Embankment on Soft Soils.

Book Published:

Published a book entitled with “**Design of Embankment Widening and Mechanically Stabilized Earth Wall**”. Authors: [Dr. Suresh Kommu & Dr. SS. Asadi](#), ISBN: 1387737007, 9781387737000, Lulu Publication, Jun.2021.

WORKSHOP ORGANIZED

1. Organized 2-days national workshop on **computational skills enhancement in geotechnical engineering** conducted by CED, VNRVJIET under TEQIP-II during 28th – 29th November 2013.

INTERNATIONAL CONFERENCE ATTENDED

1. Attended and presented a paper titled **leaching behavior and strength characteristics of black cotton soil and fly ash**. In 8th international conference on material processing and characterization (ICMPC -2018) conducted by GRITE during 16-18 March 2018.
2. Attended and presented a paper titled **optimization of embankment widening** in the international conference on construction materials and smart structure for sustainable development (ICCMSSSD-2020) organized by VNR VJIET,during 29th -31st January 2020
3. Attended and presented a paper on **quality assessment of bore well and tap water in and around Hyderabad city**. In 2nd international conference on advance

in civil engineering (ICACE-2019) during 21st -23rd March -2019 at KLEF Vaddeshwaram.

4. Attended and presented a paper on **suitability of geo-composite layer for fly ash ponds** in 2nd international conference on recent trends in science, engineering and management during March 30-31, 2019, at hotel park Jaipur.
5. Attended and presented a paper on **role of molding water content on the strength properties of black cotton soil treated with ground granulated blast furnace slag (GGBS)** in international conference held at JNT New Delhi during 30 December 2017.
6. Attended and presented a paper on **analysis of earth reinforcement elements using finite element method** in international conference on emerging trends in civil engineering ICETCE -2014 organized by VNRVJIET during 6th-8th January 2014
7. Attended and presented a paper on geotechnical laboratory evaluation of recycled construction demolition material for road embankment at the international conference on innovative sustainable technologies in civil engineering (ISTCE-2021) organized by Bapatla engineering college, Bapatla during 24th -25th 2021.

NATIONAL CONFERENCE ATTENDED

1. Attended 2-days national conference on modern concretes- driving profit and sustainability” organized by VNRVJIET [under TEQIP-II](#) during 26th -27th August 2016.
2. Attended national conference on disaster preparedness mitigation and reconstruction of sustainable society. organized by VNRVJIET [under TEQIP-II during 11-12 February 2016.](#)
3. Attended national conference of IGS, IGC 2016, organized by IIT MADRAS, Chennai during 15th -17th December 2016.
4. Participated in SYMPOSIUM ON GEOPRACTICES organized by IGS Hyderabad chapter held at JNTUH on October 14, 2017.
5. Participated national conference on “Transportation research efforts for ecological sustainability (TREES-2018) organized by VNRVJIET during 28th -29th September 2018.

6. Life member in THE INDIAL SOCIETY FOR TECHNICAL EDUCATION - LM 107774. (2015).

FACULTY DEVELOPMENT PROGRAM

1. Attended **2-week FDP** on computer-oriented applications in civil engineering. Organized by VNR VJIET during 16th to 28th may, 2016.
2. Participated **two-week ISTE STTP** on introduction to structural engineering conducted by IIT Kharagpur 30th November to 9th January 2016.
3. Attended **2-week FDP** on finite element application in civil engineering organized by VNRVJIET during 3rd -15th June 2013.
4. Attended **2-week FDP** on advanced research methodology 2.0 organized by VNRVJIET during 17th June -1st July 1021
5. Attended FDP on (NPTEL AICTE) on geotechnical engineering laboratory during, July – august 2021.
6. Participated in AICTE sponsored one-week online STTP on “Emerging Tools for Design and Analysis of Sustainable Roads (ETDASR-2020)” Series-1: During 27/7/2020-01/8/2020, Organized by Department of Civil Engineering, VNRVJIET.
7. Participated in AICTE sponsored one-week online STTP on “Emerging Tools for Design and Analysis of Sustainable Roads (ETDASR-2020)” Series-2: During 24/8/2020-29/8/2020, Organized by Department of Civil Engineering, VNRVJIET.
8. Participated in AICTE sponsored one-week online STTP on “Emerging Tools for Design and Analysis of Sustainable Roads (ETDASR-2020)” Series-3: During 7/12/2020-12/12/2020, Organized by Department of Civil Engineering, VNRVJIET.
9. Attended for faculty development programme, advanced research methodology 2.0, 17 June - 01 July 2021(**Two week**), Advanced Research Methodology Tools & Techniques. Organized by the Teaching Learning Centre, Ramanujan College, and University of Delhi in collaboration with Sibsagar Girls’ College, Sivasagar, Assam under the aegis of Ministry of Education’s Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching.

