

Publications

Journal Papers

1. **Hossain, M.S.**, Dharmateja, M., and Hossain, J. (2009). "Assessment of Geo-Hazard Potential and Site Investigations using Resistivity Imaging", **Accepted for Publication to International Journal of Environmental Technology and Management (IJETM)**.
2. **Hossain, M.S.** and Haque, M.A. (2009). "Stability of Bioreactor Landfill with Decomposition - A Numerical Modeling", **Journal of Geotechnical and Geological Engineering**, Elsevier, Published Online First, August 06, 2009: DOI 10.1007/s10706-009-9265-0.
3. **Hossain, M.S.** and Gabr, M.A. (2009), "Effects of Shredding and Equipment Size on the Compressibility and Strength Parameters of Municipal Solid Waste", **Waste Management Journal, Volume 29, Issue (9), pg. 2417-2424**.
4. **Hossain, M.S.**, and Haque, M.A. (2009). "The Effect of Daily Cover Soils on Shear Strength Parameters of Municipal Solid Waste with Degradation in Bioreactor Landfills", **Waste Management Journal, Volume 29, Issue (5), pg. 1568-1576**.
5. **Hossain, M.S.**, Hoyos, L.R. and Penmethsa, K. (2009), "Changes in Permeability of Municipal Solid Waste in Bioreactor Landfill with Degradation and Time" **Journal of Geotechnical and Geological Engineering, Elsevier. Volume 27, Issue 1, Page 43-51**.
6. Gabr, M.A., **Hossain, M.S.**, and Barlaz, M.A. (2007), "Shear Strength Parameters and Model of Municipal Solid Waste with Leachate Recirculation", Technical Note: **ASCE Journal of Geotechnical and Geoenvironmental Engineering**, Vol. 133, No. 4, April 1, 2007, pg. 478 –474.
7. **Hossain, M.S.**, and Rao, K.N. (2006), "Performance Evaluation and Numerical Modeling of Embankment over Soft Clayey Soil Improved with Chemico Pile" **Journal of Transportation Research Board**, No. 1952, Geomaterials 2006, pg. 80 - 89.
8. **Hossain, M.S.**, Gabr, M.A., and Barlaz, M.A. (2003), "Relationship of Compressibility Parameters to Municipal Solid Waste Decomposition", **ASCE Journal of Geotechnical and Geoenvironmental Engineering**, Vol. 129, No. 12, December 1, 2003, pg. 1151 –1158.
9. **Hossain, M.S.**, Omelchenko, V., Mahmood, T. (2009), "Case History of Geosynthetic Reinforced Segmental Retaining Wall Failure". **Electronic Journal of Geotechnical Engineering (EJGE)**, Volume 14C.
10. **Hossain, M.S.**, Omelchenko, V., Haque, M.A. and Hossain, J. (2009), "Capacity of a Drilled Shaft in Mid-Atlantic Region" **Electronic Journal of Geotechnical Engineering (EJGE)**, Volume 14E.
11. **Hossain, M.S.**, Haque, M.A., and Hoyos, L. (2009). "Shear Strength Parameters of Municipal Solid Waste with Degradation in Bioreactor Landfills", **Canadian Geotechnical Journal – Revised version submitted**.
12. **Hossain, M.S.**, and Penmethsa, K. (2009). "The Effects of Daily Cover Soils on Hydraulic Conductivity of Municipal Solid Waste (MSW) in Bioreactor Landfills", **Waste Management Journal – revised version submitted**.
13. **Hossain, M.S.** and Penmethsa, K. (2009), "Changes in Physical Characteristics of Municipal Solid Waste (MSW) In Bioreactor Landfill with Degradation" **International Journal of Environmental Engineering. – Revised version submitted**.

