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State of the Art and Practice (SOAP)

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W. D. Liam Finn
Keynote Lecture

W. D. Liam Finn graduated from the National University of Ireland in 1954 with a B.Eng. in Civil Engineering. He got his M.Sc. and Ph.D. from the University of Washington in Seattle in 1957 and 1960 respectively. After the 1964 Niigata Earthquake, he began to specialize in Geotechnical Earthquake Engineering and started the first program in Canada at the University of British Columbia (UBC) in Vancouver. He was Head of Civil Engineering and Dean of Applied Science at UBC. In 1999, he was appointed as the first Anabuki Professor of Foundation Geodynamics at Kagawa University, Takamatsu, Japan. Liam Finn is also president of Pan-American Engineering and Computing Services Ltd. in Vancouver. He is an Honorary International Member of the Japanese Geotechnical Society and the Chinese Society of Soil Dynamics, PRC. He is also an Honorary Professor of the Metallurgical Institute in Beijing. He is Editor of the International Journal of Soil Dynamics and Earthquake Engineering and is on the editorial boards of other journals. He is Chairman of TC-4 the Earthquake Engineering Committee of the International Society of Soil Mechanics and Geotechnical Engineering.

Finn's main research interest is geotechnical earthquake engineering with particular interest in liquefaction, seismic response of sites and earth structures, seismic safety evaluation of dams, seismic response of pile foundations and seismic risk. He has published over 300 papers on these topics. Finn consults internationally especially on the seismic safety of dams, beginning in 1967 with the Ingura dam in the old Soviet Union. He pioneered the use of dynamic effective stress analysis in practice in 1975 and the use of large strain deformation analysis for the analysis of post liquefaction deformation of dams in 1989 on Sardis Dam in Mississippi. Finn is currently working on a major research project funded by the Anabuki Construction Company, Takamatsu, Japan on the seismic response of large diameter cast in place concrete piles in reclaimed land in which liquefaction effects are a major problem.



Yoshiaki Kikuchi
SOAP 1

Dr. Yoshiaki KIKUCHI obtained his Bachelor (1981), Master of Engineering (1983), and Doctor of Engineering (2002) from University of Tokyo, Japan. He joined Port and Harbour Research Institute in 1983 as a research engineer. He became the Head of Foundations Division in 1996. The name of Port and Harbour Research Institute was changed to Port and Airport Research Institute in 2001. He is Visiting Professor of Yokohama National University from 2007.

Dr. Kikuchi is the author of more than 150 research publications on soil mechanics, foundations for port facilities, and artificial geo-materials. He received technological development award of Japan Ports and Harbours Association in 2003. He has been involved in many major projects such as Kansai-International Airport project, Tokyo bay side bridge project, Off shore development of Haneda Airport. He is responsible for deep foundation design code for port facilities in Japan. He was also a member of the drafting committee of a standard of Japanese Geotechnical Society 'Principles for foundation designs grounded on a performance-based design concept.' He organized international workshop on recent advances on deep foundations. He is a member of executive board of Soils and Foundations.

Web site

[URL:http://www.pari.go.jp/bsh/jbn-kzo/kisoko/index.html](http://www.pari.go.jp/bsh/jbn-kzo/kisoko/index.html)



Pedro Simão Sêco e Pinto
SOAP 2

He is the currently Vice President of ISSMGE for Europe, Full Professor of Geotechnical Engineering of University of Coimbra and Honorary Member of TC4 "Earthquake Geotechnical Engineering" (ISSMGE).

He has been an active consultant in Portugal and overseas working on major projects in Europe, Africa, Asia and South America and acted as United Nations Consultant.

He is author or co-author of 150 reports and more than 85 papers for journals, national and international conferences.

He has presented special lectures and state-of-the art reports in more than 36 countries in Africa, Asia, Australasia, Europe, North and South America.

He is a member of several national and international societies and scientific committees and has participated in several European Community Programmes and Projects.

He has been organizer and co- organizer of more than 18 national and international conferences, symposia and seminars.



K. Rainer Massarsch
SOAP 3

Dr. K Rainer Massarsch is consultant in foundation and earthquake engineering, as well as soil dynamics, working on assignments world-wide. He has been responsible for the design and execution of major foundation projects in Europe, the Far East, Australia, South and North America, including airports and harbours, high-speed railway lines etc. Dr. Massarsch is the author of over 160 scientific and technical publications and has lectured in more than 40 countries.