5.1. Invited Lectures

Articles/Chapters published in Books: Nil

5.3. Books published as a single author or as editor: 01

5.4. Projects Guided:

a) UG: 10

b) PG: 21

5.5. Research Interests: Geo composite liners for fly ash ponds, Ground Improvement technique using Geo composites, and Shear strength Characteristics of different soils and landslides.

5.6. Ph.D. students:

a) Enrolled: Nil

b) Submitted: Nil

c) Awarded: Nil

5.7. Papers published in reviewed Journals:

| S.No | Title of the Paper | Journal Name Vol. No. PP | ISBN/ISS N No. | Impact Factor/ Citation Index | National/ International |
|------|--|--|-------------------|--|----------------------------|
| 1 | Collapse behavior of calcareous soil using odometer test | IJIRSET | 2319-8753 | 5.442 | International |
| 2 | Prediction of compaction characteristics of soil using plastic limit | IJRET | 2319-1163 | 2.375 | International |
| 3 | Analysis of Multi-tier retaining wall | IJIRSET | 2319-8753 | 5.442 | International |
| 4 | Shear strength behaviour of sand-clay mixtures | IJIRSET | 2319-8753 | 5.442 | International |
| 5 | Study on method of Drying on soils | IJIRSET | 2319-8753 | 5.442 | International |
| 6 | Effect of curing time on behaviour and Engineering properties of cement treated soils | IJIRSET | 2319-8753 | 5.442 | International |
| 7 | Role of moulding water content on the deformation characteristics of lime treated black cotton soils | i-manager's | Vol.5 | | National |
| 8 | Effect of various sizes of stone dust on strength characteristics of clayey sub grade soils | i-manager's | Vol.6 | | National |
| 9 | Swell and strength characteristics of expansive soil reinforced with synthetic fibres. | i-manager's | Vol.6 | | National |
| 10 | Effect of P^H and curing time behavior on strength properties of expansive soils. | i-manager's | Vol.6 | | National |
| 11 | Improvement of bearing capacity of soil using bamboo geosynthetic. | i-manager's | | | National |
| 12 | Role of moulding water content on the strength properties of black cotton soil treated with Ground granulated blast furnace slag | Journal of Civil Engineering and Environ | 2349-879X; | Volume 5, Issue 1 | January-March, 2018, |

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| | | mental Technolo gy | | | |
| 13. | A Semantic Review On Operations With Fly Ash With Different Approaches In Real Time | Internatio nal Journal of Mechanic al Engineeri ng and Technolo gy (IJMET | Volume 9, | Issue 4, April 2018 | International |
| 14 | Leaching Behavior and Strength Characteristics of Black Cotton Soil Stabilized with Fly Ash | ScienceD irect, Materials Today: Proceedi ngs 5 | (2018) 17974– 17981 | | International |
| 15 | A Critical Evaluation of Toxic Metals Effects on Ground Water | Jour of Adv Research in Dynamic al & Control Systems | Vol. 10, 09-Special Issue, 2018 | Special Issue, 2018 | International |
| 16 | Suitability Of Geocomposite Layer for Fly Ash Ponds | Journal of Physics: Conferen ce Series | NANOM TECH 2019, PP;1to4 | Conference series | |
| 17 | In-Situ Consolidation Analysis By Asaoka And Hyperbola Methods | Internatio nal Journal of Scientific & Technolo gy Research | VOLUME 9, ISSUE 02, FEBRUA RY 2020 | ISSN 2277- 8616 | International |

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|----|--|--|---------------------------------|-----------------|---------------|
| 18 | Effect of Synthetic Fibres and Silica Fume on Behavior of Expansive Soil | International Journal of Recent Technology and Engineering (IJRTE) | Volume-7, Issue-6C2, April 2019 | ISSN: 2277-3878 | International |
| 19 | Quality Assessment of Borewell and Tap Water in and Around Hyderabad City | International Journal of Recent Technology and Engineering (IJRTE) | Volume-7, Issue-6C2, April 2019 | ISSN: 2277-3878 | International |
| 20 | Linear Regression Analysis on Black Cotton Soil treated with Silica Fume | International journal of Advanced science and Technology. | Vol.29, Issue.5 | PP:2408-2414 | International |
| 21 | Effect of Surrounding Stress on Permeability of Fine-Grain Soil | Journal of Green Engineering (JGE) | Volume-10, Issue-6, June 2020 | PP-2839-2847 | International |
| 22 | Correlations between Undrained shear strength and SPT N for cohesive soils | Journal of Green Engineering (JGE) | Volume-10, Issue-7, July 2020 | Pp:4112-4118 | International |
| 23 | Design of Eco-Friendly Geo-Composite Liner to Fly ash Ponds for Sustainable Management | International journal of innovative technology and Exploring Engineering | Year-2020 | | International |