14. **Hossain, M.S.**, Haque, M.A., and Hoyos, L. (2008). "Dynamic Characteristic of Municipal Solid Waste with Degradation in Bioreactor Landfills", **Submitted to Journal of Geotechnical and Geological Engineering, Elsevier – under review.**
15. Hoyos, L.R., Puppala, A.J., Ordonez, C.A., and **Hossain, S.** (2009)"Engineering Properties of Cement-Fiber-Treated Reclaimed Asphalt Pavement (RAP) Aggregates," **Submitted to ASCE Journal of Materials in Civil Engineering – under review**
16. Hoyos, L.R., Takkabutr, P., Puppala, A.J., and **Hossain, S.** (2009) "A Modified Pressure Plate Extractor Device for SWCC Testing under Controlled Anisotropic Stress States," **Submitted to ASTM Geotechnical Testing Journal – under review.**

Publication in Geotechnical News

1. Gabr, M.A., Hossain, M.S., and Barlaz, M.A. (2000), "Solid Waste Settlement with Leachate Recirculation", **Geotechnical News**, Volume 18, Number 2, pg. 50-55.

Peer Reviewed Geotechnical Special Publications

1. Hoyos, L.R., Velosa, C., Puppala, A.J., and **Hossain, S.** (2010) "A Novel Suction-Controlled Ring Shear Apparatus for Modeling Unsaturated Soil Response Under Large Deformations," GeoShanghai 2010 International Conference, June 3-5, 2010, Shanghai, China.
2. Hoyos, L.R., Velosa, C., Puppala, A.J., and **Hossain, S.** (2010) "Modeling Unsaturated Soil Response Under Large Deformations Using A Novel Suction-Controlled Ring Shear Device," UNSAT 2010: Fifth International Conference on Unsaturated Soils, September 6-8, 2010, Barcelona, Spain.
3. **Hossain, M.S.**, Gabr, M.A. and Haque, M.A. (2008), "Deformation and Stability of MSW Bioreactor Landfills: Properties and Analysis Approach" Geotechnical Special Conference, **GeoCongress 2008**, to be held on March 9 – 12, 2008, New Orleans, Louisiana.
4. **Hossain, M.S.**, Hoyos, L.R. and Penmethsa, K. (2008), "Permeability of Municipal Solid Waste in Bioreactor Landfill with Degradation" Geotechnical Special Conference, **GeoCongress 2008**, March 9 – 12, 2008, New Orleans, Louisiana.
5. Hoyos, L.R., Puppala, A and **Hossain, M.S.** (2008), "Engineering Characterization of Cement-Fiber Treated RAP Aggregates" sGeotechnical Special Conference, **GeoCongress 2008**, March 9 – 12, 2008, New Orleans, Louisiana.
6. Hoyos, L.R., Takkabutr, P., Puppala, A.J., and **Hossain, M.S.** (2008). "Dynamic response of unsaturated soils using resonant column and bender element techniques". GEESD IV: 4th Geotechnical Earthquake Engineering and Soil Dynamics Conference, May 18-22, 2008, Sacramento, California.

7. **Hossain, M.S.**, Omelchenko, V. and Haque, M.A. (2007), "Capacity of Rock Socketed Drilled Shafts in Mid-Atlantic Region" Geotechnical Special Conference, **GeoDenver**, February 18-21, 2007, **Denver, Colorado**.
8. Branch, A. and **Hossain, M.S.** (2007), "Seepage Analyses of Soil-Bentonite Slurry Cutoff Wall through Landfill" Geotechnical Special Conference, **GeoDenver**, February 18-21, 1007, **Denver, Colorado**.
9. **Hossain, M.S.**, Rao, K.N., and Haque, M.A. (2006), "Embankment over Soft Soil Improved with Chemico Pile – A Numerical Study" **Geo Shanghai, in Shanghai, China**, June 2-4, 2006.
10. **Hossain, M.S.**, and Gabr, M.A (2005), "Prediction of Municipal Solid Waste Landfill Settlement with Leachate Recirculation", **Geotechnical Special Publication - 142**, Waste Containment and Remediation, Geo-frontiers 2005 at Austin, Texas, January 24-26, 2005.
11. Kim, K.J., Rahman, M.S., Gabr, M.A., Sarica, R.Z. and **Hossain, M.S.** (2005), "Reliability Based Calibration of Resistance Factors for Axial Capacity of Driven Piles", **Geotechnical Special Publication - 132**, Advances in Deep Foundations, Geo-frontiers 2005 at Austin, Texas, January 24-26, 2005.