Dr. Massarsch received his master degree from the Technical University of Vienna, Austria and the doctor of technology from the Royal Institute of Technology in Stockholm, Sweden. Thereafter, he was visiting scholar at the University of California, Berkeley and the University of Kentucky in Lexington, respectively. He has been professor in soil dynamics at the Royal Institute of Technology (KTH), Stockholm, technical director of an international foundation company and senior consultant with a leading Swedish consulting group. He is the inventor of several patented new foundation and soil improvement methods, such as resonance compaction, foundation nailing and ground vibration isolation.

Dr. Massarsch has been involved in the design, implementation and supervision of many major foundation project world-wide, such as airport, harbour, railway and other infrastructure projects in different countries, such as Hong Kong, Singapore, Malaysia, Mexico, Germany, United States, Canada and Sweden. He was also responsible for the salvage and remediation efforts for several major historic monuments in Egypt, such as the Tomb of Nefertari, the Memnon Colossi etc. Dr. Massarsch also specialises in forensic work, such as the review and evaluation of effects of earthquakes and damage evaluation etc.

Dr. Massarsch is presently Chairman of ISSMGE Technical Committee 10, Geophysical Site Characterisation and Chairman of two European Standardisation Committees (CEN/TC 288), preparing standards on Deep Soil Mixing (WG 10) and Vertical Drainage (WG 11).

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Bengt H. Fellenius
SOAP 3

BENGT H. FELLENIUS

Dr. Bengt H. Fellenius is an internationally active geotechnical consultant and professional engineer specializing in foundation studies. He is a third generation geotechnical civil engineer: grandson of Wolmar Fellenius of slip-circle fame (who also chaired a committee of geologists and engineers that back in 1916 that originated the word Geotechnique; in Swedish: "Geoteknik"), and he is son of Bror Fellenius, Head of Geotechnical Department of the Swedish State Railways and Chairman of the Pile Commission of the Swedish Academy of Engineering Sciences.

Following army service, Bengt enrolled in civil engineering at the Royal Institute of Technology in Stockholm from where he received a M.A.Sc. degree in 1962. After a few years of practice, first as a structural engineer with the Bridge Department of the Swedish Railroads and then as a geotechnical engineer with a consulting engineering firm, he joined the Swedish Geotechnical Institute (SGI). In parallel with his work at the SGI, he completed a doctorate degree, Dr.Tech., at the Royal Institute of Technology, Stockholm.

Bengt left his native Sweden in 1972 for North America, where he first worked with a foundation contractor, Western Caissons Ltd., in Canada. Between 1973 and 1977 he was with Terratech (a Division of SNC-Lavalin), Montreal, and in 1977 he opened his own consulting office. In 1979, he moved to Ottawa, where he joined the University of Ottawa as professor in Civil Engineering specializing in foundations. He left the University in 1996 to concentrate on his international consulting practice. He is now living in Calgary.

Bengt has published more than 250 technical papers, articles, books, and book chapters. Most of these have dealt with piling and deep foundations, but he has also written on matters of broader interest. He has given numerous lectures and short courses in many parts of the world, and he is Life Member of American Society of Civil Engineers (ASCE) and is, or has been, active in many professional organizations, such as the American Society for Testing and Materials (ASTM), the Canadian Geotechnical Society (CGS), and the Deep Foundation Institute (DFI).

He was Canadian Geotechnical Society Trans Canada Lecturer for 1985/1986. In 1990, he received Award "for Service in Standards Development" from American Society for Testing and Materials, 1990. In 1993, he received the Deep Foundation Institute's Distinguished Services Award "for Exceptionally Valuable Contributions to the State-of-the-Art in Deep Foundations". In 1997, he received the Canadian Geotechnical Society's G. Geoffrey Meyerhof Award "for Outstanding and Significant Contributions to the Art and Science of Foundation Engineering. In 1999, he was the Hal Hunt Lecturer of the Deep Foundation Institute Meeting in New York. In 2002, he was elected Fellow of the EIC "in Recognition of Excellence In Engineering and for Services to the Profession and to Society".



