

Dr. Udeni Priyantha Nawagamuwa

BScEng.Hons(Moratuwa), MEng(AIT), DrEng(YNU), CEng, MIE(SL)

Senior Lecturer (Grade II), Department of Civil Engineering,
University of Moratuwa



Contact Information:

Address:

Department of Civil Engineering
University of Moratuwa,
Moratuwa, Sri Lanka.

e mail: udeni@civil.mrt.ac.lk

Telephone: +94-11-2650567

Fax: +94-11-2651216

● Academic & Professional Qualifications

- Work Experience
- Project Experience
- Research Interests
- Awards & Achievements
- Professional Memberships
- Language Skills
- Social & Professional Activities

● Publications - Thesis

- Journal Publications
- Presidential Addresses
- International Conferences
- Local Conferences (Japan)
- Local Conferences (Sri Lanka)-Full Paper Publication
- Local Conferences (Sri Lanka)-Abstract Publications

Academic & Professional Qualifications

- BSc Eng (Hons) in Civil Engineering from University of Moratuwa , Sri Lanka (Dec.1994- Jan 1999)
- MEng in Geotechnical Engineering from Asian Institute of Technology , Thailand (Sep.2000-April 2002)
- Dr Eng in Geotechnical Engineering from Yokohama National University , Japan (Oct. 2002 -Sep. 2005)
- Chartered Engineer (Civil) since 4 th January 2008

Work Experience

- Industrial Training1 at Hilton Tower in 1996 - Main contractor was Kajima Keangnam JV
- Industrial Training2 at Seethawaka Industrial Zone construction site in 1997/98 - Main Contractor was Kumagai Gumi
- Instructor at the Department of Civil Engineering, University of Moratuwa from Jan 1999 to Jan 2000
- Research Assistant and Visiting Lecturer at the Department of Civil Engineering from Jan 2000 to August 2000
- Visiting Lecturer at the Institution of Engineers Sri Lanka (IESL) in 1999 and 2000
- Visiting Demonstrator at the Kothalwala Defense Academy in 1999
- Probationary Lecturer at the Department of Civil and Environmental Engineering, University of Ruhuna from August 2000 - September 2005
- Senior Lecturer (Grade II) from 30 th September 2005 to 30 th September 2007 at University of Ruhuna
- Visiting Lecturer at the Institution of Engineers Sri Lanka (IESL) since August 2006
- Visiting Lecturer at the University of Moratuwa from May - August 2007
- Currently attached to the Department of Civil Engineering, University of Moratuwa as a Senior Lecturer (Grade II) since 1 st October 2007 .
- Visiting Lecturer at Kothalawela Defense University since January 2008
- Coordinator (Civil Engineering) and Member of Board of Studies at Kothalawela Defense University since October 2008
- Coordinator - MEng/PG Diploma in Foundation Engineering and Earth Retaining Systems at the Department of Civil Engineering, University of Moratuwa since 2009

Project Experience

- Geotechnical Engineering Consultant to China Harbor Engineering Corporation (CHEC) at STDP from Feb 2009 to May 2011
- Resource person of RECLAIM (Part III) on development of Rainfall Thresholds of Landslides in the Asian Region conducted by ADPC from Jan 2010 to April 2012 funded by Norway
- Geotechnical Engineering Consultant to ADPC in the study of Rainfall Triggered Landslide Hazard Zonation in Cox's Bazaar and Teknaf Municipalities in Bangladesh from March 2010 to December 2011

Research Interests

- Ground Improvement Techniques
- Use of Domestic and Industrial Wastes in Constructions
- Geo-environmental Engineering
- Development of Cricket Pitches
- Earth Retaining Structures
- Landslide Studies

Awards & Achievements

- Winner of the Sri Lanka National Mathematical Olympiad-1992
- Best Final Year Project - Geotechnical Engineering Division, University of Moratuwa in 1999
- Best Paper to represent Sri Lanka for IYGEC 2000- Sri Lankan Geotechnical Society
- Speaker of Monthly Geotechnical Forum at IESL conducted by Sri Lankan Geotechnical Society in July 2006
- Supervisor of the Project which won the Nimal Chandrasena Award for the Best Paper presented by Young Members of IESL - 2007
- Invited Lecture on Recent Developments in Sustainable Landslide Mitigation in Sri Lanka at Yokohama National University and Saitama University , Japan in January 2009
- Visiting Scholar at University of South Florida , USA from March to April 2009

