

CURRICULUM VITAE



Name: Dr. Ir. Low Kaw Sai

Correspondence Address & Contact Numbers:

No. 13, Jalan Kenanga SD9/1C, Bandar Sri Damansara, 52200 Kuala Lumpur, Malaysia.

Tel: 03-6272 0659 (Res), Mobile: 012-3201 678,

Email: lowks@utar.edu.my and drkslow@gmail.com

Sex: Male

Nationality: Malaysian

Year of Birth: 1954

Marital Status: Married with 3 children

Profession: University Teacher (Assoc. Professor) cum Professional Engineer (Civil)

Language Proficiency: Good in spoken and written English, Chinese (Mandarin) and Malay language & fluent in a few Chinese dialects.

Academic Qualifications: B.Sc.(Hons.) [Civil Engineering], U.K.
Ph.D. (Engineering), U.K.

**Professional Qualifications:
& Memberships**

- Member of Institution of Engineers Malaysia (M.I.E.M) (Application to be a Fellow Member is made)
- Registered Professional Engineer (P.Eng), Board of Engineers, Malaysia
- Associate Member of the Institution of Civil Engineers, U.K.
- A selected member of WHO's WHO Historical Society for year 2001, International Who's Who Professionals, U.S.A
- Secretary cum Treasurer (2010-2011), Civil & Structural Technical Division, IEM
- Earthquake Engineering Working Group Member (WG5), IEM
- Professional Interviewer, Institution of Engineers Malaysia
- Member of the Road Engineering Association of Asia & Australasia
- Member of Malaysian Invention Society

Fields of Interest:

- Soil/ground stabilization, soft ground treatment.
- Geo-environmental & geo-earthquake engineering
- Porous Asphalt (pavement engineering)
- Light-weight concrete (Air-entrained) for Industrialized Building System and Energy Efficiency Building constructions.
- Highway engineering & computer-aided geometric design of highway

Affiliations & Awards:

- Ex-external Ph.D. examiner of Universiti Teknologi Malaysia (UTM)
- Ex-external final year Civil Engineering undergraduate project supervisor of Universiti Teknologi of Mara (UiTM)
- Invited Institution of Engineers Professional Interviewer
- Invited Lecturer for various courses in IKRAM (prior to privatization)
- Japan International Co-operation Agency (JICA) Scholarship & Country Representative for the "Building Construction Management Course", Philippines, 1994.
- British Council Scholarship for a Post-doctoral Fellowship Program at Universities of Oxford & Cambridge, England, 1989.
- British National Research Grant for Ph.D. Program (Oct 1981-Mar 1986)

Miscellaneous: - Patent (pending) Holder of an engineering product designed & developed

Publications: - Published and/or presented about 25 technical papers in national & international conferences/ seminars/workshops.

Cv/f:lks cv/05- 09

CAREER & EXPERIENCE

Apr. 2006 – Present

Associate Professor, Universiti Tunku Abdul Rahman (UTAR)

Teaching geotechnical & geo-environmental engineering, solid/structural mechanics & construction technology in the civil engineering department of the Faculty of Engineering and Science of the university. Conduct research into areas of green building technologies and earthquake engineering, and at present is elected the group leader for Green Building material group. Other duties involve supervising postgraduate research programmes at both Master and Ph.D. levels.

May 1999 – Apr. 2006

Principal, DR. KSL and Associates (Consulting Engineers Firm)

To negotiate, secure, design, and prepare documents & drawings for various projects awarded to company. About 10 projects of different sizes and natures were secured and mostly completed.

