

Symposium on Highway Infrastructure and TSR lecture

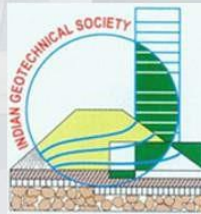
*December 1 - 5 2020,
Thiruvananthapuram, Kerala, India*

Organised By

Indian Geotechnical Society Student Chapter Marian Engineering College
in collaboration with IGS Thiruvananthapuram Chapter

Supported by

TC 202, Transportation Geotechnics, ISSMGE



Marian Engineering College





MARIAN ENGINEERING COLLEGE, Kazhakkuttom

Marian Engineering College, Kazhakkuttom, Trivandrum is managed by the Trivandrum Social Service Society under the Trivandrum Latin Catholic Archdiocese. The long term vision is to establish a high level centre of learning, comparable to international standards with research and academic atmosphere to foster engineering education in the private sector. The rich experience gained by the Archdiocese in running educational institutions of superior quality over half a century is the driving force behind this venture. Approval from the All India Council for Technical Education (AICTE), Government of India, New Delhi is obtained for running this professional college.

INDIAN GEOTECHNICAL SOCIETY

The Indian Geotechnical Society of Soil Mechanics and Foundation Engineering was established in the year 1948, soon after the second International Conference on Soil Mechanics and Foundation Engineering held at Rotterdam. The Society was affiliated to the International Society in the same year and since then it has strived to fulfil and promote the objectives of the International Society. In December 1970, the name "Indian Geotechnical Society" was adopted. In January 1994, it hosted the 13th International Conference on Soil Mechanics and Foundation Engineering (ICSMGE). The Indian Geotechnical Society (IGS) aims at promoting co-operation amongst engineers and scientists for the advancement and dissemination of knowledge in the fields of Soil Mechanics, Foundation Engineering, Soil Dynamics, Engineering Geology, Rock Mechanics, Snow and Ice Mechanics and allied fields and their practical applications. It provides a common forum for academicians, research workers, designers, construction engineers, equipment manufacturers and others interested in geotechnical activity.

INDIAN GEOTECHNICAL SOCIETY, Thiruvananthapuram Chapter

The Thiruvananthapuram local Chapter of IGS is one of the youngest chapters under the society formed in 2015. The chapter is one among the two local chapters in the state of Kerala, and is very actively contributing to the research and practice of various facets of geotechnical engineering within and outside the state since its inception. It has been hosting various events including lecture series, conferences, site visits and hands-on-workshops to name a few. The chapter is also guiding a well run system of student chapters under its mentorship. Through this, the chapter is providing more opportunities to students in enhancing their knowledge, nurturing leadership qualities and is preparing them for the world of engineering practice.

IGS Student Chapter of Marian Engineering College was officially inaugurated on 14th March 2018 by Dr G. V. Rao, former Head of the Department, IIT Delhi. It is the biggest student chapter in the state of Trivandrum with 282 members at present.

TC 202 TRANSPORTATION GEOTECHNICS, ISSMGE.

The goal of Technical Committee (TC) 202 is to apply broad engineering to bridge the gap between Pavement/Railway Engineering and Geotechnical Engineering. The main task is to promote co-operation and exchange of information and knowledge about the geotechnical aspects in design, construction, maintenance, monitoring and upgrading of roads, railways, airfields and harbor facilities. The task also covers the related environmental aspects. TC 202 has identified eight task forces for achieving its goals. Several conferences and workshops are being organised all around the world for the purpose.



Erol Tutumluer, Ph.D.
Chairman TC-202
(ISSMGE)

Erol Tutumluer holds a B.S. (Bogazici University 1989), two M.S. degrees (Duke University 1991 and Georgia Tech 1993), and a Ph.D. (Georgia Tech 1995), all in civil engineering. He has been on the faculty of the department of Civil and Environmental Engineering at the University of Illinois since 1996. In October 2006, Dr. Tutumluer was recognized as the Paul F. Kent Endowed Faculty Scholar for his research accomplishments in the CEE department. Professor Tutumluer also serves as the Director of International Programs for the department and is present chairman of Technical Committee 202 of ISSMGE.

KEYNOTE SPEAKERS

Day 1

Mr. Ravi Sundaram, Member TC-202, ISSMGE



Mr. Ravi Sundaram started his career in 1980 with McClelland International Ltd. He is the founder Director of Cengrs Geotechnica Pvt. Ltd. and directs the company's geotechnical consultancy and construction activities. His expertise includes geotechnical investigations, geophysical surveys and ground improvement. His special interests include artesian conditions, dune sands, expansive soils, tall buildings, power plants, bridge foundations, pile testing and foundation strengthening.

