

# CURRICULUM VITAE



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## **EDUCATIONAL BACKGROUND**

2004 – PhD (Civil Engineering), Universiti Teknologi Malaysia  
1991 - MSE (Civil Engineering), The University of Michigan, Ann Arbor, USA  
1985 - BSCE (Cum Laude), West Virginia University, Morgantown, USA  
1980 - SPM, Sekolah Alam Shah, Kuala Lumpur

## **WORKING EXPERIENCE**

Aug 2008 to date	-	Assoc Professor (Geotechnical Eng.), UTM
July 2005 to Aug 2008	-	Senior Lecturer (Geotechnical Eng.), UTM
Aug 1993 to June 2005	-	Lecturer (Geotechnical Eng.), UTM
July 1987 to July 1993	-	Asst. Lecturer 'A' (Geotechnical Eng.), UTM
Feb 1987 to June 1987	-	Civil Engineer (Intertex Sdn Bhd)
Apr 1986 to Feb. 1987	-	Civil Engineer (Jeffa Construction Sdn Bhd)

## PUBLICATIONS

- 2013 Influence of Natural Fillers on Shear Strength of Cement Treated Peat - (Ali Dehghanbanadaki, **Kamarudin Ahmad**, Nazri Ali), *Gradevinar*, Vol 7, 633 - 640
- 2013 Stabilization of Soft Soils with Deep Mixed Soil Columns – General Perspective (Ali Dehghanbanadaki, **Kamarudin Ahmad**, Nazri Ali), *Electronic Journal of Geotechnical Engineering*, **Vol 17**, 295 - 306
- 2012 Initial Settlement of Mat Foundation on Group of Cement Columns in Peat – Numerical Analysis (Ali Dehghan Banadaki, **Kamarudin Ahmad**, Nazri Ali), *Electronic Journal of Geotechnical Engineering*, **Vol 17**, 2243 - 2253
- 2012 A Review of Experimental Studies on Double-Porosity- Soils (Su Kong Ngien, Norhan Abd Rahman, **Kamarudin Ahmad**, Roland W. Lewis) *Scientific Research and Essays*, Vol **7(38)**: 3243 – 3250, **doi**: 10.5897/sre11.2131
- 2011 Electrokinetic Treatment on a Tropical Residual Soil (**Kamarudin Ahmad**, Mohd Raihan Taha and Khairul Anuar Kassim) *Proceedings of the Institution of Civil Engineers, Ground Improvement* **164(1)**: 3 – 13, **doi**: 10.1680/grim.800025
- 2011 Numerical Modeling of Multiphase Immiscible Flow in Double-Porosity Featured Groundwater Systems (Ngien, S.K., Rahman, N.A., Lewis, R.W. and **Ahmad, K.** *International Journal for Numerical and Analytical Methods in Geomechanics*. DOI: 10.1002/nag.1055
- 2011 Compaction Parameters of Kaolin Clay Modified with Palm Oil Fuel Ash as Landfill Liner (Oyeleke Raifu Brown, Mohd Badruddin Mohd Yusof, Mohd Razman Salim and **Kamarudin Ahmad**) *Proceeding of 2011 IEEE First Conference on Clean Energy and Technology CET 2011*, 27 – 29 June 2011, Kuala Lumpur, pp