- Supervisor of the Project which won the Nimal Chandrasena Award for the Best Paper presented by Young Members of IESL - 2009
- EOE Pereira Award for the Best Technical Paper presented at IESL Annual Sessions in 2009
- EOE Pereira Award for the Best Technical Paper presented at IESL Annual Sessions in 2010
- Presidential Address of Section C, SLAAS 2010
- Award for Appreciation of Outstanding Research Performances 2010 by University of Moratuwa, Sri Lanka

Professional Memberships

- Member - Sri Lankan Geotechnical Society
- Corporate Member - Institution of Engineers Sri Lanka (IESL)
- Life Member - Sri Lanka Association for the Advancement of Science (SLAAS)
- Member - ISSMGE

Language Skills

Sinhala Mother Tongue

English TOEFL (in 1999) and GRE (in 2001)

Japanese Fair Knowledge (Fundamental Course at Yokohama National University , Japan)

Social & Professional Activities

Committee Member - Sri Lanka Association at Asian Institute of Technology (AIT), Thailand (2000-2001)

General Assembly Member - Student Union of AIT (Jan 2001-Aug 2001)

Chair Person of Film and Video Committee - Student Union of AIT (Sep 2001-April 2001)

Executive Committee Member - Sri Lanka Students' Association in Japan (2002-03, 2004-05)

President - Sri Lanka Students' Association in Japan (2003-04)

Executive Committee Member - Sri Lankan Geotechnical Society (SLGS) (2006-todate)

Member - Organizing Committee of 20 th Anniversary Celebrations of SLGS (2006-2007)

Secretary - Sri Lankan Geotechnical Society's First International Conference on Soil and Rock Engineering - August 2007

Member - Joint Working Group on Geotechnical Engineering for Disaster Mitigation and Rehabilitation (JWG-DMR) hosted by South East Asian Geotechnical Society (SEAGS) (2006)

Editor - SLGS Newsletter since July 2006

Member - Civil Engineering Sectional Committee of IESL (2007-2008)

Vice President/ President Elect - SLAAS, Section C (2009)

President- SLAAS, Section C (2010)

Council Member - SLAAS (2010)

Council Member - IESL (2010-2011) and (2011-2012)

Chairman Elect - Committee for Popularization of Science/SLAAS (2011)

Chairman - Committee for Popularization of Science/SLAAS (2012)

Council Member - SLAAS (2012)

Publications - Thesis

1. **Nawagamuwa, U.P.** , 2002, Cavity Expansion Analysis on Cone Penetration Resistance of Sand Compaction Piles, MEng Thesis, AIT, Thailand , April 2002
2. **Nawagamuwa, U.P.** , 2005, Studies on the effects of influential factors on consolidation with vertical drains, Doctoral dissertation, Yokohama National University , Japan , September 2005

Journal Publications

1. Imai, G. and **Nawagamuwa, U.P.** , 2005, Consolidation of clayey sub soils with intermediate permeable layers improved by vertical drains with smear effect, Journal of Lowland Technology International, Vol.7, No.2
2. **Nawagamuwa, U.P.** , 2006, Cavity Expansion Analysis for Sand Compaction Piles, Geotechnical Journal, Sri Lankan Geotechnical Society, Vol.3, No.1
3. **Nawagamuwa, U.P.** and Imai, G., 2007, Proposal of a new concept for the vertical drain design considering the effects of intermediate permeable layers and smear, Soils and Foundations, Vol.47, No.3
4. **Nawagamuwa, U.P.** , Senanayake, A.I.M.J., Silva, S.A., and Sanjeewa, D.M.I., 2009, Improvement of local soils in order to make "Fast & Bouncy"cricket pitches, Engineer, Journal of the Institution of Engineers Sri Lanka, Vol XXXXII, No 04, October 2009
5. **Nawagamuwa, U.P.** , Senanayake, A.I.M.J., and Silva, S.A., 2010, The Curious case of the Khetarama Pitch, Engineer, Journal of the Institution of Engineers Sri Lanka, Vol XXXXIII, No 04, October 2010.
6. Wickramaarachchi, P., Ranasinghe,K, Hamamoto, S, Kawamoto, K, **Nawagamuwa, U.P.** , Moldrup P, and Komatsu, T., 2011, Gas transport parameters for compacted reddish brown soil in Sri Lankan landfill final cover, ASCE Journal of Hazardous Toxic and Radioactive Waste, ISSN: 2153-5493, Volume: 15, Issue: 4, October 2011.