RAYMOND BOLTON SEED
SOAP 4

Dr. Raymond B. Seed received his Bachelor of Science Degree in Civil Engineering from the University of California at Berkeley in 1980, and his Master of Science and Doctor of Philosophy Degrees, both in Geotechnical Engineering and both from the University of California at Berkeley, in 1981 and 1983, respectively. After working between 1980 and 1983 as an engineer for several geotechnical consulting firms, (Dames and Moore, Woodward-Clyde Consultants, and Converse Consultants), he joined the faculty of Stanford University where he served for four years as an Assistant Professor of Civil Engineering. He returned to U.C. Berkeley in 1987, where he is now a Professor of Civil and Environmental Engineering.

Since 1982, Professor Seed has served as a geotechnical consultant to numerous domestic and foreign engineering firms and government and civil agencies on problems spanning a number of areas including: geotechnical earthquake engineering, static and seismic stability evaluation and design of dams and embankments, analysis of soil-structure interaction, design and performance of buried structures and conduits, stability and performance of waste fills and repositories, advanced geotechnical laboratory testing for a variety of applications, seismic risk analyses of lifeline systems, seismic response analyses, slope stability studies, liquefaction hazard assessment and mitigation, foundation design, and geotechnical finite element analyses of a variety of problems.

The author of more than 200 professional research publications, Professor Seed's research activities also span a wide range of subject areas. His research has had a significant impact on geotechnical practice in a number of areas including: analysis of compaction-induced stresses and deformations, seismic stability and performance evaluation for dams and embankments, analysis of soil liquefaction potential and post-liquefaction behavior, analysis of reinforced soil systems and deep braced excavations, effects of site conditions on seismic site response, finite element analysis of soil-structure interaction, stability and performance evaluation for hazardous waste fills, risk assessment for levees and flood control systems, and others. He has led and/or participated in forensic studies of nine major earthquakes (domestic and foreign), multiple slope and dam failures, one tsunami, and the Kettleman Hills waste repository failure, and he led the NSF-sponsored independent investigation of the performance of the New Orleans regional flood protection systems following hurricane Katrina. He has also served as an advisor to local, state and national governmental agencies and professional organizations on the development of policies, design codes and practice in the fields of geotechnical and earthquake engineering.

RAYMOND BOLTON SEED
SOAP 4 – Cont.

Among the professional honors accorded him, he has received the ASCE Thomas A. Middlebrooks Award (1987 and 2006), the ASCE Edmund Friedman Young Engineer Award for Professional Achievement (1989), the ASCE Arthur Casagrande Award (1989), and the ASCE Huber Research Prize (1996) from the American Society of Civil Engineers, the Prakash Award for International Contributions to Seismic Geotechnics (1997), the Presidential Young Investigator Award (1985) from the U.S. National Science Foundation, a Special Resolution from the California Geology Board recognizing contributions to State seismic safety (2001), and a formal citation from the Egyptian Government's High and Aswan Dam Authority. He was twice selected as the Queen Mary Lecturer (ASCE; 2003 and 2006), and also as the 2006 George W. Sowers State of Practice Lecturer (ASCE). Professor Seed has also received a number of awards and honors recognizing his contributions as an educator, including the 1989 University of California Distinguished Teaching Award (the University's highest teaching award), the New Engineering Educator Excellence Award (1988) from the American Society for Engineering Education, and several other teaching awards from the Department of Civil Engineering at U.C. Berkeley.



Dr. Ronaldo Luna
SOAP 5

Dr. Ronaldo Luna, Associate Professor, Department of Civil, Architectural, and Environmental Engineering, Missouri University of Science and Technology. He was Assistant Professor 1995 to 1999 in the Department of Civil and Environmental Engineering at Tulane University, New Orleans, LA. He obtained his B.S.C.E. 1983, from the University of Maryland, College Park, MD, and M.S.C.E. 1985 from Purdue University, West Lafayette, IN, and his Ph.D. 1995 from the Georgia Institute of Technology, Atlanta, GA. He was Post-Doctoral Fellow in 1995 at the Georgia Institute of Technology, Atlanta, GA. Between his graduate degrees he practiced as a geotechnical engineer in the states of California and Washington and internationally.

He has received several awards: G.A.A.N.N. Fellowship, U.S. Department of Education, 1991; AM/FM International Scholarship, 1992; Sowers Distinguished Graduate Student Award, Georgia Tech, 1994; Lilly Endowment Teaching Fellowship, Tulane University, 1996; NSF/IFAI Professor Training in Geosynthetics, Auburn University, 1996; NASA/ASEE Faculty Fellowship, Stennis Space Center, 1998; ADSC: International Foundation Drilling-Civil Engineering Faculty Workshop, 2000; and the PDCA Piling Faculty Workshop, 2003.