May 1996 – Apr. 1999

Director, Endeavour Consult Sdn. Bhd. (Civil & Structural Consulting Engineers Firm)

To manage and carrying out engineering designs for buildings, highways, bridges, ground improvement and other geotechnical-related projects. Occasionally, proprietary system of construction was deployed in the projects where clients agreed. Some notable ones were: 1) Design of the proposed privatization of Assam Jawa to Taman Rimba Templer Expressway, 2) Upgrading B20 in Bandar Baru Nilai as Eastern Access to KLIA, and 3) Ground improvement works for the New Miri Supply Base, Sarawak. In this project, ingenious Bamboo-Geotextile reinforcement system involving 750,000 poles of local bamboos was successfully applied over the 167 acres of very soft riverine clays to enable new Miri Supply Base that serve offshore oil industry to be constructed satisfactorily and with much cost saving.

May 1992 – May 1996

Technical Manager, Bina Puri Sdn. Bhd.

Manage and report to managing director on all projects of the company. For large projects, assume the role of a project coordinator to render technical back-up service for smooth, economical and quality project implementation. Thus, innovative alternative proposals involving state-of-the art technologies are often necessary. No less than 20 projects were accomplished during the 4 years in office. The worth mentioning projects completed were:

- 1) North-South Expressway, Package 6B4-Alor Pongsu to Bukit Merah Section,
- 2) Faculty of Engineering, Universiti Kebangsaan Malaysia, Bangi, Selangor,
- 3) Kota Tinggi By-pass,
- 4) Muar Water Supply Scheme.
- 5) The pioneer use of SBS Polymer Modified Porous Asphalt for high skid resistance and anti-aquaplaning road surface construction. First proposed by us, this project was implemented as part of J.K.R. (Public Works Department, Malaysia) research program with technical cooperation also drawn from an Italian engineering organization. The project involved resurfacing of 9 km Federal Route I between the Selangor-KL boundary marked by the Arch (near TV Malaysia) and entrance to Subang Jaya town .

Being a senior staff, opportunity to involve actively in the listing exercise of the company was given. This included: liaise closely with KL Securities Commission on all company technical matters, e.g. the pioneered Porous Asphalt technology had attracted considerable interest from them. These had subsequently contributed towards successful listing of the company on the Main

Board of Kuala Lumpur Stock Exchange in 1995. Thereafter, business expansions to undertake infrastructures constructions in India, China & Vietnam ensued and led to many negotiations with potential foreign partners to tender and vying joint ventures projects abroad. Successful conclusion of the Asian Development Bank funded National Highway 5 project in India was an example.

Jan 1992 – Apr. 1992

Chief Geotechnical Engineer, HSS Integrated Sdn. Bhd.

Head the geotechnical division to design and check all geotechnical-related structures of all projects of the company. Those projects involved were the KL International Airport and Lemal & Rantau Panjang Flood Protection Scheme in Kelantan.

July 1990 – Jan. 1992

Chief Geotechnical & Material Engineer, Malaysian–Thai Development Sdn. Bhd.

Head the geotechnical & material department of the turnkey project of Improvements to Slopes and other Ancillary Works along the East-West Highway (Package II). The treacherous terrain, notorious topography, critical climatic conditions gave rise to numerous challenging technical complexities unmatched in many highways constructed elsewhere in the country. Extensive use of field instrumentation e.g. inclinometers, piezometers and standpipes etc. was a feature of this project. Till this date, this Highway remains the best training ground for a geotechnical engineer of mountainous highway where road embankment as tall as 78m were constructed. Singlehanded setting up from scratch a sophisticated laboratory at site was experienced. It concerned an automatic 24-hours round-the-clock computer-controlled test system for high quality isotropical consolidated undrained (CIU) triaxial compression test data acquisition for effective soil shear strength parameters determination that required for slope stability computation. Scarcity of mountain highway constructions in the country rendered it to a rare and treasured experience gained. Being turnkey, all round experience on highway engineering from design to construction added to its another uniqueness and proved its usefulness in the later career. Indeed, the experience gained here had been served as the basis for subsequent successful membership application to the Institution of Engineers Malaysia and the Board of Engineers, Malaysia.

Oct. 1986 – July 1990

Research Officer, Forest Research Institute Malaysia (F.R.I.M.)