Presidential Addresses

1. **Nawagamuwa, U.P.**, 2011, Sri Lankan Experience in Ground Improvement, Presidential Address of Section C, Proceedings of the 67 th Annual Sessions, Part II: Inaugural and Presidential Addresses, December 2011

International Conferences

1. **Nawagamuwa, U.P.** , 2000, Study of the Behavior of Anchored Tyre Earth Retaining Structures, IYGEC 2000, University of Southampton, UK, 8-13th September 2000
2. Kulathilaka, S.A.S. and **Nawagamuwa U.P.** , 2001, Development of Internally Stabilized Earth Retaining Structures with Local Materials, XVth International Conference on Soil Mechanics and Geotechnical Engineering, Turkey, 27-31st August 2001
3. **Nawagamuwa, U.P.** , Takemura, J. and Priyankara, N.H., Cavity Expansion Analysis to Evaluate Mechanical Properties of Sand Compaction Piles, The Fifth International Summer Symposium, Japan Society of Civil Engineers (JSCE), Tokyo, 26th July 2003
4. Takemura, J., **Nawagamuwa, U.P.** and Priyankara, N.H., Numerical and Laboratory Studies of Cavity Expansion Analysis using Cone Penetration Resistance, International Workshop on Prediction and Simulation Methods in Geomechanics, Athens, Greece, 14-15th October , 2003
5. **Nawagamuwa, U.P.** and Imai, G., 2004, Study of the effect of intermediate sand layers on consolidation with vertical drains, IS Osaka 2004, International Symposium on Engineering Practice and Performance on Soft Deposits, Osaka, June 2-4 2004
6. **Nawagamuwa, U.P.** and Imai, G., 2004, Influential factors of intermediate sand layers for consolidation of clayey sub-soil with vertical drains, 57th Canadian Geotechnical Conference, Quebec, Canada, 24-27th October 2004
7. **Nawagamuwa, U.P.** and Imai, G., 2005, Combinational effect of intermediate permeable layers and smear in the grounds improved with vertical drains, 6 th International Conference on Ground Improvement Techniques (GI05) , Coimbra, Portugal, 17-19th July 2005
8. **Nawagamuwa, U.P.** and Imai, G., 2005, Effect of smear and intermediate permeable layers on the consolidation of clayey sub soil using vertical drains, 7 th International Summer Symposium , JSCE, Tokyo, Japan, 30th July 2005
9. **Nawagamuwa, U.P.** and Imai, G., 2005, New design concept for vertical drains considering intermediate permeable layers with smear effect, 3 rd Young Geotechnical Engineers' Conference, iYGEC , Osaka, Japan, 12 th -16th September 2005
10. **Nawagamuwa, U.P.** and Imai, G., 2007 New design concept considering the Effect of smear and intermediate permeable layers on the consolidation of clayey subsoil with vertical drains, 13th ARC2007
11. Kumara, G .H.A.J.J., and **Nawagamuwa, U.P.** , 2008, Application of Coir dusts in vertical drains for improvement of soft clay, 2 nd International Symposium, Sabaragamuwa University of Sri Lanka, 8 th -12 th July 2008.
12. Nawagamuwa, U.P. , 2008, Recent Developments in Sustainable Landslide Mitigation in Sri Lanka, Regional seminar on experience of geotechnical investigations and mitigation for landslides, Bangkok, Thailand , 13-14 October, 2008
13. Ranasinghe, R.H.K., **Nawagamuwa, U.P.** , and Kawamoto, K., 2009, Effect of cover soil compaction and moisture content on gas transport and water retention in Maharagama landfill site, Sustainable Infrastructure development in Asia, Proceedings of the International Exchange Symposium, University of Ruhuna, Galle, Sri Lanka 14-15 th Sep, 2009
14. **Nawagamuwa, U.P.** , Senanayake, A.I.M.J., Silva, S.A., and Sanjeewa, D.M.I., 2009, Faster and bouncier