He is an active member at two NRC/TRB National Committees; ASCE Geo-Institute Computer Applications Committee; Earthquake Engineering Research Institute; Sigma Xi-The Scientific Research Society; Chi Epsilon-National Honor Society of Civil Engineering; International Society of Soil Mechanics and Foundation Engineering; and American Society of Engineering Education.

He has published over 50 technical publications.



J. David Rogers
SOAP 5

Karl F. Hasselmann Missouri Chair in Geological Engineering
Department of Geological and Petroleum Engineering
Missouri University of Science and Technology

Dr. J. David Rogers obtained his Ph.D (1982) and M.S.C.E. (1979) from the University of California, Berkeley and his B.S. in Geology from the California State Polytechnic University in 1976. He is registered Professional Engineer (Civil), Registered Geologist, Certified Engineering Geologist and Certified Hydrogeologist (all in California) and an A. I. P. G. Certified Professional Geologist.

Before joining the faculty at Missouri S&T he was Lecturer in Engineering Geology in the Department of Civil & Environmental Engineering at the University of California, Berkeley between 1994-2001. Prior to and during his tenure at Berkeley he served as a principal with Geolith Consultants, Inc. (1998 – 2001), Rogers/Pacific, Inc. (1984 – 1997), and Alan Kropp & Associates (1982-84). Between 1979-82 he was an independent consultant.

He has 20 years of experience in evaluating the stability of natural slopes, embankments, stream channels, highways and hydraulic structures. Between 1979-2001, he managed over 500 projects in the western United States, Hawaii, Taiwan and the Philippines. He also served as principal investigator for research funded by the National Science Foundation, U.S. Geological Survey and California Department of Transportation. Dr. Rogers has served on a number of panels, which currently include the Technical Advisory Committee on Regional Geologic Studies and Slope Stability Models for the California Geological Survey.

Dr. Rogers' research and publications have been recognized by a variety of awards, including: the 2001 Trent Dames Civil Engineering Heritage Speaker for The Huntington Library, San Marino, CA; appointment to the Society of Sigma Xi College of Distinguished Lecturers for the term 1999-2001; 1996 R. H. Jahns Distinguished Lecturer in Engineering Geology Award of the Association of Engineering Geologists and Geological Society of America; 1994 E. B. Burwell, Jr. Award of the Geological Society of America, 1994 ; 1994 Distinguished Project Award (designer), American Public Works Association, Northern California Chapter; 1994 Rock Mechanics Award (case histories) of the U.S. National Committee for Rock Mechanics of the National Research Council/National Academy of Sciences/National Academy of Engineering; 1993 Award of Merit in Environmental Education by the Association of San Francisco Bay Area Governments; and the 1976 Best Presentation Award of the Society of Mining Engineers, American Institute of Mining, Metallurgical and Petroleum Engineers, among others.



D. Hartford
SOAP 6

Dr. Desmond Hartford is Specialist Engineer- Dam Safety Risk Assessment at British Columbia Hydropower Authority. Specialising in dam safety and catastrophic loss risk management of large dams, hydroelectric facilities and water resource infrastructure he is primarily responsible for the development and implementation of risk management solutions for BC Hydro's portfolio of 43 dams. Dr. Hartford also advises dam and water resource agencies internationally on dam safety and risk management. He is co-author with Prof. G. Baecher of the authoritative textbook *Risk and Uncertainty in Dam Safety*, and a principal author of ICOLD bulletin 130: *Risk Assessment in Dam Safety Management*.



**Edward Kavazanjian
SOAP 7**

Edward Kavazanjian, Jr., Associate Professor, Arizona State University

Dr. Edward Kavazanjian, Jr. is an Associate Professor of Civil and Environmental Engineering at Arizona State University. He is widely recognized for his work on waste mechanics and waste containment systems. His experience includes landfill design, research on the mechanical properties of municipal solid waste, and field reconnaissance of landfill performance in the 1994 Northridge earthquake and the waste slides at the Rumpke Landfill in Cincinnati in 1996 and the Payatas Landfill in the Philippines in 2001. Dr. Kavazanjian is co-author of the USEPA guidance document *RCRA Subtitle D (258) Seismic Design Guidance for Municipal Solid Waste Landfill Facilities*.