Day 2

Er. Sunil Vasudevan, Techno-Legal expert, Former CEO, d2 Consult, Austria. PMC for Atal Tunnel



Sunil Vasudevan is a Post Graduate in Transportation & Traffic Engineering (Highways) and also a Graduate in Law. He has about Forty Two years of experience in diverse fields of Infrastructure. He has headed & handled wide range of complex projects under Turnkey, BOT & EPC in India and abroad under NHAI, NHIDCL, Ministry of Defense & State Governments under World Bank/ADB funding operated under FIDIC conditions in positions such as CEO, Director & Corporate Vice-President, Project Director, Dy Chief Engineer in Kerala PWD.

KEYNOTE SPEAKERS

Day 3

Er. Amol Humne, Principal Engineer- Geotechnics, ARCADIS, India



Mr. Amol Humne is a tunneling and geotechnical specialist with 14 years of experience in planning, analysis and design works associated with rock tunneling, caverns, hydropower structures, deep excavations and other geotechnical works. He had managed multidisciplinary teams and have worked in India, UK and UAE. He has a hands-on experience in planning and managing tunnel design for linear (Railway & Highway projects with long tunnels) and Hydropower projects.

Dr. Shreyas Kachane, Technical Director, ARCADIS, India



Dr. Shreyas Kachane possesses 17 years of experience out of which 15 years are in the field of geotechnical engineering after post-graduation. He has also got three on-field research projects completed during doctoral studies using numerical and centrifuge modelling techniques. Key experience is in the field of pile foundations, finite element analysis, soil-structure interaction, centrifuge modelling, instrumentation, geotechnical assessment, pseudo-static earthquake analysis, ground improvement, retaining structures, and slope stability. Domain of experience as a structural and geotechnical engineer includes Oil & gas.

KEYNOTE SPEAKERS

Day 4

**Dr. Chandrasegaran Ramaraju, Regional Design Manager
PE(Geo) Singapore & Malaysia,
PE(Civil) Singapore, ACPE, MIEM**



Mr. Chandrasegaran is a registered Professional Engineer, PE in Singapore and PE (Geo) in Singapore and Malaysia. He has more than 30 years of design and construction experience in both major building developments as well as underground infrastructure in the region having worked as both consulting engineer as well as a specialist subcontractor. He has also served as the president of the Geotechnical Society of Singapore (GeoSS) in 2018-19. Chandrasegaran is currently Regional Design Manager with Bachy Soletanche Singapore Pte Ltd covering the region that includes Singapore, Malaysia, Indonesia and Australia.

Er. Praveen Muley, Tunnel Engineer, ARCADIS, Singapore



Pravin Muley graduated with a Bachelor's in Civil Engineering from MIT, India in 1998. He obtained his Master's in Civil-Structures Engineering in MIT, Pune India in 2001. He began his career as a Civil & Structural Engineer and designed various buildings, retaining structures, factory structures and foundations of various structures. Later in the pedagogics, he taught various subjects to the engineering students in India. Pravin specialises in Sprayed Concrete Lining (SCL) design and supervision of NATM tunnelling with his prestigious work as a consultant to the JTC Jurong Rock Cavern when he was a Project Officer with the Nanyang Technological University of Singapore.

Day 5 (World Soil Day) TSR Lecture

Prof. T. S. Ramanatha Ayyar was born on 8. October 1932 in Nagercoll in Tamil Nadu. He obtained B.Sc. (Engg) in Civil Engineering from College of Engineering Trivandrum in 1953, M.Sc. (Engg) in Soil Mechanics from University of Madras and Ph. D. from University of Roorkee. He was the first Ph. D conferment in Geotechnical Engineering in the country. He started his career as demonstrator and rose to the position of Professor in Civil Engineering in 1965. He was the Post-Doctoral fellow during 1971-72 at Norwegian Geotechnical Institute, Oslo, the Professor at the University of Zambia during 1977-79 and Visiting Professor, Bayero University, Kano, Nigeria during 1983-84. He has served as Principal of both the colleges at Trichur and Trivandrum and was the Director of Technical education during the period 1986-87. Later he served as Visiting professor at I.I.T., Madras and U.G.C. Emeritus Fellow. Apart from being member of many academic bodies at the University and National level, Prof. Ayyar has published 3 books on soil and about 70 papers in leading journals. Indian Geotechnical Society Thiruvananthapuram chapter is organizing TSR Annual Lecture in his fond memory.