- cricket pitches using locally available clays, Sustainable Infrastructure development in Asia, Proceedings of the International Exchange Symposium, University of Ruhuna, Galle, Sri Lanka, 14-15 th Sep, 2009
15. Bandara, R.M.S., and **Nawagamuwa, U.P.**, 2009 Sri Lankan Experience on early warning mechanisms with simple and inexpensive approaches, Proceedings of Regional Meeting for Discussion and Promotion of Early Warning Mechanisms for Landslides in Asian Region, 25-27 th November, 2009, Bangkok, Thailand.
 16. Wickramarachchi, P., Ranasinghe, K, **Nawagamuwa, U.P.** , Kawamoto, K, Hamamoto, S, Moldrup, P and Komatsu, T, 2010, Measurement of gas transport parameters for final cover soil at Maharagama landfill in Sri Lanka, 19th World Congress of Soil Science, Soil Solutions for a Changing World, 1 -6 August 2010, Brisbane, Australia, pp49-52
 17. **Nawagamuwa, U.P.** , and Mujahid, A.H.M., 2010, Identification of Native Vegetation for Slope Stability in the Southern Province, Sri Lanka, 6 th International Congress on Environmental Geotechnics, 8 th -12 th November 2010, New Delhi, India
 18. Ranasinghe, R.H.K., **Nawagamuwa, U.P.** , Wickramaarachchi P.N., Kawamoto, K., and Komatsu, T. 2010, Study on gas transport and water retention in landfill cover soil: a Sri Lankan case study. 6 th International Congress on Environmental Geotechnics, 8 th -12 th November 2010, New Delhi, India
 19. **Nawagamuwa, U.P.** , and Kumara G.H.A.J.J., 2010, Utilization of coir dust to partially replace sand in vertical drains for soft ground improvement, Proceedings of the International Conference on Sustainable Built Environments 2010, Volume 2, Kandy, 13-1`4 Dec 2010
 20. **Nawagamuwa, U.P.**, Ranasinghe, R.H.K., Wickramaarachchi P.N., Kawamoto, K., and Komatsu, T. 2011, Effect of Cover Soil Selection and Compaction on Gas Transport and Water Retention: A Sri Lankan Case Study of a Cover Soil at an Open Dump, Proceedings of 14th Asian Regional Conference of ISSMGE, Hong Kong, 23 rd -27 th May 2011
 21. **Nawagamuwa, U.P.**, Rathnaweera, T.D., Rangana, H.L.L., Palihawadana, M.P., 2011, Effects of Global Warming in Landslide Frequencies in Rathnapura District, Sri Lanka, Proceedings of the International Symposium on Social Management Systems, Colombo, Sri Lanka, 12 th -16 th Sep 2011
 22. **Nawagamuwa, U.P.**, Rupasena, T.M.A.T., Kumara, N.H.G.T.N.D., Viduranga, K.D., 2011, Study of the Impacts of Native Vegetations on Cut slopes in Southern Highway, Sri Lanka, Proceedings of the International Symposium on Social Management Systems, Colombo, Sri Lanka, 12 th -16 th Sep 2011
 23. **Nawagamuwa, U.P.**, Bhasin, R.K., Kjekstad, O., Arambepola, N.M.S.I., 2011, Recommending regional rainfall threshold values for early warning of landslides in the Asian Region, Proceedings of the 2 nd World Landslide Forum, Rome, Italy, 3 rd -7 th October 2011.

Local Conferences (Japan)

- **Nawagamuwa, U.P.** , 2003, Cavity Expansion Analysis for Sand Compaction Piles, 38th Japan-National Conference on Geotechnical Engineering, Japan, 2-4th July 2003
- **Nawagamuwa, U.P.** and Imai, G., 2004, Influence of Intermediate sand layers on consolidation with vertical drains, 39th Japan-National Conference on Geotechnical Engineering, Niigata, Japan, 7-9th July 2004
- **Nawagamuwa, U.P.** and Imai, G., 2005, Effects of Intermediate permeable layers on consolidation with vertical drains considering variable permeability and compressibility, 40th Japan-National Conference on Geotechnical Engineering, Hakodate, Japan, 4-6th July 2005

Local Conferences (Sri Lanka) - Full Paper Publications

- Kulathilaka, S.A.S. and **Nawagamuwa U.P.** , 2000, Internally Stabilized Earth Retaining Systems with Discarded Tyres. Engineering Research Unit Symposium, University of Moratuwa, Sri Lanka, 7th December 2000
- Kulathilaka, S.A.S. and **Nawagamuwa U.P.** , 2001, A Study of Bamboo Reinforced Retaining Structures, Engineering Research Unit Symposium, University of Moratuwa, Sri Lanka, 7th December 2001
- Nawagamuwa, U.P. , 2006, Effects Intermediate Permeable Layers on the Consolidation of Soft Clays with Prefabricated Vertical Drains, SLGS Conference on Geotechnical Engineering under Difficult Ground Conditions, Colombo, Sri Lanka, 15 th August 2006
- Ranasinghe, R.H.K., **Nawagamuwa, U.P.** , Wickramaarachchi P.N., and Kawamoto, K., 2010 .,Gas exchangeable properties of "Maharagama"open dump cover soil, Transactions 2010, Volume I- Part B, The Institution of Engineers Sri Lanka, 2010
- **Nawagamuwa, U.P.** , Wijewickrama, M.I.D.H.,Sugathapala, K., Karunawardena , W.A., and Bandara, R.M.S. 2010, Matale Ground subsidence and overlooked construction basics, Transactions 2010, Volume I- Part B, The Institution of Engineers Sri Lanka, 2010
- **Nawagamuwa, U .P.**, and Rifas, A.M. , 2010, Disaster research as a making tool for safer building practices, Annual symposium on " Building research to face future challenges", NBRO Symposium 2010, 2 nd Nov 2010