- 2011 Physico-chemical Properties of Palm Oil Fuel Ash as Composite Sorbent in Kaolin Clay Landfill Liner System (Oyeleke Raifu Brown, Mohd Badruddin Mohd Yusof, Mohd Razman Salim and **Kamarudin Ahmad**) *Proceeding of 2011 IEEE First Conference on Clean Energy and Technology CET 2011*, 27 – 29 June 2011, Kuala Lumpur, pp
- 2011 *Experimental Modelling of Light Non-Aqueous Phase Liquid Migration in Dual-Porosity Soil* (Ngien Su Kong, Norhan Abd. Rahman and Kamarudin Ahmad). *Proceeding of Research Seminar in Civil Engineering (SEPKA2011)*, 13<sup>th</sup> – 15<sup>th</sup> September 2011, Universiti Teknologi Malaysia, Skudai, Johor.
- 2010 Elapse Time Factor on Induced Vegetative Moisture uptake in an Unsaturated Soil (Muazu, M.A., Ali, N. and **Ahmed, K.**) *American Journal of Engineering and Applied Sciences* **3(4)**, Science Publications, ISSN 1941 – 7021, 597 – 603, 2010
- 2010 Bioengineering Assessment on Sloppy Ground (Muazu, M.A., Ali, N. and **Ahmed, K.**) *American Journal of Environmental Sciences* **6(4)**, Science Publications, ISSN 1553 – 345X, 357 – 364, 2010
- 2010 Rainfall Evaluation of Root Water Uptake Induced Deformation (Muazu, M.A., Ali, N. and **Ahmed, K.**) *ARPN Journal of Engineering and Applied Sciences* **5(8)**, Asian Research Publishing Network (ARPN), ISSN 1819 – 6608, 32 – 41, 2010
- 2010 *NAPL Contamination in Groundwater for Double-Porosity Featured Sub-Surface Systems* (Ngien Su Kong, Norhan Abd. Rahman, **Kamarudin Ahmad** and Roland W. Lewis) *Proceeding of the First National Conference on Natural Resources (NCNR2010)*, 18<sup>th</sup> – 19<sup>th</sup> May 2010, Kota Bharu, Kelantan. pp
- 2010 Laboratory Experiment on Light Non-Aqueous Phase Liquid Migration Effect in Dual-Porosity Soil (Ngien Su Kong, Norhan Abd. Rahman, *Kamarudin Ahmad*, Zaidatul Sheila Kamarulzaman and Roland W. Lewis). *Proceeding of Persidangan Kebangsaan Hidrologi & Alam Sekitar (HIDRAS2010)*, 23<sup>rd</sup> – 24<sup>th</sup> June 2010, Batu Pahat, Johor. pp

- 2010      *A Double-Porosity Multiphase Groundwater Flow Model* (Ngien Su Kong, Norhan Abd. Rahman, **Kamarudin Ahmad** and Roland W. Lewis). *Proceeding of the Third International Graduate Conference on Engineering, Science and Humanity (IGCESH2010)*, 2<sup>nd</sup> – 4<sup>th</sup> November 2010, Universiti Teknologi Malaysia, Skudai, Johor. pp
- 2006      *An Evaluation on Fundamental Engineering Properties of Fluid-Modified Clayey Soils*, *Research Monograph*, Research Management Center, Universiti Teknologi Malaysia
- Dec 2006      *Electroosmotic Flows and Electromigrations during Electrokinetic Processing on a Tropical Residual Soil* (**Kamarudin Ahmad**, Khairul Anuar Kassim, Mohd Raihan Taha), *Malaysian Journal of Civil Engineering*, vol. 18, no. 2, pp 74 – 88.
- Dec 2006      *Effects of H<sub>3</sub>PO<sub>4</sub> Concentrations on Strength Increases of a Tropical Residual Soil*, (**Kamarudin Ahmad**, Muhammad Azril Hezmi and Khairul Anuar Kassim), *National Seminar on Civil Engineering Research (SEPKA 2006)*, 19-20 Dec 2006, Universiti Teknologi Malaysia, pp G10-1 to G10-8
- Dec 2006      *Comparison between River Sand and Standard Sand (Silica) for Field Density Testing Using Sand Replacement Method* (Khairul Anuar Kassim, Ahmad Safuan A Rashid, Muhammad Azril Hezmi and **Kamarudin Ahmad**), *National Seminar on Civil Engineering Research (SEPKA 2006)*, 19-20 Dec 2006, Universiti Teknologi Malaysia, pp G2-1 to G2-6
- 2005      *Influence of Electrokinetic Processing of a Residual Soil on the pHs of Electrolytes* (**Kamarudin Ahmad**, Khairul Anuar Kassim, Mohd Raihan Taha), *Jurnal Kejuruteraan Awam*, Universiti Teknologi Malaysia, vol. 17, no. 1, pp 39 - 48
- July 2005      *Compressibility of H<sub>3</sub>PO<sub>4</sub>-Treated Soils* (**Kamarudin Ahmad**, Muhammad Azril Hezmi and Lam Chee Siang), *Seminar Kebangsaan Penyelidikan Kejuruteraan Awam (SEPKA 2005) 5-6 Julai 2005*, Universiti Teknologi Malaysia, pp 65-70

