PROFESSOR CHIN FUNG KEE MEMORIAL LECTURES 1991 – 2013

The Prof Chin Fung Kee Memorial Lecture was inaugurated in 1991 and jointly organized by The Institution of Engineers, Malaysia (IEM) and the Engineering Alumni Association of the University of Malaya. The Fifth Volume, about 600 pages containing lectures from 1991 to 2013 was published by the IEM Training Centre Sdn Bhd, a wholly own subsidiary of IEM in December 2013 and is available for purchase by those who are interested while stock lasts. Kindly email: <choy.iemtc@gmail.com>

Professor Chin is the most respected Civil & Geotechnical Engineer & Academic. A Brief bio data is given below followed by the details of the Lectures:

TAN SRI DATUK IR. PROFESSOR
DR. CHIN FUNG KEE- His Life and Contributions
DSc (Belfast), FICE, FIStructE, FIE (Malaysia, S'pore, Ireland),
Hon FICE, Hon DSc (Glasgow, S'pore), Dip. Arts, FWA, MIWES, JMN, PSM, DMPN

Tan Sri Datuk Ir. Professor Dr Chin Fung Kee is Malaysia's most respected and outstanding Civil engineer not only in engineering practice but also in engineering research and education. He is renowned for his excellence in geotechnical and structural engineering. He was one of the local pioneer engineers and he played a key role in the development of engineering education, research and practice in the country. His knowledge and contributions benefited the engineering fraternity both nationally and internationally and his success was recognized worldwide.

Professor Chin was born into a goldsmith family of the late Mr. Chin Siew Woon in 1920 in a very small town known as Nibong Tebal, Penang. Like many overseas Chinese from Taisun district of the Canton Province in China, the forefathers of Professor Chin left China in 1800s to seek their fortune in Malaya. Professor Chin was the third generation to be born in Malaya. His mother is the late Mdm Chang Nyuk Khim.

Professor Chin completed his secondary education at the High School, Bukit Mertajam and was awarded a Straits Settlements Scholarship to study at Raffles College, Singapore where he obtained a First Class Diploma in Arts.

He then won a Queen's Scholarship in 1949 to study Civil Engineering at the Queen's University in Belfast. At Belfast he won the Foundation Scholarship in Civil Engineering and the Belfast Association of Engineers Prize.

In 1952, Prof. Chin graduated with First Class Honors in Engineering and proceeded to complete his Master's at the same University while working as an assistant lecturer.

In 1984 he was conferred Doctor of Science degree by his Alma Mater for his independent research over the years during his working life. He was forced to submit his thesis to his Alma Mater because he was urged to do so!

He was also awarded Honorary Doctor of Science degree by the University of Singapore in 1975 and the University of Glasgow in (year).

Professor Chin returned to Malaya in 1954 and served as an engineer with the Drainage and Irrigation Department before joining the University of Malaya in 1955 as Lecturer, Senior Lecturer and finally Professor. He was acting Vice Chancellor for seven years and for a period he was simultaneously the Professor and Dean of Engineering, Deputy and Acting Vice Chancellor.

He retired as Emeritus Professor in 1973 and joined Jurutera Konsultant (SEA) Sdn. Bhd. He was responsible for the design and construction of many highway bridges, high-rise buildings, reclamations and structures on soft ground including the Penang Bridge.

Prof Chin played a major role in the formation and development of the Faculty of Engineering, University of Malaya. In 1956, just before independence, the Government wanted to have a local university and a University of Malaya in Kuala Lumpur was set up with Arts courses run by "flying" lecturers shuttering between Singapore and Kuala Lumpur. This was an unsatisfactory arrangement and the University authority decided to terminate the arrangement after 1957/58 session.

The Government of Malaya then decided to offer an endowment to any department/faculty which was prepared to move to Kuala Lumpur "lock stock and barrel". Prof Chin together with Prof Gray agreed to take up the offer and was asked to see the Prime Minister of Malaya, YTM Tunku Abdul Rahman Putra.

With the approval of the Tunku an allocation of RM1.5 mil Endowment was given to the Faculty for its development. Under the stewardship of Prof Chin, the project went on full swing to build the Faculty of Engineering in early 1958; assembling existing Government designs of buildings already constructed for the new Faculty of Engineering buildings at Pantai Valley. The buildings were completed in four months in time for the engineering courses to commence in October 1958 without any break in the moving of the Faculty to Kuala Lumpur "lock, stock and barrel". For many nights Prof Chin had to sleep in his favourite car to supervise the 24 hour work programme in progress.

