INVITATION

Cordially invite all the Fellow Members, Engineers, Builders, Planners and Students for the Technical Lecture.

TECHNICAL EVENING LECTURE

On "Understanding Construction of Underground Metro Stations and Tunnels"

By Er. Arun Kumar

Engineer – Geotechnics, Mott MacDonald Group, Qatar.

Synopsis: The Evening Meeting will be on Understanding Construction of Underground Metro Stations and Tunnels, with more emphasis on **Tunneling**, in knowing about TBM (Tunnel Boring Machine), Tunnel linings-Segment moulds, water proofing, ring building and discussing tunneling construction factors. This presentation will be of interest to civil engineers, tunnellers, geotechnical engineers and research specialist. Will also highlights some of the current practices being adopted in Chennai Metro Project and Doha Metro project.

Presentation Tags: Cut & cover, TBM, Backfill grouting, face pressure, cutter head, backup gantries etc.

All are cordially invited

On Friday, 08th September 2017, Time: 6.30 PM – 8.00 PM

High Tea: 6.00 PM – 6.30 PM

Venue: Bangalore Institute of Technology (BIT), Seminar Hall, 2nd Floor,
K R Road, V.V. Puram, Bangalore – 560004.

Organized by:

INDIAN CONCRETE INSTITUTE – Bangalore Centre, Karnataka

In association with

ACCE (I)-BC, RMCMA, INSTRUCT & BIT

Coordinated by

Dr. Aswath M U	**Er. Ravishankar M**	**Dr. Radhakrishna**	**Er. Sapna Devendra**
Prof & Head, Civil Engg Dept, BIT	Chairman, ICI-BC	Secretary, ICI-BC	ICI-Member & Co-ordinator

MOTT MACDONALD

Summary CV

Arun Kumar
Engineer-Geotechnics

As Geotechnical & Tunnelling Professional having held Multiple positions with 14+years of experience in heavy construction industry as Senior Tunnel Engineer, Independent Geotechnical Consultant, Project Manager, Consultant Material Engineer, and QC Engineer for projects involving Doha Gold Line Metro Project, Chennai Metro Rail Project, King Abdul Aziz Centre-World Heritage Project, Krishnagiri Thopur Ghat project, Karnataka State highway improvement-involving rehabilitation & Feasibility studies and road construction of state highway projects

Personal summary

Year of birth: 1978

Nationality: Indian

Languages:

- English, Hindi, Kannada
- Tamil, Telugu

Qualifications:

- BE Civil Engineering, 2001
- ME Geotechnical Engineering, 2005
- Graduate Member Institute of Civil Engineering (GMICE)
- Member of the Institution of Engineering and Technology, (MIET)
- Member of British Tunnelling Society, (BTS)
- Member of International Geosynthetics Society, (IGS)

Key skills:

Specialisation – Tunnels, Slope Stability, Geosynthetics - Ground Improvements, Design & construction of reinforced earth wall, Design & construction of flexible and rigid pavements. Geotech. softwares- gINT, Ressa, Enkaslope & MSEW

Supplementary details:

Publications:

- "Relationship between rate of dilation, peak and critical state friction angles", Indian Geotechnical Journal, 2007
- "Bearing Capacity improvement using Geotextile for layered soils"- A practical approach", Indian Geotechnical Conference, Pune, 2015.

Invited talks_MM office

- "Tunnel Induced Ground Settlement in Soils"
- "Ring Building in Tunnel Construction"
- "Conceptual Design & Construction of RE walls Structures"

Experience and Skills

- **(2014 – present) Mott MacDonald Group, Engineer- Geotechnics (MME) Mott MacDonald -Middle East**
- **(2011 – 2014) EGIS Consulting Engineers Pvt Ltd –India, Senior Tunnel Engineer**
- **(2010 – 2011) Fugro Suhaimi Saudi Arabia, Geotechnical Engineer**
- **(2009 – 2010) Geosol Associates India, Project Manager**
- **(2007 – 2009) Z-Tech (India) Pvt. Ltd- India, Assistant Manager- Design**
- **(2007) ACC-Holcim, Bangalore, India, Deputy Manager- QC**
- **(2006- 2007) URS Scott Wilson Limited- India, Consultant Material Engineer**
- **(2001-2003) Sai Suraj Construction Pvt Ltd- India, Quality Control Engineer**

Selected projects

- **Doha-Gold Line Metro Rail Project, Doha- Qatar**

  As Design Verification Consultant, for verification and inspection of construction activities of gold line metro station and Tunnel works that includes, geotechnical appraisal reports, factual reports, geotechnical interpretative reports, verifying the monitoring and instrumentation reports, settlement analysis, method statements reviews for ground improvement works,

- **Chennai Metro Rail Project, Chennai- India**

  Analyse and verify the face pressure for the tunnelling stretch, twin tunnel settlement analysis, instrumentation and monitoring, ground improvements, quality checks for annulus grout, pre-cast segment, ring building, cross passage construction and method statement review.

- **King Abdul Aziz centre for Knowledge and World Culture, Saudi Arabia Independent Geotechnical Consultant**

  To assess deep excavation for the formation of the shear key of retaining wall and stability of excavation during all earthwork operations. Responsible for evaluating all existing cut slopes in rock and confirm type and extent of rock slope and protection required (shotcreting, rock bolting, etc) and to accordingly guide the Contractor

- **Krishnagiri Thoppur Ghat Project, (KTRP), Tamil Nadu, India**

  Guided and executed construction of all 10nos of reinforced earth wall structures with 56,000 Sq.m fascia area built successfully. It was titled as one of the best project completed in time with excellence.

- **Geotechnical Engineer Khalsa Heritage Project – Punjab, India**
  Execution of instability of reinforced slope.
  Analysed stability using Geotechnical software by enkaslope
- **Panipat Project –Haryana, India**

  Responsible for design and execution of ground improvement works for the weak sub-soil strata using Geotextile.

- **Karnataka State Highway Improvement Project, (KSHIP)-India**

  Responsibly carried out ROMDAS survey for evaluation of road roughness index for approx. 5000 KM road length. Soil map of entire state of Karnataka was identified, classified based on survey, collected soil samples and accordingly, developed a pictorial representation of soil types that is distributed for practical use.

- **Pipovav Ship Port Project-Gujarat, India**

  Involved in as part of traffic team for axle load survey to study traffic intensity, O-D survey, traffic volume count, volume and repetitive vehicular axle load study

- **Road Construction– Shimoga to Honnali Project, Karnataka, India**

  Construction execution and design of wet mix macadam, bituminous macadam, mix seal surface, selection, and suitability of stone quarries, borrow pit etc.