- July 2005 Relationship between Geotechnical Engineering Properties of Remolded Residual Soil with Plasticity Index (Muhammad Azril Hezmi, **Kamarudin Ahmad** and Masyitah Md Nujid), *Seminar Kebangsaan Penyelidikan Kejuruteraan Awam (SEPKA 2005) 5-6 Julai 2005*, Universiti Teknologi Malaysia, pp 101-106
- 2004 Geoenvironmental Aspects of Tropical Residual Soils (Mohd Raihan Taha, **Kamarudin Ahmad**, Azlan Abd Aziz and Zamri Chik), *Tropical Residual Soils Engineering*, Bujang K. Huat, Gue See Sew and Faisal Hj Ali (eds), Balkema, pp 213-228
- Dec 2004 Electrokinetically Injected Phosphate Ions to Strengthen a Saturated Tropical Residual Soil, (**Kamarudin Ahmad**, Mohd Raihan Taha and Khairul Anuar Kassim), *Malaysia-Japan Symposium on Geohazards and Geoenvironmental Engineering: Recent Advances*, Universiti Kebangsaan Malaysia. pp 143-148
- Sept 2004 Voltage Gradients, Current Density and Soil Resistivity in Electrokinetic Processing, (**Kamarudin Ahmad**, Khairul Anuar Kassim and Mohd Raihan Taha), *Seminar Penyelidikan Kejuruteraan Awam (SEPKA 2004)*, Universiti Teknologi Malaysia. pp 249 – 254
- June 2004 Compressibility of an Electrokinetically-Treated Residual Soil (Mohd Raihan Taha, **Kamarudin Ahmad** and Khairul Anuar Kassim), *4<sup>th</sup> BGA Conference, Cardiff, UK*, pp 583 – 589
- Mar 2004 Shear Resistance of an Electrokinetically-treated Residual Soil (**Kamarudin Ahmad**, Mohd Raihan Taha and Khairul Anuar Kassim), *Malaysian Geotechnical Conference 2004, IEM, Kuala Lumpur*, pp 243 – 248
- Dec 2003 Compressibility of Electrokinetically Treated Tropical Residual Soil (**Kamarudin Ahmad**, Mohd Raihan Taha and Khairul Anuar Kassim), *JSPS-VCC, Kyoto University, Japan*, pp 164-173
- July 2003 Electrokinetic on a Tropical Residual Soil (Khairul Anuar Kassim, Mohd Raihan Taha and **Kamarudin Ahmad**), *Advance Seminar on Soft Soil Engineering Technology, ASSET2, Univ. Putra Malaysia, Kuala Lumpur*, pp 833 – 844

- Nov 2001 Scanning Electron Microscopy Study on Lime-Treated Contaminated Kaolin (Khairul Anuar Kassim and **Kamarudin Ahmad**), *10<sup>th</sup> Scientific Conference Electron Microscopy Society of Malaysia, Kuala Lumpur*, pp 109-112
- Nov 2001 SEM Study on Lime-Treated Contaminated Kaolin: Strength and Hydraulic Conductivity (Khairul Anuar Kassim and **Kamarudin Ahmad**), *6<sup>th</sup> Geotechnical Engineering Conference GEOTROPIKA 2001, UTM and UNIMAS, Kuching, Sarawak*, pp 87 – 94
- June 1992 Design of Anchored Geosynthetics System for Slope Stabilization (Roman D. Hryciw and **Kamarudin Haji-Ahmad**), *Stability and Performance of Slopes and Embankments – II, ASCE, University of California, Berkeley, USA*, pp 1464 - 1480

## PROJECTS INVOLVEMENTS

- April 2009* Slope Stability Analysis at Sri Plentong Industrial Park, Johor Bahru
- Sept 2008* Preliminary Study on the National Groundwater Potential in Peninsular Malaysia
- Aug 2008* Kajian Pelan Induk Tebatan Banjir bagi Wilayah Pembangunan Iskandar tidak termasuk Sungai Tebrau, Sungai Pandan dan Sungai Tiram, Johor
- July 2008* Geotechnical Independent Checker for Interchanges at Jalan Abu Bakar and Jalan Yahya Awal, Johor Bahru, Johor
- Apr 2008* Stability Analysis and Mitigation of Slope within the Compound of Institue of Ibnu Sina, UTM
- Sept 1996* Preliminary environmental impact assessment for the proposed hotel resort on Pulau Tuba, Langkawi, Kedah
- May 1996* Interpreting soil investigation data and estimating pile capacity for a proposed hotel and shopping complex in Kota Tinggi, Johor
- Mar 1996* Preliminary environmental impact assessment for the proposed development of KEJORA staff housing in Kota Tinggi, Johor
- Feb 1996* Environmental Impact assessment on the sand-mining activity for the development of Pulau Melaka
- Sept 1995* Interpreting subsurface exploration data and assessing the effect of land clearing on the environment for the proposed Bakri Industrial Estate, Muar, Johor
- July 1995* Preliminary assessment of excavation, dredging and land reclamation for the development of Bandar Baru Kerteh, Terengganu
- May 1995* Consequences from dredging, excavation and construction of the proposed Tanjung Leman Beach Resort, Mersing, Johor