William Van Impe
SOAP 8

William Frans Van Impe, ISSMGE president for the term 2001-2005, graduated with high honours as Doctor of Applied Sciences - Geotechnics in June 1981 at the Ghent University after an initial period (1973 - 1981) as research assistant on soil mechanics/dynamics of Professor E. De Beer at the Laboratory of Soil Mechanics, he was appointed lecturer in 1982, director of the Soil Mechanics lab in 1985 and full professor at the Ghent State University since 1991. Prof. Van Impe is also Professor of Soil Mechanics in the Faculty of Engineering of the Leuven Catholic University Belgium since October 1988. In 1995 he got the Prof. honoris causa degree at the University UMSS in Bolivia.

W.F. Van Impe served many times as chair or core-member of several technical committees within the ISSMGE (TC on deep foundations, TC on environmental geotechnics , on ground improvement) and took office as ISSMGE Vice-President for Europe from 1994 to 1997. He acted as chair of the Belgian Geotechnical Society from 1997 to 2001.

W.F. Van Impe also acts as a scientific member and member of the board of directors of the Royal Academy of Overseas Sciences - Technical Office in Belgium. He acted worldwide as invited speaker in many major conferences, and actively lectured in more than 40 Universities. He was the first Vienna-Terzaghi lecturer in 1999, the Nonweiller lecturer and the John Mitchell lecturer in 2002 and he received the De Beer Award – Brussels 2004 and the Szechy award – Budapest 2007. Besides being the author and co-author of 3 books, he is the author of about 180 papers, editor of 5 proceedings on Numerical models in geotechnics and on Bored and Auger piles.

In the geotechnical profession Professor W.F. Van Impe deals globally with major projects on Nearshore Geotechnics and Dredging Geotechnical Issues, projects on Deep Foundations, Soil Improvement, soil parameter analysis, as well as mainly on projects related to Environmental Geotechnics problems-flow of contaminants through porous media.

Today (since March 2008), Prof. W.F. Van Impe acts as well as the President of the FedIGS – Federation of the International Geo-engineering Societies.



J. P. Singh
SOAP 10

Dr. Jogeshwar Preet Singh born, in January 1944, in the distinguished Patiala family of the Prime Minister of Patiala State, General Raja Gurdit Singh of Retgarh, after having his schooling at Yadavindra Public School, Patiala, graduated in Civil Engineering from Thapar Institute of Engineering and Technology, Patiala in 1964. His pursuit for higher education took him to the USA in 1965 where he received his MS in Soil Mechanics in 1966 and Ph.D. in Earthquake Engineering in 1981, both from the University of California at Berkeley.

Following his MS in 1966, he joined the world famous geotechnical engineering firm Dames & Moore where he worked on many USA and international projects. His exceptional work on the first two nuclear power plants in Iran earned him a paid sabbatical for Ph.D. by Dames & Moore. Upon completion of his doctoral dissertation in engineering seismology he became a Director of Special Services and New Technology with Harding Lawson Associates in 1980. In 1987, Dr. Singh founded his own firm named Geospectra Incorporated. In a seven-year period Geospectra excelled to new heights with world prestigious projects such as the Golden Gate Bridge and was acquired as Geospectra a Division of Kleinfelder in 1994. Dr. Singh remained with this merger until 1996 as a Principal, Senior Consultant and Manager, Seismic & Innovative New Technology. In 1996, Dr. Singh founded another firm named J.P. Singh & Associates in Richmond, California.

An international leader in earthquake engineering and seismology, Dr. Singh has been invited as expert speaker/participant in over 60 Conferences, Seminars and Workshops in USA and abroad. He has authored more than 100 technical papers and chaired numerous committees related to seismic risk reduction and building code related issues.

Dr. Singh has participated in many post-earthquake investigations of devastating earthquakes throughout the world to include 1985 Mexico Earthquake, 1985 Chile Earthquake, 1992 Costa Rica Earthquake, 1995 Kobe, Japan earthquake and more recently the 2001 Republic Day Bhuj, India Earthquake to learn how man made structures and geotechnical improvements stand and fall when the earth shakes and moves and implement lessons learned into the earthquake resistant design.

