**FACULTY – PROFILE**



***Dr. E. C. Nirmala Peter***

Professor in Civil Engineering,

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Date of Birth: 3rd February, 1961

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***Academic Qualifications and Professional Experience***

Highest Qualification: Ph. D

Specialization : Geotechnical Engineering & Geo-environmental Engineering

**Teaching Experience:** 34 years of teaching UG and PG courses in JNTU. Actively involved in the development of PG laboratories and laboratory models for physical modeling of contaminant transport etc.

**Industrial Experience:** More than 25 of experience in planning and execution of soil investigation works and design of foundations under Industrial Consultancy Services, JNTU.

Worked on projects related to design of GSB for roads, soil stabilization, Innovative techniques such as reinforced earth for foundations and embankments, alternate foundation techniques, stability of slopes, Field and laboratory testing of soils and rocks. Dynamic testing of soils. Offered services to different public and private organizations like

* + - 1. Hyderabad Urban Development Authority (HUDA)
			2. Irrigation Department
			3. South Central Railways
			4. APS RTC
			5. National Academy of Construction (NAC)
			6. Municipal Corporation of Hyderabad
			7. Airport Authority of India.
			8. AP Housing Board
			9. AP GENCO (Electricity Board)

10. RAMKY

11. Aparna Constructions

12. Prasad & Prasad constructions etc.

**Areas of Research:** Stabilization / modification of soils to suit different applications such as subgrade soils with admixtures like Zycobond, Terrasil, Polycom etc., use of soil modified with Terrasil in place of clay or as a substitute for clay in landfill liners and hearting zone in embankments.

Foundation techniques like reinforced earth (Geocells & Geogrids) and soils modified with admixtures, Pile-raft foundation, granular piles (encased).

Contaminant transport through porous medium – Parameters related to different transport processes. Curtailing contamination or sorption of contaminants using some of the waste materials like wood shavings etc. to minimize contaminant transport.

Establishing the range of design parameters such as cohesion and angle of internal friction for different conditions such as moisture content, density, plasticity index etc. of c-φ soils and correlate them with field tests under similar conditions.

**Projects Guided:**

Ph. D – One project guided and one ongoing.

M. Tech – More than 30 completed and 4 ongoing

**Other Activities**

Organized seminars, workshops and symposiums. Delivered guest lectures.

Publications (National & International Journals and conferences)