Peer Reviewed Conference Publications

1. **Hossain, M.S.**, Haque, M.A., Qasim, S. and Hoyos, L. (2007). "Dynamic Characteristic of Municipal Solid Waste with Degradation in Bioreactor Landfills", 4th International Conference on **Earthquake Geotechnical Engineering**, June 25-28, 2007, **Thessaloniki, Greece**.
2. **Hossain, M.S.**, Haque, M.A., Qasim, S. and Hoyos, L. (2007). "Seismic Stability of Bioreactor Landfill with Decomposition - A Numerical Modeling", 4th International Conference on **Earthquake Geotechnical Engineering**, June 25-28, 2007, **Thessaloniki, Greece**.
3. **Hossain, M.S.**, and Omelchenko, V. (2007), "Failure Analysis of a Mechanically Stabilized Earth (MSE) wall in Maryland" **Transportation Research Board**, TRB 86th Annual Meeting, January 21-25, 2007, Washington, D.C.
4. **Hossain, M.S.**, Mydlinski, J., Rao, K.N., and Haque, M.A. (2006), "Temporary Support System – A Case Study in Virginia" **Geo Congress 2006 in Atlanta**, February 26 – March 1, 2006.
5. Madhyannapu, R.S., Puppala, A.J., **Hossain, M.S.**, Han, J., and Porbha, A. (2006), "Analysis of Geotextile Reinforced Embankment Over Deep Mixed Soil Columns Using Numerical and Analytical Tools" **Geo Congress 2006 in Atlanta**, February 26 – March 1, 2006.
6. **Hossain, M.S.**, and Khouri, B. (2005), "Comparative Study of Different In-Situ Tests for Site Investigation" **Second International Conference on the Flat Dilatometer to be held in Washington DC**, April 2-5, 2006.
7. **Hossain, M.S.**, Gabr, M.A., and Barlaz, M.A. (2003), "Effect of Decomposition and Stress on Creep Compression Index of Municipal Solid Waste in Bioreactor Landfills", **The 12th Pan-American Conference for Soil Mechanics and Geotechnical Engineering and the 39th US Rock**

Mechanics Symposium, Soil and Rock America 2003, June 22-26, Cambridge, Massachusetts, USA, pg. 1435-1440.

8. Kim, K.J., Sarica, R.Z., **Hossain, M.S.**, Rahman, M.S., and Gabr, M.A. (2003). "Development of Resistance Factors for Axial Capacity of Driven Prestressed Concrete Piles by the Vesic Method in the Coastal Region Of North Carolina", CD-ROM: **TRB 82nd Annual Meeting**, January 12-16, 2003, Washington, D.C.

Other Publications

1. Gabr, M.A., **Hossain, M.S.**, and Barlaz, M.A. (2002), "Review of Shear Strength Parameters of Municipal Solid Waste with Leachate Recirculation", **The Second Intercontinental Landfill Research Symposia**, October 13-16, 2002 in **Asheville, North Carolina**.
2. **Hossain, M.S.**, Gabr, M.A., and Barlaz, M.A. (2001), "Compressibility Parameters of Municipal Solid Waste with Leachate Recirculation", Proceedings of **Waste Tech 2001, San Diego, California**.
3. Barlaz, M.A., **Hossain, M.S.**, Gabr, M.A., Rooker, A., and Kjeldsen, P. (2001), "Closing Gaps in the Regulation of MSW Landfills: Defining the End of Post-Closure Monitoring Period and the Future Stability of Leachate Recirculation Landfills", Proceedings of **Waste Tech 2001, San Diego, California**