J. P. Singh
SOAP 10 – cont.

Dr. Singh, with unflagged energy, has participated in numerous activities pertaining to geologic hazards and seismic code issues sponsored by U.S. Geological Survey, U.S. Nuclear Regulatory Commission, National Science Foundation, Federal Emergency Management Agency, California Seismic Safety Commission, Earthquake Engineering Research Institute, National Center of Earthquake Engineering Research, American Petroleum Institute, National Institute of Standards and Technology, National Research Council, National Academy of Sciences, Structural Engineers Association of California, State of California Building Safety Board, State of California Division of Mines and Geology, State Mining and Geology Board, California Department of Transportation, Washington State Department of Transportation, San Francisco Bay and Conservation and Development Commission, United Nations Educational, Scientific and Cultural Organization and the Secretariat of the International Decade for National Disaster Reduction.

Not only this, Dr. Singh has worked on many world prestigious projects such as Bank of America World Headquarters and Transamerica Pyramid – the tallest buildings and landmarks of San Francisco; Golden Gate Bridge – the world famous landmark in San Francisco; Tacoma Narrows Bridge – a classic resonance failure cited in every Physics text book; Trans Alaska Pipeline – World's largest and the most difficult project; Port of Oakland and Port of Los Angeles – World's two largest Container Ports.

In recognition of his exceptional achievement, leadership, unselfish and dedicated service to the community, Dr. Singh has received many awards and honors over the years such as Outstanding Immigrant Award in 1980; included in the Who's Who in California in 1983; and Who's Who in Frontiers of Science and Technology in 1985; and, in 1992, Richmond Chamber of Commerce/West County Times conferred on him the "Entrepreneur of the Year Award".

His alma mater feels genuinely honored in presenting, Dr. J. P. Singh the 'Distinguished Alumnus Award' for the year 2002 for his significant achievements and contributions in the areas of 'Seismology and Geotechnical Earthquake Engineering towards 'Mitigating Earthquake Losses and Improving Seismic Safety of the World Community'.



James K. Mitchell
SOAP 11

Dr. James K. Mitchell is currently a University Distinguished Professor, Emeritus at Virginia Polytechnic Institute and State University in Blacksburg, Virginia and a Consulting Geotechnical Engineer.

Dr. James K. Mitchell received his Bachelor of Civil Engineering Degree from Rensselaer Polytechnic Institute in 1951, Master of Science Degree from the Massachusetts Institute of Technology in 1953, and the Doctor of Science Degree, also from M.I.T., in 1956.

He joined the faculty of the University of California, Berkeley in 1958 and held the Edward G. Cahill and John R. Cahill Chair in the Department of Civil Engineering at the time of his retirement from Berkeley in 1993. He served as Chairman of the Department of Civil Engineering from 1979 through 1984. He was appointed the first Charles E. Via, Jr. Professor in the Via Department of Civil Engineering at Virginia Tech in 1994, University Distinguished Professor in 1996, and University Distinguished Professor, Emeritus, in 1999.

His primary research activities have focused on experimental and analytical studies of soil behavior related to geotechnical problems, admixture stabilization of soils, soil improvement and ground reinforcement, physico-chemical phenomena in soils, the stress-strain time behavior of soils, in-situ measurement of soil properties, and mitigation of ground failure risk during earthquakes. He has authored more than 350 publications, including two editions of the graduate level text and reference, "Fundamentals of Soil Behavior," and several state-of-the-art papers. During the 1960's and early 1970's he served as the NASA Principal Investigator for the Soil Mechanics Experiment, which was a part of Apollo Missions 14-17 to the Moon.

Dr. Mitchell serves as a consultant to numerous governmental and private organizations on geotechnical problems and earthwork projects of many types, especially soil stabilization, ground improvement for seismic risk mitigation, earthwork construction, and environmental geotechnology, both nationally and internationally. Recent and currently active projects include the evaluation of seismic stabilities and design of liquefaction mitigation options for Success Dam and Isabella Dam (U.S. Army Corps of Engineers), the Folsom Project (U.S. Bureau of Reclamation) and San Pablo Dam (East Bay Municipal Water District) in California, Deer Creek Dam in Utah (U.S. Bureau of Reclamation), Tuttle Creek Dam for the Bay Area Rapid Transit System, foundation densification using explosive compaction at Seymour Falls Dam in British Columbia (Klohn-Crippen), and the Advisory Panel for the Craney Island Eastward Expansion and Marine Terminal (Virginia Port Authority). He recently served as a member of the ASCE External Review panel for the Performance Evaluation of Hurricane and Flood Protection Projects in S.E. Louisiana. He is an Honorary Member of ASCE and is a member of the U.S. Academy of Engineering and the Academy of Sciences.