Dr. S. R. Gandhi, Director, SVNIT, Surat



Prof. S. R. Gandhi obtained his B.Tech Civil from Saurashtra University in 1977, M.Tech in Soil Mechanics from IIT Madras in 1979 and Ph.D. on topic "Piles socketed in weak rock" from IIT Madras in 1985.

He worked as faculty in Ocean Engineering Center at IIT Madras from 1982 and since 1990 he was a faculty member in Geotechnical Engineering Division in Department of Civil Engineering at IIT Madras till October, 2016. Since 24th October 2016 he is Director at SVNIT, Surat.

His research area includes design of pile foundation, ground improvement, field instrumentation & monitoring and design of ash pond. He has carried out 3 major Sponsored Research Projects funded by Department of Science and Technology on Densification of Fly Ash and Reinforced Earth Embankment.

He is an active Foundation Consultant to various Government organizations and Private industries for design and construction of foundation. He served as Executive Member of Indian Geotechnical Society, Delhi for two terms. He was the organizing chairman for the Indian Geotechnical Conference 2006 and Deep Foundation Institute (India Chapter) conference 2012 held at IIT Madras.

Schedule

Presymposium

Day 1 (01.12.2020)

INAUGURATION : 6:00 to 6:45pm

SPEAKER : Mr. Ravi Sundaram
TOPIC : Landslides on Himalayan roads,
Geotechnical investigations and Stabilization measures.
TIME : 6:45 to 7:45pm.

Day 2 (02.12.2020)

SPEAKER : Er. Sunil Vasudevan
TOPIC : The Atal tunnel- Uniqueness and Construction Challenges
TIME : 6:00 to 7:00pm.

Day 3 (03.12.2020)

SPEAKER : Er. Amol Humne
TOPIC : Road tunnels- General overview
TIME : 5:00 to 6:00pm.

SPEAKER : Dr.Shreyas Kachane
TOPIC : Engineering design for highspeed rails
TIME : 6:00 to 7:00pm.

Day 4 (04.12.2020)

SPEAKER : Dr. Chandrasehgaran Ramaraju
TOPIC : Construction of new Bugis Station for Downtown Line
contract 903
TIME : 3:00 to 4:00pm.

SPEAKER : Er. Praveen Muley
TOPIC : Underground Infrastructure in Singapore.
TIME : 4:00 to 5:00pm.

TSR Lecture

Day 5 (05.12.2020) - World Soil Day

SPEAKER : Dr. S. R. Gandhi
TOPIC : Underground excavation and anchoring
TIME : 5:00 to 6:00pm

VALEDICTORY FUNCTION @ 6:00pm



Advisory committee

- **Dr. Erol Tutumluer**, Chairman, TC-202, ISSMGE.
- **Dr. Tatsuya Ishikawa**, Secretary, TC-202, ISSMGE.
- **Dr. J.T. Shahu**, Member TC-202, IIT Delhi, Secretary, IGS, Delhi.
- **Mr. Vasant Havangi**, Member TC-202, Chief Scientist, CSIR-CRRI, New Delhi.
- **Mr. Ravi Sundaram**, Member TC-202, ISSMGE.
- **Dr. K. Balan**, President, IGS TVM, Vice Principal, RIET, Trivandrum.
- **Dr. Jayamohan J.**, Vice President, IGS TVM, Principal LBSITW, Trivandrum.
- **Dr. Arvee Sujil Johnson**, Secretary, IGS TVM, Professor CET.
- **Dr. N. Unnikrishnan**, Executive Member, IGS TVM, Professor GEC, Thrissur.
- **Dr. Jaya V.**, Joint Secretary, IGS TVM, Professor, CET.
- **Dr. Jayasree, P.K.**, Treasurer, IGS TVM, Professor, CET.





Organizing committee

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Prof. Joisy M. B., IQAC Coordinator, MEC, Kazhakuttom, TVM, Kerala

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Dr. Aparna R. Pillai, Assistant Professor, MEC.

Student Coordinators

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Hemna Cruz, Secretary, IGS, MEC.
Naarah Miriam Vincent, Treasurer, IGS, MEC.
Tinu Krishna S., Vice President, IGS, MEC.
Megha V., Vice President, IGS, MEC.
Binu John, Executive Member, IGS, MEC.
Nishara S. J., Executive Member, IGS, MEC.
Neehara R. Nair, Executive Member, IGS, MEC.

Registration

There is no registration fee. Interested academicians, practicing engineers, research scholars, and PG/UG students of engineering should register for the workshop by using the link or QR code given below.



Click on this link to register >> <https://forms.gle/PZBYbASn2X7KZcvd6>



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