Professor Chin was defector Project Director in the Planning, Design and Construction of many buildings including the International Award winning Faculty of Medicine when he was acting Vice Chancellor.

During the tenure with the Faculty of Engineering Professor Chin's great achievement, attained through the collective effort of both staff and students, was to produce the first batch of five graduates in 1958 and to build up in a short period of a few years, a degree which attained international recognition. A pass in engineering degree from the University of Malaya was readily accepted by British, Australian and American Universities for postgraduate studies which normally required a good honors degree.

Professor Chin was an outstanding Engineer in Structural, Hydraulic and Geotechnical engineering and remembered for his leading role in the design and construction of the first Penang Bridge and the Komtar building foundation rectification work in Penang.

In the Penang Bridge project, Prof Chin introduced some innovative design features to achieve considerable savings in cost and time. In particular, special natural rubber bearings were designed for the project. This has given rise to a new industry and market for the use of natural rubber and the bearings were later further developed and used in earthquake resisting foundation for buildings and bridges worldwide in seismic design environment.

He developed the concept of inverse slope method for the prediction of pile ultimate bearing capacity, without testing the pile to failure, in 1970. Using this method the ultimate value of the bearing capacity of a pile under testing can be predicted from the inverse slope plot of the settlement/load against the load corresponding to the settlement. This method is now internationally known and acknowledged as the 'Chin Method' in the piling industry.

The diagnosis of pile condition in the ground was developed by him arising out of his involvement as an independent consultant in the Komtar foundation problem in 1977. This method of diagnosis of pile well being in the ground has been widely used by practicing engineers.

Professor Chin devoted much of his time and efforts to carrying out research in respect of the needs of and the problems faced by the country. He published more than 70 papers in learned journals covering a wide range of subjects in structural, hydraulic and geotechnical engineering and a book entitled "The Penang Bridge – Planning, Design and Construction". In 1987, The Institution of Engineers, Malaysia decided to publish a book entitled "Selected papers of Professor Chin Fung Kee" for the ease of reference and benefits of the practicing engineers.

His many findings have found extensive application not only in development projects in Malaysia but also overseas.

Throughout his professional career he was dedicated to public service. He served as an honorary consultant to the Malaysian Government on numerous engineering problems and projects. He was a member of the several commissions and committees set up by the Malaysian Government to administer; study and investigate various matters pertaining to engineering.

He was Chairman of the governing Council of the National Institute for Scientific and Industrial Research of Malaysia; Member of Three Royal Commissions; Member of the National UNESCO Commission, Malaysia and Member of the Coordinating Advisory Committee, Malaysia Rubber Research and Development Board. In 1988, The National Council of Scientific

Research and Development Malaysia awarded him the National Science Award.

In recognition of the enormous contributions he was conferred the Johan Mangku Negara in 1967 and the Panglima Setia Mahkota (which carries the title of Tan Sri.) in 1980 and the Darjah Yang Mulia Pangkuan Negeri Pulau Pinang (which carries the title Datuk) in 1985.

His success earned him widespread reputation and recognition. He was an Honorary Fellow of both the Institution of Civil Engineers and The Institution of Engineers, Malaysia of which he was a founder Council member in 1959 and a President from 1966 to 1968 .He was also President of the Southeast Asian Geotechnical Society from 1973-1975 and the Vice President for Asia of the International Society for Soil Mechanics and Foundation Engineering in 1981-1985. He was Chairman of the Commonwealth Engineer's Council in 1973-1977.

Professor Chin passed away on 29 August 1990 after a short illness. He was survived by his wife, Mdm Wong Swee Yong, a daughter, Mdm Kathleen Chin Kie Fong and three sons, namely, Dr. Alan Chin Kie Loong, Dr. Ian Chin

In memory of Prof Chin's outstanding achievements and contributions, the Southeast Asian Geotechnical Society established a Professor Chin Fung Kee Lecture to be delivered at every Society Conference held once every three years in Southeast Asia and in Malaysia ; an annual Memorial Lecture Series was set up in his name and conducted by the Institution of Engineers Malaysia and funded by the Engineering Alumni Association of the University of Malaya since 1991; his former students provided fund in 1990 for the award of 'Tan Sri Professor Chin Fung Kee Prize' to the top student in the master program in Geotechnical and Geo-environmental Engineering at the Asian Institute of Technology in Bangkok and The Tungku Abdul Rahman College established the 'Professor Chin Fung Kee Memorial Prize ' to be awarded to the best student in the Final Year Advanced Diploma in Technology (Building) Examination.