Kjell Karlsrud
SOAP 12

Kjell Karlsrud was born in Norway and received his engineering education from the Massachusetts Institute of Technology (MIT). He completed his graduated studies at MIT in 1969, where he was awarded the R. Lee Russell Award for outstanding academic achievements at MIT. He then started as project engineer at the Norwegian Geotechnical Institute (NGI). He soon became Section Head, Division Director and has been Technical Director at NGI since 2000, the highest technical position at NGI. Kjell Karlsrud has been the key person in the development of NGI's work on soft and quick clays, landslides and foundation design, in addition to leading the NGI team on foundation design onshore over 20 years. He has written a number of papers, many of which are often referred to in the geotechnical literature. Throughout his career, Kjell Karlsrud has worked on consulting assignments and research projects on a wide range of expertise areas, both in Norway and abroad in over 20 countries. His expertise areas include deep open excavations and soil or rock anchoring; tunnelling in soft ground and groundwater control; ground improvement of soft clays, including vacuum preloading, deep lime/cement mixing and dynamic compaction; pile foundations for buildings, bridges and offshore installations, including earthquake loading; spread foundations and retaining structures; soil testing and soil behaviour; and hazard and risk assessment for landslides and tsunamis. Kjell Karlsrud is active on many national and international geotechnical expert groups. He is frequently asked to present keynote and invited lectures and to act as Chairman, Discussion leader and Panel Member at national and international conferences. He has published over 95 papers in scientific journals and international conferences.



Clyde Baker
SOAP 14

Clyde Baker is a past chairman of STS Consultants, Ltd., a 550-person consulting engineering firm headquartered in Vernon Hills, Illinois. Baker has more than 50 years of engineering experience with the design, analysis and construction of deep foundations for high-rise structures. He is responsible for technical consultation and overview on major engineering projects, maintaining technical standards, and development of staff engineering expertise, as well as client and project promotional activities.

During his 50+ years as a geotechnical engineer, Baker has enabled designers and engineers to build super-high and super-confidently, as they pack in more valued space at less cost to developers. From his early days at the challenging site of Chicago's John Hancock Center to today's tallest buildings, Baker's ability to analyze soil conditions, back up predictions with proven tests, and convey opinions with an expert yet easygoing style, has elevated Baker and his firm, STS-AECOM, to one of the world's most sought-after geotechnical consultants and peer reviewers. Engineers the world over credit him with the pursuit of efficient foundations that result in economic options for building developers. Together with his team, Baker has worked on eight of the 20 tallest buildings in the world, including the Chicago Spire and Burj Dubai.

Baker, a Fellow of the American Society of Civil Engineers, has been active professionally on both the local and national scene. He has served as a past president of the Structural Engineers Association of Illinois and the Chicago Chapter of the Illinois Society of Professional Engineers, and is a member of the Chicago Committee on High Rise Buildings. Other organizations with which he is involved include the Council on Tall Buildings and Urban Habitat, Deep Foundation Institute, National Academy of Engineering, Highway Research Board, American Society for Testing and Materials, National Society of Professional Engineers, Western Society of Engineers, and the M.I.T. Alumni Council. Additionally, he has served as Chairman of the Geotechnical Engineering Division of the American Society of Civil Engineers, Editor of the *Geotechnical Engineering Journal* and Chairman of the American Concrete Institute Committee 336 on Footings, Mats and Drilled Piers.

Baker is a registered structural engineer in the state of Illinois and a registered professional engineer in more than a dozen states. He has shared his knowledge and experience with his peers through numerous conference and university lectures, technical articles, papers and publications. He has performed peer reviews of geotechnical studies for high-rise projects around the world, including China, Korea and the Middle East. His contributions to the building industry over the years is evidenced by the many awards he has received throughout his career, including The Moles Non-Member Outstanding Achievement in Construction Award (2006); American Society of Civil Engineers, Ralph B. Peck Award (2000), Martin S. Kapp Award (1995) and Thomas A. Middlebrooks Award (1972); Structural Engineers Association of Illinois, Distinguished Service Award in Structural Engineering (1990); International Association of Foundation Drilling (ADSC), Outstanding Service Award (1991); American Society of Civil Engineers, Chicago Civil Engineer of the Year (1989); and Illinois Society of Professional Engineers-Chicago Chapter, Distinguished Service Award in Professional Engineering (1978).