



INDIAN INSTITUTE OF TECHNOLOGY MANDI

भारतीय प्रौद्योगिकी संस्थान मंडी

Institute Colloquium

“Sustainable Geotechnics”



06th February 2025



05:00 PM



**Auditorium, North
Campus**

Prof. G L Sivakumar Babu

**Department of Civil Engineering &
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Indian Institute of Science
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Abstract

Sustainable engineering is a broad field that focuses on designing and developing solutions and covers the whole gamut of science, engineering and management. It has brought together all the disciplines to work together and contribute to society and environmental challenges in a significant way. In this lecture, the application of sustainable engineering principles in Geotechnical and Geoenvironmental Engineering is highlighted. The lecture covers a broad spectrum of applications in design, analysis and practice that the speaker handled. They range from retaining wall design, earth reinforcement, remediation of distressed infrastructure, studies on landslides, anchor foundations, highways, embankments, dumpsites and contaminated site remediation. The lecture also highlights the importance of working together doing multi-disciplinary research and practice and interact with policy makers in improving the guidelines for implementation.



CV of Dr. G L Sivakumar Babu

Dr. G L Sivakumar Babu completed his Ph.D. (Geotechnical Engineering) in 1991 from the Indian Institute of Science, Bangalore, India, after a Master's Degree (SMFE) in 1987 from Anna University, Madras, and B.Tech. (Civil Engineering) in 1983 from Sri Venkateshwara University, Tirupati, India. He worked as Visiting Scholar from 1995 to 1996 in Civil and Environmental Engineering at Purdue University, Lafayette, for a year and as Humboldt Fellow and Visiting Scientist in Landesgewerbeanstalt Bayern (LGA) Nuremberg, Germany, in 2000. He worked at the Central Road Research Institute and International Airports Authority of India New Delhi from May 1992 to November 1996. He joined the Indian Institute of Science in December 1996 as an Assistant Professor and became a full professor in 2009 and is currently Professor (HAG).

His international recognitions are 1) being the first person from the Indian Geotechnical Society to give an invited lecture at the International Conference on Soil Mechanics and Geotechnical Engineering in 75 years of IGS and he presented it during ICSMGE(2017) in Seoul, 2) John Booker Medal from International Association for Computer Methods and Advances in Geomechanics (IACMAG), USA for the year 2017, 3) Member of the Scientific Committee for International School on "Landslide Risk Assessment and Mitigation for 2018-2024, University of Salerno, Italy, 4) Excellent Contributions Award of International Association for Computer Methods and Advances in Geomechanics (IACMAG), USA in the year 2010 and 5) Alexander von Humboldt Fellowship in 2000. He received five best paper awards for the papers published in ASCE journals.

He is an Honorary Fellow of the Indian Geotechnical Society and received the IGS Kuckelman Award 2020-2021 for his excellent contributions to Geotechnical Engineering. He also received several awards for his work, such as best Ph.D. thesis in Geotechnical Engineering in India from the Indian Geotechnical Society for the year 1992, DST BOYSACAST Fellowship,

Young Engineer from Central Board of Irrigation and Power, New Delhi and seven best paper awards from Indian Geotechnical Society.

He served as the Chairman, International Technical Committee (TC-302) on Forensic Geotechnical Engineering (FGE) of International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) for two terms (2013-2017 and 2017-2021; served as its secretary from 2005-2009 and 2009-2013. He conducted three international conferences on Forensic Geotechnical Engineering in 2010 and 2013-2016 and special technical sessions in ARCs in Fukuoka and Taipei and ICSMGE 2017. He was a member of the International Technical Committee (TC-32) on Risk Assessment in Geotechnical Engineering from 1997-2001 and 2001-2005 and conducted an International Workshop on Risk Assessment in Site Characterization and Geotechnical Design, (GEORISK 2004). He represented the Indian Geotechnical Society as its representative in ISSMGE and ARC meetings from 2013 to 2020.

He served as the Governor of Region 10, American Society of Civil Engineers from 2014 October and served as President, India Section from 2013 to 2014 and received the Distinguished Service Medal, Region 10 ASCE Award 2021. He is serving as a Council Member of the International Geosynthetics Society.

He served as Editor-in-chief of the Indian Geotechnical Journal for six years (2010-2016) and is Associate Editor of 1) Journal of Hazardous, Toxic, and Radioactive Waste, ASCE, 2) International Journal of Geomechanics, ASCE, Editorial Board member of 3) International Journal of Georisk -Assessment and Management of Risk for Engineered Systems and Geohazards, Taylor & Francis Group, and 4) Geosynthetics International, Journal of Institution of Civil Engineers, UK.

His teaching and research activities include courses on Geomechanics, Soil investigations, risk and reliability applications in Civil Engineering, Pavement Engineering, Geosynthetics, Ground Improvement and Geoenvironmental Engineering. He guided a number of students for research degrees (21 Ph.D. and 5 M. Sc (Engg. Total 26) and six students are in advanced stages for submission for Ph.D. He wrote a book on soil reinforcement and geosynthetics, edited six books and proceedings, and has several publications (International and national Journals over 200, International and national conf. more than 160 Total over 360).