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| **S.No** | **Details** |
| 1 |  **E. Saibaba Reddy**, E.C. Nirmala Peter , *Effect of water table on pollutant transport*, Int. Conf. in Environmental Engg. Hyderabad, 1999 |
| 2 | **E. Saibaba Reddy**, E.C. Nirmala Peter , *Effect of soil moisture on pollutant spread in sandy soil,*, Indian Geotechnical Conference 2003, Indian Institute of Technology Roorkee , India, 2003 |
| 3 | Nirmala Peter, E. C., Madhav, M. R. and Saibaba Reddy, E. (2006) Modelling of one-dimensional flow and dispersion – Study of effect of scale-dependent dispersion coefficient, *Indian Geotechnical Conference*, Vol. 2, 887-890.  |
| 4. | Nirmala Peter, E. C and Saibaba Reddy, E. (2004). Laboratory Model for the determination of dispersion coefficient in soils. *Indian Geotechnical Conference*, Vol. 1, 529-532. |
| 5 |  Nirmala Peter, E. C., Saibaba Reddy, E and Madhav, M. R. (2006). An experimental study of variation of dispersion coefficient with depth – Column study. National Conference on Corrective Engineering Practices in Troublesome Soils (CONCEPTS), Kakinada 8-9 July, 2006, Theme-1, pp 1-4. |
| 6. |  Nirmala Peter, E. C., Madhav, M. R. and Saibaba Reddy, E. (2009) “study of one-dimensional non-reactive contaminant transport with scale-dependent dispersion”. Indian Geotechnical Journal, 39(1), 2009, 64-80. |
| 7. | Reddy, E. S., Nirmala Peter, E. C., Rama Sastri, K. and Bhaskar Kura (1998). Flyash disposal problem at thermal power stations – an experimental study. International Journal of Energy Research, Vol. 23, Issue 7, Pages 589-603. |
| 8. | Suma, T., Nirmala Peter, E. C. and Neelima, S. (2008). One-Dimensional Subsurface Contaminant Transport Studies. Symposium on Engineering of ground and Environmental Geotechnics (SEG2), Feb. 29-March 1, 2008, Hyderabad.  |
| 9. | Madhav, M.R., Suresh, K. and Nirmala Peter, E.C. 2009. Creep Effect on Response of Granular Pile Reinforced Ground, Int. Symp. on Ground Improvement Technologies and Case Histories, Singapore, pp.275-284 |
| 10 | Madhav, M.R., Suresh, K. and Nirmala Peter, E.C. 2009. Analysis of Effect of Creep on Response of Granular Pile Reinforced Ground. Ind. G. J., Vol. 39, No.4, pp.399-423. |
| 11 | Madhav, M.R., Suresh, K. and Nirmala Peter, E.C. 2009. Creep Effect on Response of Granular Pile Reinforced Ground. Int. J of Geotechnical Engineering, Oct. 2010. |
| 12 | Nirmala Peter, E., Madhav, M.R. and Saibaba Reddy, E. 2009. One Dimensional Non-Reactive Contaminant Transport with Scale Dependent Dispersion, IGJ, Vol.39, (1), pp.64-80. |
| 13 | E.C. Nirmala Peter, M. R. Madhav, E. Saibaba Reddy and T. V. Bharat “Modeling Dominant Transport Processes In One-Dimensional Contaminant Transport” Proc. of Int. Symp. on Geoenvironmental Eng., ISGE2009, PP 90-98, September 8-10, 2009, Hangzhou, China. |
| 14 | Madhav M.R., Suresh. K and Nirmala Peter. E.C “Effect of Creep on Settlement of Granular Pile Reinforced Ground (Cs/Cc>0)” International Journal of Geotechnical Engineering (IJ GE Oct. 2010) Vol4: PP495-505. |
| 15 | Madhav, K. Suresh, and E.C. Nirmala Peter (2010)“Creep Settlements Rates of Granular Pile Reinforced Ground” Indian Geotechnical Conference16-18 Dec 2010, (Geotrendz) IITB, Mumbai. |
| 16 | K. Suresh, Madhira R. Madhav, and E.C. Nirmala Peter (2010) “Effect of stiffness factor of Granular Pile Reinforced Ground” Proceedings, National Conference GEO-CHALLENGES , Cochin university of Science and Technology ,Cochin,, 15-17 Dec 2011 |
| 17 | . K. Suresh, Madhira R. Madhav, and E.C. Nirmala Peter “Effect of Creep of Granular Pile on Response of Granular Pile Reinforced Ground” International Congress on Computational Mechanics and Simulation (ICCMS), IIT Hyderabad, 10-12 December2012 |
| 18 | K. Suresh, Madhira R. Madhav, and E.C. Nirmala Peter “Effect of Creep of Granular Pile on Response of Granular Pile Reinforced Ground” 8th International Symposium on Lowland Technology, (ISLT-2012) Bali Indonesia. |
| 19 | K. Suresh, Madhira R. Madhav , E.C. Nirmala Peter “Induced over consolidation of granular pile reinforced ground” Proceedings of the Indian Geotechnical Conference, IGC-2012, , New Delhi, December 13-15, 2012. Advances in Geotechnical Engineering VOLUME – I, PP 524-527 |
| 20 | K.Shiva Prashanth Kumar and E. C. Nirmala Peter “Physical and Numerical Modeling of One Dimensional Contaminant flow Considering Sorption” *IRACST – Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol.2, No. 4, August 2012* |
| 21 | K. Shiva Prashanth Kumar and E. C. Nirmala Peter (2016) “Influence of Hexavalent Chromium initial concentration on retardation factor and contaminant velocity in a soil Media” Journal of Engineering Science and Technology, Vol. 11, No. 2 (2016) 149 – 165 © School of Engineering, Taylor’s University |
| 22. | K. Suresh, M. R. Madhav, E. C. Nirmala Peter4 “Analysis of Induced Overconsolidation on Response of Granular Pile Reinforced SoftGround-Effect of Relative Compressibility” © Springer Nature Singapore Pvt. Ltd. 2019 M. F. Randolph et al. (Eds.): VSOE 2018, LNCE 18, pp. 203–209, 2019 |
| 23. | K. Shiva Prashanth Kumar and E. C. Nirmala Peter (2016) “Adsorption Of Chromium (Vi) From Aqueoussolutions By Different Admixtures – A Batch Equilibrium Test Study” Vol. 9, No. 4 (2014) 410 - 422 |
| 24. | Karthik*,*K. R. M., Padmavathi, V. and Nirmala Peter, E. C. (2016), “Utilization of Pond Ash and Pond Ash Stabilized by RBI Grade-81 for Road Construction”, Proceedings of Indian Geotechnical Conference, Paper ID. 192. |
| 25. | Padmavathi, V., Nirmala Peter, E. C., Rao, P. N. & Padmavathi, M. (2018), “Stabilization of Soil Using Terrasil, Zycobond and Cement as Admixtures”, Proceedings of the 2nd GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt, Latest Thoughts on Ground Improvement Techniques, pp. 163-170.ISSN 2366-3405 ISSN 2366-3413 (electronic)Sustainable Civil InfrastructuresISBN 978-3-030-01916-7 ISBN 978-3-030-01917-4 (eBook)https://doi.org/10.1007/978-3-030-01917-4© Springer Nature Switzerland AG 2019H. Shehata and H. Poulos (Eds.): GeoMEast 2018, SUCI, pp. 163–170, 2019.https://doi.org/10.1007/978-3-030-01917-4\_13 |