Conducting practical engineering researches on bamboos and timbers. Some worth mentioning achievements were:

- 1) Pioneered practical original researches into,
 - a) Bamboo-reinforced soil coined as “geobam” constructions.
In this application, the tensile and bending strengths of bamboo are fully exploited to reinforce and improve slope stability of an embankment significantly. On another application, to enhance the bearing capacity of an otherwise very soft and weak foundation soil to enable safe construction above it to be realized. Subsequent successful applications of these techniques in various large size projects confirmed the true potential and great practical value of these methods. Appreciations for this research were reflected by local and foreign funding received, and potential joint research with University of Cambridge then.

- b) Pioneered timber space frames research involving off-cut timber members.
- 2) Provide engineering consultancy service to outside organizations, e.g. the Majlis Perbandaran Seberang Prai, Penang, in their 20 hectares wide Ampang Jajar Sanitary Landfill Project where economy and practical local bamboos poles were used as a cost effective substitute for the more expensive PVC pipes originally proposed by foreign experts for methane gas venting and leachate collection and discharging purposes. It was a success in this project.
- 3) Regularly invited by Institut Kerja Raya Malaysia (I.K.R.A.M.), J.K.R. to give lectures and assist in conducting engineering courses and trainings to their architects, engineers and technicians of different grades/levels.
- 4) Organizing large-scale international engineering conferences jointly with local universities (e.g. UTM and UiTM) and bodies such as the Institution of Engineers Malaysia.

Oct. 1981 – Mar. 1986

Research Assistant cum Tutor, University of Sunderland (then Sunderland Polytechnic), England, U.K.

Assisting professor in carrying out post-graduate research investigation into the behaviour of a vertically installed sea-bed foundation pile which is subjected to monotonic and repeated uplift tensile load applied horizontally, obliquely and vertically. The piles were to anchor and moor offshore oilrig structures. The research which was funded by British National Research Council was carried out in collaboration with QMC Anchor Technology Limited which was then belonged Queen Mary College of University of London. The content of the research formed the basis for the Ph.D program and was completed fruitfully in March 1986 following the submission of a thesis entitled “Pile-anchor Response to Monotonic and Repeated Loadings”. A related technical paper was then prepared and presented at the 9th Annual Energy-source Technology Conference, New Orleans, Louisiana, U.S.A., 1986.

Apr. – Sept. 1980

Trainee Engineer, Lancashire County Council, North Western Road Construction Unit (N.W.R.C.U.), England, U.K..

Assisting Chief County Engineer in carrying out computer-aided geometric design of the M65 Motorway-Calder Valley Route, Blackburn, Lancashire, England. Experience was gained in the use of a complete computer-aided highway design package known as British Integrated Program Suite 3 (B.I.P.S.3). B.I.P.S.3 and M.O.S.S. (another twin-software) which were then the standard computer highway design packages fully supported and maintained by the British Department of Transport and widely used by highway design units not just across all county offices in U.K. but also found popular among the various commonwealth countries including Malaysia.

Apr. – Sept. 1979

Trainee Engineer, Highway Department, Transport and Road Research Laboratory (T.R.R.L.), England, U.K.

Carried out practical investigation into the potential use of geotextile in road construction especially for strengthening weak road base/foundation layers. A joint research project then was between T.R.R.L.(i.e. Department of Transport, U.K.) and the Ministry of Defence, U.K. was conducted to study the possibility of using geotextile in providing a quick & safe passage of heavy military vehicles (e.g tanks) over soft to very soft ground (e.g. swamp) during a war.

Apr. – Sept. 1978

Trainee Engineer, Sato Kogyo Company Ltd., Kuala Lumpur.

Received training in a project entitled Section 7, Kuala Lumpur-Karak Highway. The responsibilities given were: to carrying out quality control tests in laboratory and field alike on those commonly used construction materials such as soils, concrete and asphalt. Experience in basic highway design and its associated land survey works were first acquired during this period.

- End -