Local Conferences (Sri Lanka) - Abstract Publications

- Nadeesha A . M.K.N ., Thileepan, T., Anushnath, K., Kumara, W.A.P.S.P., and **Nawagamuwa, U.P.** , Study on the use of waste polythene in reducing the brittleness of soft soils improved with cement, 64 th Annual Sessions, SLAAS Proceedings, 5 th -10 th December 2008.
- Kumara, G .H.A.J.J., and **Nawagamuwa, U.P.** , 2008, Use of coir dusts in vertical drains as a substitution for sand, 64 th Annual Sessions, SLAAS Proceedings, 5 th -10 th December 2008.
- **Nawagamuwa, U.P.** , 2008 Laboratory experiments to investigate the suitability of low-replacement sand compaction piles for developing countries, 64 th Annual Sessions, SLAAS Proceedings, 5 th -10 th December 2008.
- Priyankara, N. H., and **Nawagamuwa, U.P.** , 2009, Numerical analysis of seismic behavior of the ground improved with sand compaction piles, National Symposium on Promoting Knowledge Transfer to Strengthen

Disaster Risk Reduction & Climate Change Adaptation, 7 th & 8 th July 2009

- Sugathapala, K., **Nawagamuwa, U.P .**, and Karunawardena , W.A., 2009, Human settlement perspective related to land subsidence in Matale District, National Symposium on Promoting Knowledge Transfer to Strengthen Disaster Risk Reduction & Climate Change Adaptation, 7 th & 8 th July 2009
- **Nawagamuwa, U.P .**, and Mujahid, A.H.M., 2009, Bio-engineering approach towards identification of Natural vegetation for slope stability in the Southern Province, Sri Lanka, National Symposium on Promoting Knowledge Transfer to Strengthen Disaster Risk Reduction & Climate Change Adaptation, 7 th & 8 th July 2009
- **Nawagamuwa, U.P .**, Senanayake, A.I.M.J., Silva, S.A., and Sanjeewa, D.M.I., 2009, Faster and Bouncier Cricket Pitches using locally available clays , Proceedings of the Annual Symposium, ERU, University of Moratuwa, Nov 6 th 2009
- Ranasinghe, R.H.K., **Nawagamuwa, U.P .**, and Kawamoto, K.,2009, Study on Gas Tranposrt and Water Retention in Maharagama Landfill, Proceedings of the Annual Symposium, ERU, University of Moratuwa, Nov 6 th 2009
- Ranasinghe, R.H.K., **Nawagamuwa, U.P .**, Kawamoto, K., and Wickramaarachchi P.N.,2009 .,Effect of cover soil compaction and gas transport and water retention: Case study -Maharagama Waste Disposal Site, Proceedings of the Annual Symposium 2009, General Sir John Kotelawala Defence University, 4 th Dec 2009
- **Nawagamuwa, U.P .**, Madarasinghe, D.L., Goonatillake M.D.M.J and Karunarathne H.J.D, 2010, Suitability of construction and demolition waste as a gabion fill material, Proceedings of the Annual Symposium, ERU, University of Moratuwa, Nov 2 nd 2010
- **Nawagamuwa, U.P .**, and Sugathapala, K.C. 2010, Adverse effects of Matale ground subsidence in residential housing, Proceedings of the 66 th Annual Sessions -2010, Part 1 - Abstracts
- **Nawagamuwa, U.P .**, and Ranasinghe, R.H.K., 2010, Study on the gas transport parameters of final cover soil of Maharagama landfill, Proceedings of the 66 th Annual Sessions -2010, Part 1 - Abstracts
- Silva, J.H.C.D, Abyewickrama, S.H.M.P, Prasanka, H.L.S and **Nawagamuwa, U.P .**, 2010, development of correlations for local soils using field and laboratory test results, Proceedings of the 66 th Annual Sessions -2010, Part 1 -Abstracts
- **Nawagamuwa, U.P .**, and Bandara, R.M.S., 2011, Simple and inexpensive approaches in identifying and early warning of landslides - Some case studies, Proceedings of the Symposium on DISASTERS: REDUCTION, MITIGATION AND MANAGEMENT Kandy, Sri Lanka, 25 th -26 th Feb, 2011 -Abstracts