Professor Chin was a man with humility and had been a role model, a teacher and a friend to many who have been fortunate to know him and worked with him. He was a man of principle and integrity who has dedicated his life to excellence and service to the engineering profession and to society at large. Very few people, even in the international engineering fraternity, can match the width and depth of his achievements. He will be remembered as one of the great engineers of the last century who has excelled in engineering practice, research and education.

Contributed by:

Ir. Dr. Ooi Teik Aun
Ir. Chiam Teong Tee
Ir. Lee Yow Ching

A selected list of lectures are given below not in any order

1995 The 5th Prof. Chin Lecture:

(1) “The Risks of Daily Life” by Dr. Edmund C. Hambly

(2) “What is a Successful Urban Transit Project?”
by Prof. Tony M. Ridley

1996 The 6th Prof. Chin Lecture: “Foundation Failures”
by Ir. Dr. Chan Sin Fatt1991 The 1st Prof. Chin Lecture: “In Praise of Engineering” by Prof. T.H. Hanna

1992 The 2nd Prof. Chin Lecture: “Rehabilitation of Ex-mining Land for Building and Road Construction”
by Ir. Dr. Ting Wen Hui

1993 The 3rd Prof. Chin Lecture: “Up-down Construction of Tall Building”
by Prof. Lee Seng Lip

1994 The 4th Prof. Chin Lecture: “Engineering Education in Malaysia: Past, Present & Future”
by Dato’ Ir. Prof. Muhammad Ridzuan bin Haji Salleh

1997 The 7th Prof. Chin Lecture: “Geotechnical Problems Related to Design and Construction of the Taipei Rapid Transit Systems”
by Dr. Za-Chieh Moh

1998 The 8th Prof. Chin Lecture: “Reinventing the Future”
by Datuk Ir. Dr. Tengku Mohd Azzman Shariffadeen

1999 The 9th Prof. Chin Lecture: “Water Resources: The Challenge of the New Century”
by C.R. Head

2000 The 10th Prof. Chin Lecture: “Concrete: From 3,000 PSI to 80 MPa and Beyond”
by Ir. Dr. Tam Chat Tim

2001 The 11th Prof. Chin Lecture: “China Yangtze Three Gorges Project Under Construction” by Prof. Lu Youmei

2002 The 12th Prof. Chin Lecture: “Modified Soil Mechanics from Practice to Theory”
by Prof. A.S. Balasubramaniam

2003 The 13th Prof. Chin Lecture: “Risk Management in Design and Construction”
by Dr. Michael J. Mawdesley

2004 The 14th Prof. Chin Lecture: “Kuala Lumpur” Re-engineering a Flooded Confluence”
by Datuk Ir. Haji Keizrul Abdullah

2005 The 15th Prof. Chin Lecture: “Serviceability and Strength of Normal and High Strength Concrete Structures”
by Prof. Yew-Chaye Loo

2006 The 16th Prof. Chin Lecture: “The Enigma of Space and the Rationale for Space Exploration”
by Associate Professor K. Arichandran

2007 The 17th Prof. Chin Lecture: “Design, Assessment and Strengthening of Bridges using Advanced Modelling Techniques and Modern Code of Practice”
by Chris Hendy

2008 The 18th Prof. Chin Lecture: “The Search for NEWater: The Singapore Water Story”
by Lee Ek Tieng

2009 The 19th Prof. Chin Lecture: “Geotechnical Failures/Issues, Dispute Resolution and Mitigation”
by Ir. Dr. Ooi Teik Aun

2010 The 20th Prof. Chin Lecture: “Dam Engineering: State Of The Art and Practice, Observed Behavior and Future Challenges” by Professor Dr. In. Pedro Seco e Pinto

2011 The 21st Prof. Chin Lecture: “Engineering and Entrepreneurship: Is It An Oxymoron?”
by Tan Sri Dr. Francis Yeoh

2012 The 22nd Prof. Chin Lecture: “E-Learning Application to Continuing Education of Engineers”
by Professor Cham Tao Soon

2013 The 23rd Prof. Chin Lecture: “Exploring the Viability of Dams is Key to Malaysian Water Resources Development of the Future”
by Dato’ Ir. Syed Muhammad Shahabudin