- May 1995* Environmental impact assessment for the proposed development in Pulau Sibul Tengah, Mukim Pulau Sibul, Mersing
- April 1995* Study on the potential impacts of dredging of sea sand and land reclamation for a proposed commercial center in Alai, Melaka
- Feb 1995* Interpretation of subsurface exploration data and preparation of construction programme for the proposed hotel development in Jalan Sulaimani, Kemaman, Terengganu
- Oct 1994* Study on the soil characteristics and impacts of land clearing on the environment for the proposed national sheep-breeding farm in Rompin, Pahang
- July 1994* Preliminary study on the effects of land clearing and the construction of a cove and a golf course resort in Pulau Besar, Melaka
- July 1994* Site investigation and data interpretation for the preparation of national groundwater quality monitoring network in Sungai Besi, Kuala Lumpur and Panji, Kelantan
- April 1994* Subsurface exploration and data interpretation for the preparation of national toxic waste disposal site master plan in Kota Tinggi, Johor and Bukit Mak Indah, Terengganu
- Mar 1994* Interpretation of geological and soil data, study on the consequences from dredging of Batang Baram and site improvement using surcharge and vertical drains for the proposed Miri new port in Kuala Baram, Sarawak
- Aug 1993* Site investigation for Bukit Saujana condominium project in Johor Bahru, Johor
- July 1993* Subsurface exploration to estimate volume of granite for a proposed quarry in Kota Tinggi, Johor
- 1993* Detailed design of the Tanjung Agas industrial zone drainage scheme and part of Kesang drainage scheme, Muar, Johor
- Feb 1993* Site investigations for the extension of Tenggara Cement processing plant in Pasir Gudang, Johor



- Dec 1992* Subsurface exploration for PROMET fabrication yard in Teluk Ramunia, Kota Tinggi, Johor
- Dec 1992* Site investigations for a proposed shop-house block in Larkin, Johor
- Feb 1992 to July 1992* - Site investigations for CELCOM telecommunication towers in Melaka and Johor
- Julai 1992* The preliminary study of the proposed marina resort in Pengerang, Kota Tinggi, Johor
- Mar 1992* Environmental Impact assessment of the proposed industrial-agriculture-residential uses in Panchor, Ampangan, Seremban, Negri Sembilan
- Feb 1987 to June 1987* - Housing project in Pahang
- April 1986 to Feb. 1987* - 132 kV transmission line project for Lembaga Letrik Negara from Segambut to Sungai Tua, Gombak

## RESEARCH GRANTS

- 2010 Development of modified oedometer to establish SWCC (Head) (Research University Grant Vot # RMC Q.J130000.7122.01J25 RM40,000.00)
- 2008 Full-Scale Test of trial Embankment on Bamboo-Geotextile Composite Reinforced Soft Clay (Researcher) (e-Science Vot #79155)
- 2008 Engineering Characteristics of Coal Ash in Malaysia (Researcher), (Vot #78220)
- 2007 – 2009 Migration Characteristics of Heavy Metal Contaminants through Peat Soil (Head), RMC Vot # 78008 (RM30,000.00)
- 2004 – 2005 An Evaluation on Fundamental Engineering Properties of Fluid-Modified Clayey Soils (Head), RMC Vot # 75105 (RM38,500.00)
- 2001 – 2004 Development of Rapid Consolidation Equipment for Soft Cohesive Soils (Researcher), IRPA Vot # 74110 (RM170,000.00)
- 1999 – 2003 Development of Stabilisation Techniques for Contaminated Soils (Researcher). IRPA Vot # 72277 (RM135,850.00)
- 1997 – 1998 Improvement of Soft Saturated Clay Using Electrokinetic Dewatering and Hardening (Head), RMC Vot # 71375 (RM12,000.00)

A Member of Group 8 "Geotechnical and Ecological Environment Management", JSPS-VCC Environmental Science, Engineering and Ethic.

## **PhD STUDENTS**

1. Ali Deghanbandaki - Physical and numerical modeling of peat improved with soil-cement columns
2. Mehrdad Kholgifard - Compressibility and collapse potential of compacted tropical residual soil
3. Oyeleke Brown - Palm oil fuel ash and kaolin mixture as landfill liner material
4. Ali Arefnia - Kaolin-shredded tire mixture as backfill materials