Dr. Makarand G. Khare (Ph.D. IIT Madras)

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ACADEMIC QUALIFICATIONS

Doctor of Philosophy (May, 2008) - Indian Institute of Technology Madras, Chennai, India
M.S. in Civil Engineering (December, 2000) - University of Central Florida, Orlando, USA
B.E. in Civil Engineering (August, 1999) - College of Engineering Pune, University of Pune

KEY EXPERIENCE

- 25 years of experience in the field of Geotechnical and Civil Engineering including detailed design, consultancy, project management, construction support and research.
- Design of Underground Metro Stations, TBM Tunnels and Shafts, Building Basements with deep excavations in congested urban environment.
- Design of high-rise buildings, Viaducts near/above Underground Metros and Tunnels.
- Instrumentation and Monitoring of Cut and Cover Structures, TBM Tunnels, Cross-Passages.
- Detailed design of shallow and pile foundations of high-rise buildings, factories, airports, viaducts, hospitals, commercial and residential buildings.
- Forensic analysis, construction claims review and support for complex infrastructure projects.
- Design of ground improvement schemes for TBM Shafts, Cross-Passages, Metro Depots, Ports.
- Professional and research works published in 12 International Conferences and 3 Journals.

COUNTRIES OF WORK EXPERIENCE – India, United States

CORPORATE EXPERIENCE – AECOM, L&T ECC, ANTILLIAN

KEY PROJECTS

Underground Metro Rail: Chennai Metro Phase 2, Mumbai-Ahmedabad High Speed Rail, DMRC Phase 4, Kanpur Metro, Cluj Metro (Romania), Mumbai Metro Line 3, Riyadh Metro Line 1 & 2, Chennai Metro Phase 1, Kolkata Metro.

Elevated Metro, Viaducts, Bridges: Delhi-Meerut RRTS, Pune Metro Line 3, Indore Metro IN04, Thane Coastal Road, Versova-Dahisar Sea Link, Mumbai Coastal Road, Chennai Metro Phase 2, , Mumbai Metro Line 5.

Airports: Mumbai Airport, Salalah and Muscat International Airport, Hyderabad Int. Airport.

Factories: AARTI Industries-Gujrat**,** Maruti Suzuki-Manesar, Sejal Glass – GIDC Jhagadia, LTM Phase 2 - Kancheepuram.

Commercial, Office and Institutional Buildings: Adani Walk Museum, Chennai Central Square, Commercial Development - Chandigarh for Godrej Properties, L&T Finance – Mumbai, Jindal Global Law School - Haryana, Seawoods - Navi Mumbai, Spencers Mall - Kolkata, CTS Siruseri – Chennai, ITC East India Hotel - Kolkata, TAJ Hotel – Dwarka, Delhi

Hospitals: MIOT Hospital - Chennai, GG Hospital - Chennai, Agartala Medical College - Tripura, Apollo Reach Hospitals – Chennai.

Residential Buildings: NCRTC Quarters, Delhi, Northern Lights – Mumbai, Godrej Garden City - Ahmedabad, Godrej Prakriti - Kolkata, Riverview Apartments - Lucknow.

Ports: JNPT Reclamation Works and Ground Improvement, Greater Male Connectivity

ENGINEERING SOFTWARE SKILLS: PLAXIS (2D, 3D), WALLAP, SLIDE, L-Pile, SHAFT

Publications

Refereed International Journals

1. **Khare, M.G.** S. Sudheer Kumar (2018) Soil-Structure Interaction Analysis of Embedded Retaining Walls for Underground Metros J. of The Indian National Group of The Int. Assoc. For Bridge & Structural Engineering; Volume 48, Number 4, pp. 24-32.
2. Jain Rahul, Gupta Rishi, **Khare, Makarand** and Dharmadhikari, Ashish (2011) Use of Polypropylene Fibre Reinforced Concrete as a Construction Material for Rigid Pavements. The Indian Concrete Journal, March 2011.
3. **Khare, M.G.** and Gandhi, S.R. (2009) Shear Resistance of Bitumen Coated Piles in Sand. Geotechnical Engineering, Proc. of the Institution of Civil Engineers, London, Volume 162, Issue 6, pages 303 –310.

Refereed International Conferences

1. Gupta, S.K., **Khare, M.G.** and GVR, Raju (2019) Geotechnical challenges in Design and Construction of Tunnels for Mumbai Metro Line – 3. Proceedings of the WTC 2019 ITA-AITES World Tunnel Congress (***WTC 2019***), May 3-9, 2019, Naples, Italy.
2. Gupta, S.K., **Khare, M.G.** and Celentano, John (2018) Design and Construction of Bored Tunnels for Mumbai Metro Line 3. ***World Tunneling Congress***, Dubai, 23-25 April 2018.
3. **Khare, M.G.** and Ramanathan M. (2013) Investigation of Collapse of Slurry Trench in Underground Metro Construction. 5th International Conference on Forensic Engineering, 16-17 April 2013, London, UK.
4. N Kumar Pitchumani, **Khare, M.G.** and K.V. Sridhanya (2013) Design and Construction of Diaphragm Walls Embedded in Rock for a Metro project. 4th International Seminar on Forensic Geotechnical Engineering, 10-12 January 2013, Bengaluru, India.
5. **Khare, M.G.** and Varun, M. (2012) Comparison of Subgrade Reaction and Finite Element Methods for Diaphragm Wall Design. ***World Tunnel Congress 2012***, Bangkok.
6. **Khare, M.G.** and Varun, M. (2012) Effect of Diaphragm Wall-Slab Joint Rigidity on Design of Underground Metro Station. ***World Tunnel Congress 2012***, Bangkok.
7. Datye, K.R. and **Khare, M.G.** (2008) Performance of Large Storage Tank in Bhuj Earthquake. 6th International Conference on Case Histories in Geotechnical Engineering, Arlington VA, USA.
8. **Khare, M.G.**, Chopra, M.B. and Reinhart, D. (2008) Experimental Study of Clogging of Leachate Collection System. Global Waste Management Symposium, Denver, USA, 2008.
9. **Khare, M.G.** and Gandhi, S.R. (2007) Skin Friction of Piles Coated with Bituminous Coats. Proc. of GeoDenver 2007: New Peaks in Geotechnics, 18-21 February 2007, Denver, USA.
10. **Khare, M.G.** and Gandhi, S.R. (2007) Behavior of Coated Piles under Dragload. 13th Asian Regional Conference, Kolkata December 2007.
11. **Khare, M.G.** and Gandhi, S.R. (2006) Performance of Bituminous Coats in Reducing Negative Skin Friction. Proc. 10th International Conference on Piling and Deep Foundations, 2006, Amsterdam, The Netherlands, pp. 475-483.
12. **Khare, M.G.**, Chopra, M.B. and Reinhart, D.R. (2002) Design Issues with MSW Landfill Leachate Collection Systems. Waste Tech 2002, Coral Springs Fl., USA.