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|----|--|------------------------------------|--|--|--|
| 24 | Effect of PH on compressibility behaviour of cement treated soil | Springer Nature Singapore Pte Ltd. | Series Volume 83 | Pp: 789-795 eBook ISBN 978-981-15-5644-9 | International , DOI: 10.1007/978-981-15-5644-9 |
| 25 | Design of Mechanically Stabilized Earth Wall for Widened Embankment | Solid State Technology | Volume: 63 Issue: 5, Dec20 | Pp:7911-7918 | International |
| 26 | Simple Shear Testing of Sand a Novel Approach | Solid State Technology | Volume:64, Issue:2, Jan21 | PP:209-210 | International |
| 27 | Optimization of Embankment Widening with Different Soils | International: | Mangali Akhil Kumaar, Suresh Kommu , SS.Asadi | International Journal of Recent Technology and Engineering | ISSN: 2277-387 Volume-8 Issue-3, September 2019 |
| 28 | Optimization of Embankment Widening. | Materials Today: Proceedings, | Suresh Kommu , M Akhil Kumaar, and Madhav Madhira | Materials Today: Proceedings , | January-2022, https://doi.org/10.1016/j.matpr.2021.12.280 |
| 29 | Geotechnical laboratory evaluation of construction demolition recycled material for road embankments | IOP Conf. Series: | H.Shivaprasad and Suresh Kommu | Earth and Environmental Science 982 (2022) 012064 | doi:10.1088/1755-1315/982/1/012064 |
| 30 | Analysis of Earth Reinforcement Elements Using Finite Element Method | International | K.Suresh | International Journal Of Earth Sciences and Engineering | April-2014, ISSN: 0974-5904, Vol.07, No.4, PP: 634-638. |

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|----|---|-------------------------------------|--|--|---|
| 31 | “Effect of Surcharge on Arching Phenomena in Back-to-Back MSE Walls | International | Suresh Kommu, Karthika Gorla | Journal of Geotechnical and Transportation Engineering | Volume 7 - Issue 1 – September-2022 |
| 32 | “Rectification of heavy metal contaminated soils using phytoremediation process | National | A. Rajitha Sree, B. Nagamalleswara Rao, Kommu Suresh | i-manager’s Journal on Civil Engineering | Volume- 6, issue- 4- Year- November 2016 |
| 33 | Prediction of soaked CBR value with index properties of black cotton soils of Sangareddy region | National | Prashanth Miryala, B. Nagamalleswara Rao, Suresh Kommu | i-manager’s Journal on Civil Engineering | Volume- 7, Issue 1,- Year- February 2017. |
| 34 | Effect of rice husk ash on strength characteristics of black cotton soil | National | Salman Pasha Mohammad, Suresh Kommu , Ravi Kumar Yamala | i-manager’s Journal on Structural Engineering | Volume- 6 issue- 1 - Year-May 2017 |
| 35 | Collapse Studies on Flyash | International | A. Anil Yadav, K V Uday and K Suresh | Recent Research Advances in Civil Engineering | Year-2014—PP-175-183. |
| 36 | Study on the curing time effect on UCC strength and variation in engineering properties of the cement-treated soils | 50th Indian Geotechnical Conference | Pasupuleti Ravi Kumar Teja, K. Suresh , Dr. K. V. Uday | | Year- December 2015—PP- 28. |

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|----|---------------------------------------|--------------------------------|--|--|---------------------------|
| 37 | Behavior of soil by using tyre powder | Indian Geotechnical Conference | A.sathwik, P.Arthi Sudan, Suresh Kommu | | Year- December 2016 |
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5.8. Papers presented at National / International Journals: 05

5.9. Sponsored Research Projects:

Funding Project Applied: Applied for funding Project Subject: Project titled "DEVELOPMENT OF GUIDELINES FOR BACK-TO-BACK MECHANICALLY STABILIZED EARTH (BBMSE) WALLS DESIGN". File Number: EEQ/2021/001068.

5.10 Consultancy Projects:

| S.No | Title | Agency | Period |
|------|---|---------------------------------|--------------------------|
| 1 | Degree of Compaction for the Ramky Villas Finding out the Safe Bearing Capacity of different soils in the lab. Finding out the silt and clay content in different sands in the lab. Bearing capacity of soil for Sri Rastu group to construct the villas | Sri Rastu Group | 01-12-2016 to 28-12-2016 |
| 2 | Net Safe Bearing Capacity of soil | Sahasra Builders | 05/02/2018 to 08/02/2018 |
| 3 | Net Safe Bearing Capacity of soil | Radiant Institute of technology | 03/01/2018 to 06/01/2018 |
| 4 | Net Safe Bearing Capacity of soil | S. Kumar, Architects | December 2018 |
| 5 | Geotechnical Investigations for the fish harbors at Mangalore | | January 2021 |

6. Awards / Honours received:

- Received a letter of appreciation for delivering the lecture on “Design of Embankments on Soft Soils” in the FDP program, Organised by St.Martins Engineering College, Secunderabad.

7. Motto: Work is Devotion

Involvement in Corporate Social Responsibility